The product or products described in this book are licensed products of Teradata Corporation or its affiliates.

Teradata, BYNET, DBC/1012, DecisionCast, DecisionFlow, DecisionPoint, Eye logo design, InfoWise, Meta Warehouse, MyCommerce, SeeChain, SeeCommerce, SeeRisk, Teradata Decision Experts, Teradata Source Experts, WebAnalyst, and You've Never Seen Your Business Like This Before are trademarks or registered trademarks of Teradata Corporation or its affiliates. Adaptec and SCSISelect are trademarks or registered trademarks of Adaptec, Inc. AMD Opteron and Opteron are trademarks of Advanced Micro Devices, Inc. BakBone and NetVault are trademarks or registered trademarks of BakBone Software, Inc. EMC, PowerPath, SRDF, and Symmetrix are registered trademarks of EMC Corporation. GoldenGate is a trademark of GoldenGate Software, Inc. Hewlett-Packard and HP are registered trademarks of Hewlett-Packard Company. Intel, Pentium, and XEON are registered trademarks of Intel Corporation. IBM, CICS, RACF, Tivoli, z/OS, and z/VM are registered trademarks of International Business Machines Corporation. Linux is a registered trademark of Linus Torvalds. LSI and Engenio are registered trademarks of LSI Corporation. Microsoft, Active Directory, Windows, Windows NT, and Windows Server are registered trademarks of Microsoft Corporation in the United States and other countries. Novell and SUSE are registered trademarks of Novell, Inc., in the United States and other countries. QLogic and SANbox are trademarks or registered trademarks of QLogic Corporation. SAS and SAS/C are trademarks or registered trademarks of SAS Institute Inc. SPARC is a registered trademark of SPARC International, Inc. Sun Microsystems, Solaris, Sun, and Sun Java are trademarks or registered trademarks of Sun Microsystems, Inc., in the United States and other countries. Symantec, NetBackup, and VERITAS are trademarks or registered trademarks of Symantec Corporation or its affiliates in the United States and other countries. Unicode is a collective membership mark and a service mark of Unicode, Inc. UNIX is a registered trademark of The Open Group in the United States and other countries. Other product and company names mentioned herein may be the trademarks of their respective owners.

The information contained in this document is provided on an “as-is” basis, without warranty of any kind, either express or implied, including the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. Some jurisdictions do not allow the exclusion of implied warranties, so the above exclusion may not apply to you. In no event will Teradata Corporation be liable for any indirect, direct, special, incidental, or consequential damages, including lost profits or lost savings, even if expressly advised of the possibility of such damages.

The information contained in this document may contain references or cross-references to features, functions, products, or services that are not announced or available in your country. Such references do not imply that Teradata Corporation intends to announce such features, functions, products, or services in your country. Please consult your local Teradata Corporation representative for those features, functions, products, or services available in your country. Information contained in this document may contain technical inaccuracies or typographical errors. Information may be changed or updated without notice. Teradata Corporation may also make improvements or changes in the products or services described in this information at any time without notice. To maintain the quality of our products and services, we would like your comments on the accuracy, clarity, organization, and value of this document. Please e-mail: teradata-books@lists.teradata.com

Any comments or materials (collectively referred to as “Feedback”) sent to Teradata Corporation will be deemed non-confidential. Teradata Corporation will have no obligation of any kind with respect to Feedback and will be free to use, reproduce, disclose, exhibit, display, transform, create derivative works of, and distribute the Feedback and derivative works thereof without limitation on a royalty-free basis. Further, Teradata Corporation will be free to use any ideas, concepts, know-how, or techniques contained in such Feedback for any purpose whatsoever, including developing, manufacturing, or marketing products or services incorporating Feedback.

Copyright © 2008 - 2010 by Teradata Corporation. All Rights Reserved.
Table of Contents

Chapter 1: Teradata Viewpoint Help............................................................................................................ 11
Teradata Viewpoint Help............................................................................................................................ 11

Chapter 2: Getting Started......................................................................................................................... 13
Getting Started........................................................................................................................................... 13
  Logging On............................................................................................................................................... 13
  Logging Off............................................................................................................................................ 13

Chapter 3: Portal Basics............................................................................................................................. 15
Portal Basics............................................................................................................................................... 15
  Adding a Portal Page................................................................................................................................. 15
  Naming a Portal Page................................................................................................................................. 16
  Arranging Portal Pages............................................................................................................................. 16
  Deleting a Portal Page............................................................................................................................... 16

Chapter 4: Portlet Basics............................................................................................................................ 19
Portlet Basics.............................................................................................................................................. 19
  Portlet Controls..................................................................................................................................... 19
  Adding a Portlet..................................................................................................................................... 21
  Filtering Portlets.................................................................................................................................... 21
  Deleting a Portlet.................................................................................................................................... 21

Chapter 5: Portal and Portlet Tools........................................................................................................... 23
Portal and Portlet Tools............................................................................................................................. 23
# Table of Contents

About the Rewind Feature.......................................................................................................................... 23
About the Pause Feature..............................................................................................................................26
About Shared Portlets..................................................................................................................................26

## Chapter 6: Profile
Profile.............................................................................................................................................................. 29
  About the Personal Info Tab.......................................................................................................................29
  About the Teradata Accounts Tab.............................................................................................................32

## Chapter 7: System Administration
System Administration................................................................................................................................. 35
  About Security and Permissions................................................................................................................ 35
  Alert Setup.................................................................................................................................................. 36
  Alert Setup..................................................................................................................................................36
  Backup............................................................................................................................................................42
  Backup............................................................................................................................................................42
  LDAP Servers................................................................................................................................................44
  LDAP Servers................................................................................................................................................44
  Managed Servers...........................................................................................................................................47
  Managed Servers...........................................................................................................................................47
  Portlet Library...............................................................................................................................................49
  Portlet Library...............................................................................................................................................49
  Roles Manager..............................................................................................................................................50
  Roles Manager..............................................................................................................................................50
  Teradata Systems........................................................................................................................................65
  Teradata Systems........................................................................................................................................65
  User Manager..............................................................................................................................................87
  User Manager..............................................................................................................................................87

## Chapter 8: Alert Viewer
Alert Viewer..................................................................................................................................................... 95
  About Alerts..................................................................................................................................................95
  About Filters and Sorting............................................................................................................................96
  Viewing Alert Details..................................................................................................................................97
# Chapter 9: Calendar

Calendar ........................................................................................................................................................................ 99
  About the Calendar Week View ........................................................................................................................... 99
  About the Calendar Month View ....................................................................................................................... 100
  About the Calendar Event Details View ............................................................................................................ 101
  Adding an Event ................................................................................................................................................... 102
  Editing an Event ................................................................................................................................................... 104
  Deleting an Event ................................................................................................................................................. 105

# Chapter 10: Canary Response Times

Canary Response Times .............................................................................................................................................. 107
  About the Canary Response Times View .......................................................................................................... 107
  About the Preferences View ................................................................................................................................ 109

# Chapter 11: Capacity Heatmap

Capacity Heatmap ....................................................................................................................................................... 113
  About the Capacity Heatmap View ................................................................................................................... 113
  About the Capacity Heatmap Menus and Toolbar ......................................................................................... 120
  About the Preferences View ................................................................................................................................ 123

# Chapter 12: External Content

External Content .......................................................................................................................................................... 125
  About the Preferences View ................................................................................................................................ 125

# Chapter 13: Lock Viewer

Lock Viewer .................................................................................................................................................................. 127
  About the Lock Viewer View .............................................................................................................................. 127
Chapter 19:
Query Monitor

About the Query Monitor View

About the Utility View

About the Details View

About the Tools Menu

About the Preferences View

Chapter 20:
Remote Console

About the Remote Console View

About the Remote Console Menus and Toolbar

About Console Utilities

About the Preferences View

Chapter 21:
Space Usage

About the Space Usage View

About the Space Usage Details View

About the Preferences View

Chapter 22:
SQL Scratchpad

About the SQL Scratchpad View

About Running a Query

About the Object Browser

About the History Tab

About the Saved Tab

About the Console

About the Preferences View
## Chapter 23:
**System Health**

System Health .................................................................................................................................................... 245
  - About the System Health View ................................................................. 245
  - About the System Health Details View .................................................. 246
  - About the Preferences View ................................................................. 248

## Chapter 24:
**Today’s Statistics**

Today’s Statistics ............................................................................................................................................. 251
  - About the Today’s Statistics View ......................................................... 251
  - About the Preferences View ............................................................... 254

## Chapter 25:
**Viewpoint Monitoring**

Viewpoint Monitoring ...................................................................................................................................... 257
  - About the Viewpoint Monitoring View ................................................ 257
  - About the Preferences View ............................................................... 261

## Chapter 26:
**Workload Designer**

Workload Designer .......................................................................................................................................... 265
  - About the Workload Designer View .................................................... 265
  - About Ruleset Options ......................................................................... 266
  - About the Ruleset General View ......................................................... 270
  - About Ruleset States ........................................................................... 272
  - About Classification Settings ............................................................. 281
  - About Ruleset Sessions ....................................................................... 287
  - About Ruleset Filters ........................................................................... 293
  - About Ruleset Throttles ...................................................................... 296
  - About Ruleset Workloads .................................................................... 299
  - About Ruleset Exceptions .................................................................... 310
Chapter 27: Workload Health.................................................................................................................................313
  Workload Health......................................................................................................................................................313
  Workload Health Concepts................................................................................................................................313
  About the Workload Health View.........................................................................................................................314
  About the Workload Health Details View........................................................................................................316
  About the Preferences View.................................................................................................................................319

Chapter 28: Workload Monitor..................................................................................................................................323
  Workload Monitor..................................................................................................................................................323
  Workload Monitor Concepts................................................................................................................................323
  Working with Workload Monitor Views................................................................................................................325
  About the Dynamic Pipes View............................................................................................................................331
  About the Static Pipes View................................................................................................................................332
  About the Distribution View................................................................................................................................333
  About the Request Details View.............................................................................................................................334
  About the Tools Menu...........................................................................................................................................338
  About the Preferences View.................................................................................................................................340
Teradata Viewpoint Help

The Teradata Viewpoint Help online user guide provides targeted information about how to use the Teradata Viewpoint portal and related system management tools, called portlets, to manage your Teradata Database system.

Click to open a browser containing Teradata Viewpoint Help. The display is divided into panes:

Contents

Lists the hierarchy of topics contained in Teradata Viewpoint Help. To navigate using this pane:

- Click next to a topic name to expand the list of available topics.
- Click next to a topic name to collapse the list of available topics.
- Click on any topic name to display corresponding topic information in the right pane.

Current Help Topic

Displays the currently selected Help topic. In this pane, you can:

- Browse through topic information, using the Scroll Bar to view content not visible in the pane.
- Select links to related topics that are above (parent) or below (child) the current topic in the content hierarchy.

Only one instance of the Help system can be displayed regardless of how many sessions are open.
Getting Started

Getting Started topics describe how to begin and end a Teradata Viewpoint session.

Logging On

Logging on to the Teradata Viewpoint portal begins your session so you can begin working with the Teradata Viewpoint portal.

1. Open a browser.
2. Enter the address for your Teradata Viewpoint portal.
   The Welcome page appears, with the portal version number shown at the bottom.
3. Log on to the Teradata Viewpoint portal.
   If your Teradata Viewpoint system is set up to create a user profile automatically, the username and password you enter are authenticated against your company-provided username and password the first time you log on to Teradata Viewpoint. Automatic profile creation is known as auto-provisioning.

Logging Off

Logging off the Teradata Viewpoint portal ends your current session and returns you to the Welcome page.

1. From the Teradata Viewpoint main menu bar, click Logout to exit the portal.

All page content is preserved for your next Teradata Viewpoint session. Any open Teradata Viewpoint Help window is closed.
Portal Basics

To help you work efficiently, Teradata Viewpoint uses a page metaphor as the framework for displaying and updating portlets. Each portal page is a virtual work space where you decide which portlets to display and how to arrange them on the page. Examples of ways to organize your work include defining a page for each system being monitored, or for each type of query or user. As you work, Teradata Viewpoint continually updates the information displayed on the page that currently fills the Teradata Viewpoint portal. This page is called the active page.

Manage portal pages using the following guidelines:

- Add portal pages at any time during a Teradata Viewpoint session.
- Access any portal page by clicking its tab; only one page can be active at a time.
- Change the name of any tab, including the Home page tab; page names can be duplicated.
- Rearrange pages by dragging and dropping into a new location.
- Remove pages, along with any portlets contained on the page, with a single mouse-click.
- One page (tab) must remain, as well as the Add Page tab.

Adding a Portal Page

Organize your system management tools by adding pages to the Teradata Viewpoint portal. Multiple pages can be added or removed per session. The newest page is always the active page unless you click on another tab.

1. In the Teradata Viewpoint portal, click Add Page.

A New Page tab appears to the left of Add Page and becomes the active page.
Naming a Portal Page

One way you can customize the Teradata Viewpoint portal is by giving meaningful names to the pages that display portlets. Initially, each page is named New Page. You can change the page name at any time during a Teradata Viewpoint session.

1. Click on the page tab to highlight the page name.

2. Enter the new name.
   Page names can be up to 30 characters long.

3. To apply the new name, do one of the following:
   - Click anywhere on the portal page.
   - Press Enter.

4. [Optional] Reorder the portal pages to maintain your management scheme.

Arranging Portal Pages

Initially portal pages appear in the order in which they have been added from left to right. Arranging or rearranging pages does not change page content, and can be done at any time during your Teradata Viewpoint session.

1. In the portal task bar, mouse over the tab you intend to move.
   The cursor changes to a directional cursor.

2. Drag the tab to the left or to the right of its current position.
   The tab aligns in the new position.
   Add Page is always in the right-most position and cannot be moved or deleted.

Deleting a Portal Page

A portal page and its contents can be deleted from the portal at any time after it has been defined and at any time during your Teradata Viewpoint session.

1. In the portal task bar, click the tab of the page you intend to delete.
2 Click \(\times\) to remove the portal page and its contents.
   A confirmation message appears.

3 Click OK to delete the page.
   The page is removed, and the remaining tabs shift left.
CHAPTER 4
Portlet Basics

Portlet Basics

Teradata Viewpoint system management tools are called portlets. Select the portlets that you want to display and monitor from submenus, or categories, under Add Content. You can also search for a specific portlet name using the filter feature. Generally, every instance of a portlet:

- Has a frame that appears when the cursor moves over any part of the portlet on the page and disappears when the cursor moves off the portlet.
- Displays the portlet name or the current settings in the upper frame, depending on the current activity.
- Has a width requirement to ensure proper display of its graphical information such as charts, sparklines, or graphs.
- Remains at a fixed size even when the browser window is re-sized. You can use the browser scroll bars to view the entire portlet view.
- Can be repositioned on the portal page.

Portlet Controls

The Teradata Viewpoint Administrator controls what portlets and features you are authorized to use. If a portlet or feature is not available, the Teradata Viewpoint Administrator can assign permissions. The following controls appear within each portlet frame if the control is available:
Back

Returns to the previous view.

 Rewind

Indicates that the portlet can be set to display data from a previous point in time.

 Preferences

Accesses portlet preferences and settings. Preferences are used to specify what information is displayed, time intervals for reporting, and other features that help you customize the portlet functions.

 Share Portlet

Captures a customized version of a portlet for use by other users. The Teradata Viewpoint Administrator must make the customized portlet available for sharing.

 Collapse

Toggles the portlet closed. This button appears only when the portlet is open. When collapsed, only the upper and lower portlet frame sections are displayed.

 Expand

Toggles the portlet open. This button appears only when the portlet is collapsed. When expanded, the portlet returns to its normal size and position on the portal page.

 Maximize

Toggles the portlet to fill the portal page, covering all other portlets being displayed.

 Minimize

Toggles the portlet to the default size of one column wide.

 Remove

Removes the portlet and all its settings from the active portal page.

Each portlet instance has its own settings and controls as well as the features shared by all portlets. Depending on the specialized nature of the portlet, a portlet can include any of the following features:

- Tabs for accessing views, when views are available to organize settings according to function.
- Selection menus above the toolbar to choose detailed information.
- A toolbar with buttons for quick access to information.
- Date-range slider for selecting start dates and end dates for analysis.
- Information balloons to show detailed information when you mouse over the portlet.
Adding a Portlet

A portlet can be added to the active page at any time during a session. Except for the Calendar portlet, multiple instances of a portlet can be added to a portal page.

1. In the portal, click Add Content.
2. Select a portlet from the submenus.

The portlet is added at the top of the left-most column.

3. [Optional] Reposition the portlet on the portal page by dragging it to another location.

Filtering Portlets

Find a portlet by using the keyword filter box and the SEARCH RESULTS list. This method is also useful when you want to add a portlet to the active page and the list of portlets is long.

1. Click in the keyword filter box to activate the field for typing.
2. Begin typing the portlet name.
   As you type, the SEARCH RESULTS list shows the portlets that match your filter criteria. This field is not case-sensitive.

3. Click a portlet name in the SEARCH RESULTS list to add it to the page.

Deleting a Portlet

A portlet can be deleted from the active portal page at any time. Deleting a portlet resets portlet information and deletes any custom settings set for that instance only. Other portlet instances on the same page or on other pages are not affected.

1. On the active portal page, mouse over the portlet frame to activate the portlet.
   The portlet does not need to be expanded if it is collapsed.
2 Click \( \times \) to remove the portlet from the portal page.
A confirmation message appears.

3 Click \textbf{OK}.
The portlet is removed from the active portal page.
Portal and Portlet Tools

Portal and Portlet Tools topics describe the tools that control the functions accessed from the portal and portlet frames. These tools are generally available to all users and allow you to customize the Teradata Viewpoint portal and portlets to make managing and working with system data more efficient. Use these functions to customize Teradata Viewpoint and streamline your workflow:

- Rewind
- Pause
- Share Portlet

About the Rewind Feature

The rewind feature allows you to view data that corresponds to dates and times in the past and compare it to data for a different date and time. You can rewind the data for some or all portlets on a portal page to a previous point in time, such as when a job failed. Rewinding portlet data is useful for identifying and resolving issues.

You can rewind data as far back as data is available. The rewind feature is not available for portlets that have portlet-specific methods for reviewing data over time.

Using the rewind toolbar, you can enter a specific date and time as well as scroll through the data in increments of seconds, minutes, hours, or days. All portlets on the page that are participating in rewind activities display data that corresponds to the selected rewind date and time each time a selection is made.

If portlet data can be rewound, a time stamp, and appear in the portlet frame.

You can also do the following:

- Pause individual portlets so that the data display is no longer rewound or refreshed
• Resume participation in rewind for a portlet in pause mode
• Prevent a portlet from participating in rewind and display current data instead
• Resume participation in rewind and return to the state a portlet was in when it was unlinked from rewind
• Cancel the rewind feature so that all rewound portlets on the portal page display current data

Permission to use the rewind feature is granted to individual users based on their role and portlet access. If the rewind toolbar does not appear on the portal page, you are not authorized to use the feature. If the rewind icons and time stamp do not appear in the portlet frame, the feature is not available for that portlet.

Rewinding a Portal Page

You can rewind all participating portlets on a portal page. Use the rewind feature to:

• Select a date and time for data to display in all participating portlets currently on a portal page or added to the page.
• Scroll the selected time incrementally to find a change in status among the participating portlets displayed on the page.

1 Click ⬅️.
   The Rewind toolbar appears along the top of the portal page.

2 [Optional] Specify the date and time:
   a Enter a date in the Desired Date and Time date field.
   b Enter a time in the Desired Date and Time time field.
   c Click anywhere in the portal page to display the data that corresponds to the selected date and time for all participating portlets.

3 [Optional] Drag ⬅️ left to scroll back through time in increments of:
   • 1 second
   • 10 seconds
   • 1 minute
   • 10 minutes
   • 1 hour
   • 1 day

4 [Optional] Drag ⬅️ right to scroll forward through time in increments of:
   • 1 second
   • 10 seconds
   • 1 minute
   • 10 minutes
   • 1 hour
   • 1 day
You cannot scroll forward past the current time as projected data is not available using the rewind feature.

**Pausing Rewind for a Portlet**

You can pause an individual portlet on a portal page while other portlets on the page display rewound data. Pausing an instance of a portlet freezes the display of data at the moment the portlet is placed in pause mode, allowing you to compare data for multiple rewound time periods.

1. Click in the portlet frame.
2. Click Pause.

Data displayed in the portlet becomes static and does not change until you resume the portlet refresh rate.

**Resuming Rewind for a Portlet**

You can resume using the rewind feature for an individual portlet on a portal page that is in pause mode.

1. Click in the portlet frame.
2. Click Resume.

Data displayed in the portlet is updated to the selected rewind time and does not change until the selected date or time for the rewind feature is changed.

**Stopping Rewind Participation**

You can prevent an individual portlet from participating in rewind when the portlet frame displays .

1. Click in the portlet frame.
   - The portlet can be in pause mode or actively responding to the rewind date and time controls.
2. Click Unlink from Rewind.
   - The portlet no longer responds to rewind date or time controls and is updated to display the most recent data available.

**Restarting Rewind Participation**

You can have an individual portlet not participating in rewind resume participation when the portlet frame displays .

1. Click in the portlet frame.
2. Click Link to Rewind.

The portlet returns to the mode it was in when it was unlinked from participation in rewind. For example, if the portlet was in pause mode when unlinked from rewind, it is in pause mode when participation in rewind resumes.
Canceling the Rewind Feature

You can turn off the rewind feature and resume display of current data in all portlets on the portal page.

1 Click Cancel.

All portlets on the portal page that were participating in rewind activities end participation and display the most recent data available.

About the Pause Feature

Any rewindable portlet can be paused from refreshing data. Pausing an instance of a portlet freezes the display of data at the moment the portlet is placed in pause mode, allowing you to compare data for different time periods. The rewind feature does not need to be active to pause the portlet. When a portlet is in pause mode, the time stamp flashes, indicating that the data in the portlet is no longer being refreshed.

Pausing Portlet Refresh

You can pause an individual portlet on a portal page.

1 Click in the portlet frame.

2 Click Pause.

Data displayed in the portlet becomes static and does not change until you resume the portlet refresh rate.

Restarting Portlet Refresh

You can resume the portlet refresh rate when the portlet is in pause mode.

1 Click in the portlet frame.

2 To restart the portlet, do one of the following:

• Click Refresh to refresh portlet summary and detail data to the current date and time.
• Click Resume to resume the portlet refresh rate.

About Shared Portlets

Use the Share Portlet feature to make a customized or preconfigured version of a Teradata Viewpoint portlet available to other users. When the shared portlet is added to a portal page, all preferences and settings you selected when you customized the portlet are used.

Any user can customize a shareable portlet and submit it for sharing. Depending on your Teradata Viewpoint system configuration, the portlet is not available to authorized users until the Teradata Viewpoint Administrator approves the request. Only the Teradata Viewpoint Administrator can delete the shared portlet entirely. If deleted, existing instances remain on your portal page. However, a warning message appears if you try to access the portlet.

The Shared Portlets feature allows you to:
• Share customized views of a Teradata Viewpoint portlet with other users.
• Create different configurations of a portlet for different roles.
• Assign a preconfigured portlet to a role as a default instance of the portlet.
• Assign a name to the preconfigured portlet.

The portlet name appears in the Shared submenu of the Add Content menu. The Shared submenu only appears when at least one shared portlet is enabled for the user who is logged on.

Creating a Shared Portlet

Use the Share Portlet feature to customize a Teradata Viewpoint portlet and make it available to other users.

1 Add a portlet instance that you want to share to your portal page.
2 From the portlet frame, click to access the PREFERENCES view.
3 Customize the portlet using the available preference settings.
4 Click OK to save the settings.
5 Click to access the SHARE PORTLET dialog box.
6 Enter a name for the custom portlet using up to 25 alphanumeric characters.
   Depending on your Teradata Viewpoint system configuration, the portlet is not available to authorized users until the Teradata Viewpoint Administrator approves your request.
7 Click Save.
8 [Optional] Contact the Teradata Viewpoint Administrator to verify that the portlet has been received for approval.
Profile

The Profile portlet provides tabs that allow you to set your personal user settings and manage your Teradata Database profile information:

**Personal Info**

Change your name, change your password (if authorized), and set Teradata Viewpoint preferences.

**Teradata Profiles**

Manage settings for each of your Teradata Database user profiles. Link your Teradata profile to the Teradata Database systems you are authorized to access.

Access the Profile portlet from the Teradata Viewpoint portal main menu bar.

**About the Personal Info Tab**

The Profile view, Personal Info tab, allows you to manage your Teradata Viewpoint profile:

- Change the first and last name for the profile.
- Change your Email address.
- Change your Locale.
- Select the Time Zone.

Use the Personal Info tab to set your locale. Supported locales include:
The locale you select is applied to the entire Teradata Viewpoint session and is maintained in future sessions.

The list of available locales is determined by the language packs installed. If the locale you want does not appear in the list, contact the Teradata Viewpoint Administrator.

Changing a Name
You can change the first and last name for a Teradata Viewpoint profile.

1. From the Profile view, click the Personal Info tab.
2. Change the name in the First Name field.
3. Change the name in the Last Name field.
4. Click Apply.
   A confirmation message appears.

Setting a Contact Email Address
You can set your Email address using the Personal Info tab. This email address is used for identification and communication in the Teradata Viewpoint system, including notifications and reminders.

The email address cannot contain uppercase letters. Uppercase characters are automatically converted to lowercase.

1. From the Profile view, click the Personal Info tab.
2. Enter your full address in the Email field.
3. Click Apply.
   A confirmation message appears.

Managing Passwords
You can manage Teradata Viewpoint profile passwords. A password must be 4 to 25 characters in length.

A user cannot change their password if their profile is externally authenticated. The fields required to change the password are not available when external authentication is used. To change the password on an externally authenticated profile, follow your company policy for password management.

1. From the Profile view, click the Personal Info tab.
2. Enter your current password in the Current Password field.
3 Enter a new password in the **New Password** field.

4 Confirm your new password by retyping it in the **Re-enter New Password** field.

5 Click **Apply**.

   A confirmation message appears.

### Setting the Locale

You can set the Teradata Viewpoint locale to display the local language and dates, times, and numbers in the correct format for the country.

1 From the **Profile** view, click the **Personal Info** tab.

2 Select the locale from the list.

   The Teradata Viewpoint application server locale is the default.

3 Click **Apply**.

   A confirmation message appears.

### Setting the Time Zone

You can adjust your local Teradata Viewpoint time zone setting to compensate for different time zones. Select the local time zone to display all time and date information in the local date and time, even if the Teradata Database system you are monitoring is located in a different time zone.

The time zone you enter compensates for the time difference between the monitored system location and the Teradata Viewpoint reporting location.

1 From the **Profile** view, click the **Personal Info** tab.

2 Select a time zone from the list.

   Time zones shown are relative to Greenwich Mean Time (GMT) and include a reference location. The Teradata Viewpoint application server time zone is the default. To view more time zones, use the scroll bar.

3 Click **Apply**.

   A confirmation message appears.
About the Teradata Accounts Tab

Use the Teradata Accounts tab in the Profile view to manage Teradata Database account logon and profile information for each Teradata Database system. Teradata account information is used by the My Queries portlet. For each Teradata Database system, you can:

- Add accounts
- Edit existing profiles
- Delete profiles

System profiles added using the Teradata Accounts tab must already exist on the monitored system. The system validates the USERNAME, PASSWORD, and ACCOUNT STRING fields prior to confirmation.

Adding a User Profile

This task explains how to associate Teradata Database profiles with your Teradata Viewpoint profile.

1. From the Profile view, click the Teradata Accounts tab.
2. Under Add Account, select a Teradata Database system from the list.
3. Enter the following information in the appropriate fields:
   - Username
   - Password
   - [Optional] Account string
4. Click Add.
   A confirmation message appears.

Editing a User Profile

This topic explains how to edit a Teradata Database system user profile in Teradata Viewpoint.

1. From the Profile view, click the Teradata Accounts tab.
2. Mouse over the row containing the user profile information for the Teradata Database system you are updating.
   The row is highlighted, and Edit and Delete appear.
3 Click **Edit** to the right of the row containing the user profile information.

4 Edit any of the following fields:
   - **PASSWORD**
   - **ACCOUNT STRING**

5 [Optional] Click **Test** to verify that the logon settings are correct.
   A confirmation message appears.

6 Click **Save** to save your changes.
   A confirmation message appears.

**Deleting a User Profile**

This task explains how to delete a Teradata Database system user profile from Teradata Viewpoint using the **Profile** view, **Teradata Accounts** tab.

1 From the **Profile** view, click the **Teradata Accounts** tab.

2 Mouse over the row containing the Teradata Database user profile information for the system you are updating.
   The row is highlighted, and **Edit** and **Delete** appear.

3 Click **Delete** to the right of the row containing the user profile information.
   If the deletion is successful, a confirmation message appears.
System Administration

The Teradata Viewpoint administrative portlets allow the Teradata Viewpoint Administrator to provide access to Teradata Viewpoint resources and information.

**Configuration portlets**

- **Teradata Systems** Configure, enable, and disable Teradata Viewpoint servers and data collectors. After a server is defined to Teradata Viewpoint, you can maintain logins, accounts, passwords, and character set settings.
- **Managed Servers** Configure, enable, and disable managed servers.
- **Alert Setup** Configure alerts or migrate Teradata Manager alerts.
- **LDAP Servers** Configure LDAP servers to authenticate, auto-provision, and map Viewpoint roles to Teradata Viewpoint users.
- **Backup** Configure daily backups.

**Portlet Library**

Select portlets for activation. Using a simple checklist, you can either enable or restrict access to available Teradata Viewpoint portlets.

**Roles Manager**

Manage roles, assign users, and grant permissions efficiently. After a role is created, you can customize the role by assigning users, enabling portlets, grant permissions for metrics, and granting user permissions for portlets.

**User Manager**

Manage Teradata Viewpoint user accounts by creating user accounts, assigning or resetting passwords, and assigning users to predefined roles.

**About Security and Permissions**

The Teradata Viewpoint administrative portlets allow the Teradata Viewpoint Administrator to control portlet access at different levels by setting permissions for Teradata Viewpoint users.

**Global**

Enable or disable access to portlets globally using the **Portlet Library** portlet. This setting takes precedence over every other portlet permission level.
Role

Assign permissions to classes of users called roles using the Roles Manager portlet. Each tab controls access to features.

User

Assign available roles to users and set role precedence using User Manager portlet. Roles assigned higher priority take precedence over lower-priority roles.

Alert Setup

The Alert Setup portlet allows the Teradata Viewpoint Administrator to configure the Alert Service to perform any of the following actions in response to alerts:

- Write to the alert log
- Send email notifications
- Send SNMP notifications
- Run BTEQ scripts
- Run programs

The Teradata Viewpoint Administrator can also configure the following alert presets:

- Core hours of operation
- Action sets of multiple alert actions run in a single operation
- Groups of multiple alert action sets run in a single operation

The Teradata Viewpoint Administrator can set time periods and file-size restrictions for retention of alert log data.

Settings configured in the Alert Setup portlet determine data displayed in the Alert Viewer portlet.

Setting Alert Retention

You can set limits on how long to retain alert log data and how much to retain.

1. From the SETUP OPTIONS list, click Delivery Settings.
2. From the DELIVERY TYPES list, click Alert Log.
3. Under Delete Alert Log Data, do any of the following:
   - Select the After check box to set the retention period using a number and calendar value.
   - Select the Over check box, and then set the file-size restriction using the Over box and list.
4. Click Apply to apply the settings.
If you set a retention period, then after the specified period expires, alert log data is deleted in weekly increments. If you set a file-size restriction, then after the specified file size is exceeded, alert log data is deleted in weekly increments with the oldest data being deleted first.

**Configuring Email Settings for Alerts**

You can configure the Alert Service to send alert notifications by email.

1. From the **SETUP OPTIONS** list, click **Delivery Settings**.
2. From the **DELIVERY TYPES** list, click **Email**.
3. Under **SMTP Host**, do the following:
   a. In the box, type the host address of the outgoing (SMTP) email server.
   b. [Optional] Select the **Use SSL** check box to use Secure Sockets Layer as the transmission protocol.
4. Under **Port**, do one of the following:
   - Select **Use default port** to use the default communications port on the SMTP host for outgoing email.
   - Select **Enter port number**, and in the box, type the custom port number for the SMTP host to use for outgoing email.
5. In the **Server Timeout** box, type the number of seconds the system must wait to establish a connection with the SMTP host before timing out. The default is 30 seconds.
6. In the **Reply-to** box, type the email address to use as the Reply-to address in delivered alert email messages.
7. Under **Login**, do one of the following:
   - Select **Anonymous login** to log on to the SMTP host anonymously.
   - Select **Enter credentials** and in the boxes type a **Username** and **Password** to use to log on to the SMTP host.
8. Leave the **Advanced** box empty.
9. To test your email delivery settings, type a valid recipient email address in the **Test Recipient** box and click **Test**.
   - The icon ![ ] appears if the operation is successful. The icon ![ ] appears if the operation fails. Verify that the settings are correct, and try again.
   - If the test is successful, an email message is sent to the test recipient address, addressed from the email address specified in the **Reply-to** box.
10. Click **Apply** to apply the settings.

**Adding and Editing SNMP Configurations for Alerts**

You can configure the Alert Service to deliver alert notifications to third-party management applications using SNMP.

1. From the **SETUP OPTIONS** list, click **Delivery Settings**.
2 From the **DELIVERY TYPES** list, click **SNMP**.

3 From the **SNMP** list, do one of the following:
   - To add an SNMP configuration, click 📚.
   - To copy an SNMP configuration, click 📚 in the row of the configuration you want to copy.
   - To edit an SNMP configuration, click the name of the configuration.

4 In the **Configuration Name** box, type a name for the SNMP configuration.

5 In the **Destination** box, type the IP address or host name of the destination for SNMP alert notifications.

6 In the **Community** box, type a name for the SNMP community.
   The default is `public`.
   You also have the option to add 🗑️ or remove 🗑️ **Destination** and **Community** pairs.

7 To test the SNMP configuration on the specified destination host or hosts, click **Test**.
   The icon 🟢 appears if the operation is successful. The icon 🟠 appears if the operation fails. Verify that the settings are correct, and try again.
   If the test is successful, the Alert Service sends an SNMP trap (notification) to each specified destination. Verify that the SNMP trap is received at each destination.

8 [Optional] Select the **Default for Alert Request Collector** check box to make this the default configuration for SNMP requests originating from the AlertRequest and MonitorRequest tables in the dbcmngr database.
   **Note:** Making this configuration the default clears the previous default.

9 Click **Apply** to apply the settings.

### Adding and Editing BTEQ Configurations for Alerts

You can configure the Alert Service to run BTEQ alert actions.

1 From the **SETUP OPTIONS** list, click **Delivery Settings**.

2 From the **DELIVERY TYPES** list, click **BTEQ**.

3 From the **BTEQ** list, do one of the following:
   - To add a BTEQ configuration, click 📚.
   - To copy a BTEQ configuration, click 📚 in the row of the configuration you want to copy.
   - To edit a BTEQ configuration, click the name of the configuration.

4 In the **TDPI D** box, type the TDPI D of the Teradata Database you want to log on to.
   The BTEQ scripts are run against the specified TDPI D. The TDPI D must match the configuration in the **Teradata Systems** portlet.

5 [Optional] In the **Account ID** box, type the logon account ID under which to run the BTEQ configuration.
   The account ID is associated with the **Username** specified in this pane.
6 Select a **Session Character Set** from the list.

7 In the boxes, type a valid **Username** and **Password** to use to log on to the specified TDPID.

8 [Optional] Type a **Logmech Name** and **Logmech Data** in the boxes.
   - **Logmech Name** is the logon mechanism, and **Logmech Data** is the logon data (parameters or credentials) for the selected mechanism.

9 To test the BTEQ configuration on the specified TDPID, click **Test**.
   - The icon 🎊 appears if the operation is successful. The icon 🕳️ appears if the operation fails. Verify that the settings are correct, and try again.

10 Click **Apply** to apply the settings.

### Deleting SNMP or BTEQ Configurations

You cannot delete a BTEQ configuration if it is used in an action set, or if it is the last configuration for a defined BTEQ alert action. You cannot delete an SNMP configuration if it is used in an action set.

1 From the **SETUP OPTIONS** list, click **Delivery Settings**.

2 From the **DELIVERY TYPES** list, click **SNMP** or **BTEQ**.

3 From the **SNMP** or **BTEQ** list, click 🗑️ to delete a configuration.
   - A confirmation message appears.

4 Click **OK**.

### About Core Hours

The Alert Service operates 24 hours a day, 7 days a week.

You can schedule alert actions to run during one or more of the following times:

- Core hours
- Evening hours
- Weekend hours

Core hours are set as specific days of the week, with either a specific time interval or all day (24 hours).

Evening hours and weekend hours are defined as follows:

- **Evening hours**. On core days, the hours opposite the core hours.
- **Weekend hours**. The ending time of the ending core day to the beginning time of the beginning core day.

<table>
<thead>
<tr>
<th><strong>Time Interval</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>If the core hours are Monday through Friday, 9:00 AM to 5:00 PM, then evening hours are Monday through Friday, 5:00 PM to 9:00 AM, and weekend hours are from Friday at 5:00 PM through Monday at 9:00 AM.</td>
</tr>
</tbody>
</table>
All Day
If the core hours are Monday through Friday, 24 hours, then there are no evening hours, and weekend hours are Saturday through Sunday, 24 hours.

Setting Core Hours
As you make selections in this view, the EVENING HOURS and WEEKEND HOURS are updated in the view.

1 From the SETUP OPTIONS list, click Alert Presets.
2 From the PRESET OPTIONS list, click Core Hours.
3 In the CORE HOURS pane, under Days, select the beginning and ending core days from the two lists.
4 Under Time, do one of the following:
   • Select 24 hours to specify the entire day on core days.
   • Select the time interval option and select the beginning and ending times from the two lists.
5 From the Time Zone list, select the time zone to use for the core hours.
6 Click Apply to apply the settings.

Adding and Editing Action Sets
Alert actions can be combined into action sets. An action set allows you to run multiple alert actions in a single operation.

1 From the SETUP OPTIONS list, click Alert Presets.
2 From the PRESET OPTIONS list, click Action Sets.
3 From the ACTION SETS list, do one of the following:
   • To add an action set, click .
   • To copy an action set, click in the row of the action set you want to copy.
   • To edit an action set, click the name of the action set.
4 In the Action Set Name box, type a name for the action set.
5 Under Times, select check boxes for the hours of operation during which you want the action set to run.
6 Under Actions, select any of the following actions by selecting the appropriate check box:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Include in alert log</td>
<td>Enables the alert log.</td>
</tr>
<tr>
<td>Send to person</td>
<td>In the appropriate box, type the recipient name or ID, role, or email address. Specify multiple users in any box by separating them with a semicolon. You can use the boxes in any combination to specify different recipients.</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SNMP</td>
<td>Select the SNMP configuration from the list.</td>
</tr>
<tr>
<td>BTEQ</td>
<td>From the lists, select the BTEQ script to run and the TDPIP of the Teradata Database to log on to and against which to run the script. Select Get from alert to specify the Teradata Database that generated the alert.</td>
</tr>
<tr>
<td>Run a program</td>
<td>From the list, select the program to run. You have the option to enter command-line arguments.</td>
</tr>
</tbody>
</table>

You also have the option to add or remove actions. The Send to person, SNMP, BTEQ, and Run a program actions are dimmed if they have not been defined by the Teradata Viewpoint Administrator or Teradata System Administrator. For additional information, see the Teradata Viewpoint Configuration Guide.

7  Click Apply to apply the settings.

Adding and Editing Groups

Alert actions can be combined into action sets, and alert action sets can be combined into groups. A group allows you to run multiple action sets in a single operation. Action sets must be defined before they can be included in a group.

1  From the SETUP OPTIONS list, click Alert Presets.

2  From the PRESET OPTIONS list, click Groups.

3  From the GROUPS list, do one of the following:
   • To add a group, click .
   • To copy a group, click in the row of the group you want to copy.
   • To edit a group, click the name of the group.

4  In the Group Name box, type a name for the group.

5  From the list under Include the Following Action Sets, select the action set you want to include in the group.

   You also have the option to add or remove action sets.

6  Click Apply to apply the settings.

Deleting Action Sets or Groups

If you delete a group, the group configuration is lost but the action sets combined in the group remain. You cannot delete an action set if it is used in a group or an alert rule. You cannot delete a group if it is used in an alert rule.

1  From the SETUP OPTIONS list, click Alert Presets.

2  From the PRESET OPTIONS list, click Action Sets or Groups.

3  From the ACTION SETS or GROUPS list, click to delete a configuration.

   A confirmation message appears.

4  Click OK.
**Group Examples**

Alert actions can be combined into action sets, and action sets can be combined into groups. A group allows you to run multiple action sets in a single operation.

---

**Different Alert Actions for Weekday and Weekend Hours**

If you want a different set of alert actions to be performed for an event depending on the time period, define time-specific action sets and assign them to a group.

If you want the alert to perform an SNMP notification when a space-usage threshold is exceeded on a weekday, and to perform an SNMP notification and also send an email message to the Teradata Database Administrator when the threshold is exceeded during the weekend, define two action sets: one SNMP notification action for core, evening, and weekend hours, and one email notification action for weekend hours only.

Create a group and assign both action sets to the group. Then, in the Teradata Viewpoint administrative portlet where you want to define the alert, assign the group as the alert action.

---

**Managing Email Alert Recipients**

Groups and action sets can also be used to manage alert recipients, similar to email distribution lists.

Define action sets that send email notifications to different sets of people in your organization.

One action set could send an email notification to the Teradata Database Administrator, and another action set could send an email notification to end users in the finance department.

Create a group and assign both action sets to the group. Then, in the Teradata Viewpoint administrative portlet where you want to define the alert, assign the group as the alert action. When an alert is issued, both sets of users receive an email notification.

---

**Backup**

The **Backup** portlet allows you to enable automatic Teradata Viewpoint system backups and configure the data retention settings.

The **Backup** portlet displays the backup process icon with either a successful completion or an error for the last attempt and lists the last successful backup date and time. Use the **Backup** portlet to:

- Enable and disable the daily backup process
- Store the backup files on the local system or at a network location
- Select the daily backup time
- Select how many days to keep the backup files
About Backup Errors

The BACKUP dialog box displays an out-of-service icon and the status message **AN ERROR HAS OCCURRED** if an error occurs during the backup process. To investigate the error, you can view the backup log file: /opt/teradata/dcs/logs/backup.log. For additional information, see the Teradata Viewpoint Configuration Guide.

Scheduling Viewpoint Backups

You can configure automatic backups, set a data retention length, and enable or disable the backup process at any time.

1  [Optional] From the BACKUP view, do one of the following:
   - Select the **Enable backup** check box to activate the backup process.
   - Clear the **Enable backup** check box to disable the automatic-backup process.

2  Under **Location**, select one of the following options to set the location of the backup files:
   - Click **Local** to use the local server.
   - Click **Network** to use a network location and do the following:
     - Enter a **Host** to specify the host system name.
     - Enter a **Path** to specify the absolute path name where the backups are stored on the host system.
     - [Optional] Click **Test** to verify that the login settings are correct. The icon ✅ appears if the operation is successful. The icon ⬤ appears if the operation fails. Verify that the settings are correct, and try again.

3  From the **Daily Backup Time** list, select the daily start time of the backup operation.

4  From the **Keep Backups For** list, select the number of days to retain the backup data.

5  Click **Apply**.
The changes are saved and backup files are deleted when they are older than the configured number of days.

**LDAP Servers**

**LDAP Servers**

The LDAP Servers portlet allows you to configure LDAP servers to authenticate users and assign user roles in Teradata Viewpoint. The LDAP Servers portlet displays the names of currently configured LDAP servers or is empty if an LDAP is not configured.

- Use the next to SETUPS to add an LDAP server.
- Use the order buttons to adjust the evaluation order of the LDAP-server list.
- Use the next to the server name to delete an LDAP server.
- Use the dialog box to enable and disable an LDAP server, and configure the LDAP to automatically validate users against the LDAP directory with the auto-provisioning feature or assign user roles with the role mapping feature.

**What is an LDAP Server?**

Teradata Viewpoint uses a Lightweight Directory Access Protocol (LDAP) server to:

- Validate new user information by querying the LDAP for authentication. The binding operation authenticates a username and a password.
- Automatically create a Teradata Viewpoint username with the auto-provisioning feature.
- Automatically assign users to a Teradata Viewpoint role with the Role Mapping feature.

**Adding an LDAP Server**

You can add an LDAP server to authenticate and assign roles to Teradata Viewpoint users.

1. Click next to SETUPS.
2. Enter a Nickname for the LDAP server (up to 8 characters).
3. [Optional] Select the Enabled check box to activate LDAP upon successfully adding the LDAP server to Teradata Viewpoint.
4. Enter a URL address.
   One URL address is required. Use to delete, add, and move up or move down in the evaluation order.
5. Select the Name Matching method from the following options:
   - Select DN Pattern Bind to specify one or more patterns that represent a distinguished name (DN) in the LDAP directory.
   - Select User Search to search for a pattern in the base directory or subdirectories:
     - [Optional] Enter a Service account DN and Service account password to search with a specific account.
     - [Optional] Leave Service account DN and Service account password blank to connect to the LDAP as an anonymous user.
     - Enter a Search pattern.
     - Enter a Search base to specify a base directory for the search pattern.
     - [Optional] Select the Search extent Recursive scan check box to include subdirectories of the base directory in the search.
     - [Optional] Under Search extent, clear the Recursive scan check box to limit the search to the specified base directory.
6. Configure Key User Information:
   - Enter the LDAP first name attribute.
   - Enter the LDAP last name attribute.
   - Enter the LDAP email attribute.
   Every user has an email address. This default email domain is used if a valid email address is not found in the LDAP directory during auto-provisioning.
7. [Optional] Test your settings:
   - Click Test to display the LDAP test panel.
   - Enter a Test username and Test password.
   - Click Run.
   The icon ☑ appears if the operation is successful. The icon △ appears if the operation fails. Verify that the settings are correct, and try again.
8. [Optional] Configure Auto-Provisioning:
a  [Optional] Select the **Turn on auto-provisioning** check box to automatically validate users against the LDAP directory.

b  Select a role from the **Automatically assign these roles** menu. You can add or remove roles.

c  Enter a **Default email domain** to provide a notification email address. Every user has an email address. This default email domain is used if a valid email address is not found in the LDAP directory during auto-provisioning.

9  If the group role mapping method is specified, configure **Role Mapping**:

a  Enter a **Group search base**.

b  [Optional] Select the **Group search subtree** check box to include subtree directories during the binding process.

c  Enter a **Group attribute name**.

d  [Optional] Click **Add Role Mapping** to add attribute or group settings so that you can assign another role.

10  Click **Apply**.

The icon ☑️ appears if the operation is successful. The icon ✗ appears if the operation fails. Verify that the settings are correct, and try again.

**About Role Mapping**

In Teradata Viewpoint, users are assigned roles to organize and control their access to portlets, metrics, and features. You can use the **Roles Manager** portlet to assign permissions to the roles. During the process of adding an LDAP configuration to Teradata Viewpoint, the optional **Role Mapping** section in the **LDAP Servers** portlet allows you to assign a role automatically to auto-provisioned users.

Use role mapping to:

- Assign roles for a new user.
- Add roles that were assigned to the user since the last user login.
- Remove roles that were removed since the last user login.

Consider the following:

- Only roles already defined using the **Roles Manager** portlet can be mapped.
- The Teradata Viewpoint Administrator can change a role at any time using the **Roles Manager** portlet.

**Role Mapping Use Cases**

In the following use cases, the LDAP value represents the distinguished name (DN) of a group. When the **Type** is Attribute, the attribute name field represents the user attribute where the group DN is stored. When the **Type** is Group, the group attribute name field is used for mapping and represents the group attribute where the user DN is stored.

The first use case assigns users to a Teradata Viewpoint role based on an attribute of the user’s record in LDAP. Assume you have a user with the following record in LDAP:
Managed Servers

Managed Servers

A managed server is a server in a Teradata cabinet that is monitored by the same Teradata server management solution used to monitor TPA nodes. A managed server might be used for storage, backup, or housing data collectors that provide portlet information and metric data. Teradata Viewpoint monitors managed servers for system-level metrics and collects information for Teradata Viewpoint portlets.

The Managed Servers portlet displays the names of currently configured managed servers or is empty if no managed server is configured. Use ☰ next to SERVERS to add a managed server. Use the dialog box to delete, enable, and disable a managed server for use by the Teradata Viewpoint Data Collection Service (DCS).
Adding a Managed Server

You can add a managed server to Teradata Viewpoint. After a managed server is defined in Teradata Viewpoint, you can test the configuration settings and enable the managed server for use by the Data Collection Service (DCS).

1. Click next to SERVERS.
2. [Optional] Select the Server enabled check box to activate the managed server for the DCS.
3. Enter values for these required fields:
   - **Managed Server Name** is an 8-character alphanumeric name.
   - **Hostname** is the managed server IP address or domain name.
   - **Login** is the user name and password.

   The default values only need to be changed if you change the login and password settings during the installation of TMS Monitor.

4. Do any of the following:
   - Click Test to verify that the login settings are correct.
   - Click Apply to update the managed server.

   The icon ✅ appears if the operation is successful. The icon ⚠️ appears if the operation fails. Verify that the settings are correct, and try again. If you are unable to enable or disable the managed server, contact the Teradata Viewpoint Administrator.

Deleting a Managed Server

You can delete a Teradata Viewpoint managed server. This is a permanent procedure that differs from disabling the managed server from the Data Collection Service.

1. From the SERVERS list, click on the managed server name you want to remove.
2. In the dialog box, click Delete Server.

   A confirmation message appears.

3. Click OK.
Enabling or Disabling a Managed Server

After a managed server is defined in Teradata Viewpoint, you can enable it for use by the Data Collection Service (DCS) or disable it.

1. From the SERVERS list, click on the managed server name you want to update.
2. Do one of the following:
   - Select the Server enabled check box to activate a managed server.
   - Clear the Server enabled check box to disable a managed server.

When disabled, the DCS does not use the managed server. Any existing data about the managed server can still be viewed.

3. Do any of the following:
   - Click Test to verify that the login settings are correct.
   - Click Apply to update the managed server.

The icon appears if the operation is successful. The icon appears if the operation fails. Verify that the settings are correct, and try again. If you are unable to enable or disable the managed server, contact the Teradata Viewpoint Administrator.

Portlet Library

The Portlet Library allows you to enable or disable portlets globally. This setting takes precedence over every other portlet permission level.

The Manage Existing Portlets view allows you to manage the installed portlets, which are grouped by category. Details about each portlet are also provided:

- Version number
- Publisher name
- Bundle name
- Installation date
- Whether the portlet is enabled

Portlets in the Admin category display N/A in the ENABLE column. These portlets cannot be disabled and are included in the view only to provide version information.

Enabling or Disabling Portlets

The Teradata Viewpoint Administrator can use the Portlet Library to enable or disable installed portlets for Teradata Viewpoint user access.

1. In the Manage Existing Portlets dialog box, click a name to expand a category.
2. For each installed portlet, do one of the following:
• Enable the portlet by selecting the corresponding check box.
• Disable the portlet by clearing the corresponding check box.

You can enable all the portlets by clicking the ENABLE column heading. Portlets in the Admin category display N/A in the ENABLE column. These portlets cannot be disabled and are included in the view only to provide version information.

3 Click Apply.

Deleting a Shared Portlet

The Teradata Viewpoint Administrator can use the Portlet Library to delete a shared portlet so Teradata Viewpoint users can no longer access it.

1 In the Manage Existing Portlets dialog box, click Shared to expand the category.
2 Click × under the DELETE column that corresponds to the shared portlet you want to delete.

A confirmation message appears.

3 Click OK.

The portlet name no longer appears in the Add Content menu in the portal, and the portlet is no longer available to Teradata Viewpoint users. Existing instances of a shared portlet on a portal page remain on the page. However, a warning message appears if a user tries to access the portlet.

Roles Manager

Roles Manager

The Roles Manager portlet allows the Teradata Viewpoint Administrator to assign permissions efficiently by creating classes of users called roles.

The Teradata Viewpoint Administrator can perform the following tasks:

• Add and configure new roles
• Edit the configuration and settings of existing and default roles
• Copy roles, saving time in creating new roles
• Enable or disable portlets for a role.
• Delete roles that are no longer needed

About Roles

Teradata Viewpoint includes the following preconfigured roles:

Administrator

This role has all permissions and can be assigned to any account. It is recommended that this role be used only by the Teradata Viewpoint Administrator.
User

This role is assigned to every Teradata Viewpoint user and cannot be removed from Teradata Viewpoint. It is recommended that this role be set with minimum user permissions.

It is recommended that you configure new roles with partial permissions that are appropriate to all users in that role. Each role you create controls access to specific systems, portlets, metrics, preferences, and permissions in portlets.

Example Roles

The following examples show how roles can be defined to manage portlet usage and control permissions within Teradata Viewpoint.

### AppDBA

The AppDBA role is defined for users that are application DBAs. The rewind feature and some portlets are enabled for this role so users can review graphs in the Productivity portlet.

### AcctDept

The AcctDept role is defined for all users in the Accounting Department. Some portlets are enabled for this role. These users are granted permissions so they can edit all calendar events in the Calendar portlet and access the My Queries portlet to monitor their queries.

### OpDBA

The OpDBA role is defined for users that are operations DBAs. The rewind feature and all portlets are enabled for this role so users can monitor performance trends. Users in the OpDBA role access the Workload Monitor portlet to track Teradata Database request arrivals and completions.

About the Roles Manager View

The Roles Manager view allows the Teradata Viewpoint Administrator to manage roles efficiently, including assigning users to roles, and granting user permissions. After a role is created, you can customize the role using the following tabs:

**General**

Enable or disable a role, and select the systems available to that role.

**Users**

Search for users and add them to, or remove them from, the list of users assigned to the selected role.

**Portlets**

Enable or disable portlets for a role. This tab can also be used to configure default settings per portlet, per role.

**Metrics**

Select the metrics to display per metric, per system.
Permissions

Configure permissions per system, per portlet, per role.

Adding a Role

You can add a role and assign one or more Teradata Database systems to the role.

1. From the Roles Manager view, click Add Role.
   An Add role dialog box appears with the General tab selected (default).

2. Under Name, enter a new name for the role, up to 25 characters.
   You can use alphanumeric characters and underscore (_), but no space.

3. Under Description, use the default or enter a new description, up to 255 characters.

4. [Optional] Under Role State, do one of the following:
   - Leave the Role State as is.
   - Select Enabled to enable the role for configuration and adding users, and activate the role for use with Teradata Viewpoint.
   - Select Disabled to enable the role for configuration and adding users, but disable the role for use with Teradata Viewpoint.

5. [Optional] Under Rewind State, do one of the following:
   - Leave the Rewind State as is.
   - Select Enabled to grant permission to this role to use the rewind feature, when available.
   - Select Disabled to deny permission for this role to use the rewind feature.

6. [Optional] Under Enable Systems For Role, do one of the following:
   - Leave the currently selected Teradata Database systems as is.
   - Select new Teradata Database systems the selected role is authorized to access.
   - Click the Enable Systems For Role column heading to select all check boxes for the Teradata Database systems.
**Editing a Role**

You can edit a role, but you cannot change the name of an existing role. To change the name, you must either add a new role or copy the role, and then change the role name.

1. From the **Roles Manager** view, select a role from the list.
   A dialog box appears with the current information for the selected role.

2. Under **Description**, use the default or enter a new description, up to 255 characters.

3. [Optional] Under **Role State**, do one of the following:
   - Leave the **Role State** as is.
   - Select **Enabled** to enable the role for configuration and adding users, and activate the role for use with Teradata Viewpoint.
   - Select **Disabled** to enable the role for configuration and adding users, but disable the role for use with Teradata Viewpoint.

4. [Optional] Under **Rewind State**, do one of the following:
   - Leave the **Rewind State** as is.
   - Select **Enabled** to grant permission to this role to use the rewind feature, when available.
   - Select **Disabled** to deny permission for this role to use the rewind feature.

5. [Optional] Under **Enable Systems For Role**, do one of the following:
   - Leave the currently selected Teradata Database systems as is.
   - Select new Teradata Database systems the selected role is authorized to access.
   - Click the **Enable Systems For Role** column heading to select all check boxes for the Teradata Database systems.

   **Note:** You can click the column heading again to clear all check boxes.

**Copying a Role**

When a role is copied, all settings on all tabs are inherited from the original role, except for the **Name** field on the **General** tab. When the Administrator role is copied, all information
on all tabs is copied. However, the copied role does not have administrative privileges and does not have an Admin menu on the portal.

1. From the Roles Manager view, select a role from the list.
2. Click Copy Role.

   A dialog box appears with the General tab selected.

3. Under Name, enter a new name for the role, up to 25 characters.
   You can use alphanumeric characters and underscore (_), but no space.

4. Under Description, use the default or enter a new description, up to 255 characters.

5. [Optional] Under Role State, do one of the following:
   - Leave the Role State as is.
   - Select Enabled to enable the role for configuration and adding users, and activate the role for use with Teradata Viewpoint.
   - Select Disabled to enable the role for configuration and adding users, but disable the role for use with Teradata Viewpoint.

6. [Optional] Under Rewind State, do one of the following:
   - Leave the Rewind State as is.
   - Select Enabled to grant permission to this role to use the rewind feature, when available.
   - Select Disabled to deny permission for this role to use the rewind feature.

7. [Optional] Under Enable Systems For Role, do one of the following:
   - Leave the currently selected Teradata Database systems as is.
   - Select new Teradata Database systems the selected role is authorized to access.
   - Click the Enable Systems For Role column heading to select all check boxes for the Teradata Database systems.

   Note: You can click the column heading again to clear all check boxes.
Deleting a Role

You can delete a role. After a role is deleted, it cannot be restored. This action affects all users assigned to the role.

1. From the Roles Manager view, select a role from the list.
2. Click Delete Role.
   A confirmation message appears.
3. Click OK.
   The deleted role is removed from the list.

Assigning Users to a Role

You can search for users and assign them to a role.

If auto-provisioning is in use, a default role is automatically assigned to new users the first time they log on. User is generally the default assignment.

1. From the Roles Manager view, select a role from the list.
2. Click the Users tab.
   The users list appears and includes two panes. The left pane lists all Teradata Viewpoint system users. The right pane lists users already assigned to the selected role. In the left pane, the names of users already assigned to the selected role are dimmed.
3. [Optional] Search for a user:
   a. Select a filter from the list.
   b. In the contains field, enter the search criteria.
   c. Click Find.
      The AVAILABLE USERS list displays only users meeting the search criteria.
4. Select one or more users from the left pane.
   To select multiple users, press Ctrl while selecting additional names.
5. Click >>.
   The selected users are assigned to the role. Selected user names are copied to the right pane and are dimmed in the left pane.
6. Click Apply.
Removing Users from a Role

You can remove users from a role.

1. From the Roles Manager view, select a role from the list.
2. Click the Users tab.

The users list appears and includes two panes. The left pane lists all Teradata Viewpoint system users. The right pane lists users already assigned to the selected role. In the left pane, the names of users already assigned to the selected role are dimmed.

3. Select one or more users from the right pane.
   You can select multiple users by holding the CRTL key and clicking additional names.
4. Click .
   The selected users are removed from the role. The names no longer appear in the right pane and are no longer dimmed in the left pane.
5. Click Apply.

Portlet and Preferences Permissions

The Teradata Viewpoint Administrator can set permissions for a role to access portlets, preferences, and tabs. Higher level permissions override lower level permissions.

Portlet Access

This option is the highest permission level for portlet access and gives this role access to the entire portlet. To grant a role access to this portlet from the Add Content menu, select the ENABLE FOR ROLE check box from the Portlets tab.

Preferences Access

This option is the highest permission level for preferences and gives this role access to change all preferences in this portlet. To grant a role access to the PREFERENCES view, select the SET PREFS check box from the Permissions tab.
Note: The SET PREFS check box is only available for portlets that have a PREFERENCES view.

Tab Access

This option is the lowest permission level for preferences and denies this role access to tabs in the PREFERENCES view. To deny a role from using any tab in the PREFERENCES view, select the Disable User Preferences for tab name globally check box from the Portlets tab by clicking under CONFIGURE DEFAULTS.

Enabling Portlets for a Role

You can enable Teradata Viewpoint portlets for a role. Portlets enabled using the Roles Manager portlet are the default portlets available for all users assigned to the selected role.

1. From the Roles Manager view, select a role from the list.
2. Click the Portlets tab.
   A dialog box appears displaying the portlet categories.
3. Click a name to expand a category and display the available portlets.
4. For the selected role, select the portlets to enable in each category.
   Click the ENABLE FOR ROLE column heading to enable the role for all portlets. Click the column heading again to clear all check boxes. Enabling a portlet in the Roles Manager view, Portlets tab, includes the portlet in the Teradata Viewpoint Add Content menu for all role-assigned users.
5. Click Apply.

Configuring Default Portlet Settings

You can configure default portlet settings for a role.

Shared portlets are preconfigured using an instance of a portlet and cannot be configured using the Roles Manager portlet.

1. From the Roles Manager view, select a role from the list.
2. Click the Portlets tab.
   A dialog box appears displaying the portlet categories.
3 Click a name to expand a category and display the available portlets.

4 Configure defaults for each portlet as follows:

a Click 🗂️ for the portlet you want to configure.

The CONFIG view for the corresponding portlet appears.

Configuration defaults entered in the CONFIG view only apply to the role being configured. If a user is assigned to multiple roles, the role with the highest priority determines which settings are applied to every instance of the portlet added to a portal page. For example, if a user is assigned the roles of Administrator then User, the Administrator settings apply to each instance of the portlet. Also, the Teradata Viewpoint Administrator can grant users permission to set preferences for a subset of the available settings as long as user preferences are not disabled.

b Follow the instructions in the preferences-related topics provided for each portlet in Teradata Viewpoint Help.

5 Click Apply.

**Granting Metric Permissions for a Role**

You can grant permissions for metrics by role. The metric permissions granted to a role apply to the following portlets only:

- Capacity Heatmap
- Metrics Analysis
• **Metrics Graph**

• **Today's Statistics**

1. From the **Roles Manager** view, select a role from the list.

2. Click the **Metrics** tab.

   A dialog box appears displaying the metrics categories and each Teradata Database system name.

3. Select the metrics for each available Teradata Database system that you want users in the selected role to see by doing any of the following:

   - Click the top check box in a column to select or clear all check boxes for a category for all systems.
   - Click the system name at the left of the row to select or clear all check boxes for that system.
   - Click a check box to select or clear that category for that system.

4. Click **Apply**.

**Granting Portlet Permissions for a Role**

You can enable specific features of a portlet by system and role.

1. From the **Roles Manager** view, select a role from the list.

2. Click the **Permissions** tab.

3. Select a portlet from the **Select portlet** list.

   The **Permissions** dialog box displays a list of the available systems and options.
4 Select the permissions you want to grant to the selected role for each available Teradata Database system by doing any of the following:

- Select the **SET PREFS** check box to allow users to set their own preferences.
- Select the **SHARE PORTLET** check box to allow users to share customized versions of the portlet with other users.
- Click the top check box in a column to select or clear all check boxes for a category for all systems.
- Click the system name at the left of the row to select or clear all check boxes for that system.
- Click a check box to select or clear that category for that system.

5 Click **Apply**.

### Portlet Permissions

The Teradata Viewpoint Administrator can grant access to portlet views using the **Permissions** tab. You must select the parent view setting for dependent child views to display.

<table>
<thead>
<tr>
<th>Permission Name</th>
<th>Description</th>
<th>Dependency</th>
<th>Portlets Displaying Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET PREFS</td>
<td>Enables role access to set their own preferences in this portlet. After this setting is enabled, the user can click <img src="image" alt="Preferences" /> in the portlet.</td>
<td>The SET PREFS check box is only available for portlets that have a <strong>PREFERENCES</strong> view.</td>
<td></td>
</tr>
<tr>
<td>SHARE PORTLET</td>
<td>Enables role to share customized versions of the portlet with other users. After this setting is enabled, the user can click <img src="image" alt="Share" /> in the portlet.</td>
<td>The <strong>SHARE PORTLET</strong> check box is only available for portlets that can be shared.</td>
<td></td>
</tr>
<tr>
<td>Permission Name</td>
<td>Description</td>
<td>Dependency</td>
<td>Portlets Displaying Setting</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>ABORT HOST</td>
<td>Enables role access to the Abort Host console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>ABORT QUERY</td>
<td>Enables role to abort queries from the Tools menu.</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
<td></td>
</tr>
<tr>
<td>ACCOUNT</td>
<td>Enables role to select <strong>By Account String</strong> in the SELECT REPORT dialog box.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td>ACCOUNT DRILLDOWN</td>
<td>Enables role access to a table of all sessions for each account.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td>ADD SPACE</td>
<td>Enables role to reallocate permanent disk space from one database to another.</td>
<td>Space Usage</td>
<td></td>
</tr>
<tr>
<td>ALL SESSIONS REPORT</td>
<td>Enables role to select <strong>By Session &gt; All</strong> in the SELECT REPORT dialog box.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td>CHANGE PRIORITY</td>
<td>Enables role to change the priority of a query or session from the Tools menu.</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
<td></td>
</tr>
<tr>
<td>CHANGE STATE</td>
<td>Enables role to change a state.</td>
<td>Application Health, Ecosystem Health, Process Health, Table Health</td>
<td></td>
</tr>
<tr>
<td>CHANGE WORKLOAD</td>
<td>Enables role to change the workload of a query or session from the Tools menu.</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
<td></td>
</tr>
<tr>
<td>CHECKTABLE</td>
<td>Enables role access to the Check Table console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>CLEAR ALERT</td>
<td>Enables role to clear an alert.</td>
<td>Application Health, Ecosystem Health, Log Viewer, Process Health, Table Health</td>
<td></td>
</tr>
<tr>
<td>CONFIGURE</td>
<td>Enables role access to the Configure console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>CREATE EVENT</td>
<td>Enables role to create calendar events.</td>
<td>Calendar</td>
<td></td>
</tr>
<tr>
<td>DBS CONTROL</td>
<td>Enables role access to the DBS Control console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>EDIT ANY EVENT</td>
<td>Enables role to edit any events, including events created by other users.</td>
<td>Calendar</td>
<td></td>
</tr>
<tr>
<td>EDIT OWN EVENT</td>
<td>Enables role to only edit their own calendar events.</td>
<td>Calendar</td>
<td></td>
</tr>
<tr>
<td>EDIT RULESETS</td>
<td>Enables role to edit rulesets</td>
<td>Workload Designer</td>
<td></td>
</tr>
<tr>
<td>Permission Name</td>
<td>Description</td>
<td>Dependency</td>
<td>Portlets Displaying Setting</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>FERRET</td>
<td>Enables role access to the Ferret console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>GATEWAY GLOBAL</td>
<td>Enables role access to the Gateway Global console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>LOCK DISPLAY</td>
<td>Enables role access to the Lock Display console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>MY CRITERIA</td>
<td>Enables role to select <strong>By Session &gt; My Criteria</strong> in the <strong>SELECT REPORT</strong> dialog box.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td>OPERATOR CONSOLE</td>
<td>Enables role access to the Operator Console console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>PARTITION DRILLDOWN</td>
<td>Enables role to select a utility from the <strong>NAME</strong> column in the utility view to see all sessions for the selected utility.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• VIEW SUMMARY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• UTILITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIORITY SCHEDULER</td>
<td>Enables role access to the Priority Scheduler console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>QUERY CONFIGURATION</td>
<td>Enables role access to the Query Configuration console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>QUERY SESSION</td>
<td>Enables role access to the Query Session console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>RECOVERY MANAGER</td>
<td>Enables role access to the Recovery Manager console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>RELEASE QUERY</td>
<td>Enables role to release a query that is queued and waiting to run from the <strong>Tools</strong> menu.</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
<td></td>
</tr>
<tr>
<td>SESSION DRILLDOWN</td>
<td>Enables role to view details of each session from the Account String, Session, User, or Utility reports.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• VIEW SUMMARY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ACCOUNT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ACCOUNT DRILLDOWN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ALL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MY CRITERIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• USER</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• USER DRILLDOWN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHOW LOCKS</td>
<td>Enables role access to the Show Locks console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>Permission Name</td>
<td>Description</td>
<td>Dependency</td>
<td>Portlets Displaying Setting</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>SPACE BY DATABASE</td>
<td>Enables role to select <strong>Database: By most space</strong> in the SELECT REPORT dialog box.</td>
<td></td>
<td>Space Usage</td>
</tr>
<tr>
<td>SPACE BY TABLE</td>
<td>Enables role access to the details view with a list of tables in each database.</td>
<td></td>
<td>Space Usage</td>
</tr>
<tr>
<td>SPACE BY VPROC</td>
<td>Enables role to select <strong>Vproc: By space</strong> in the SELECT REPORT dialog box.</td>
<td></td>
<td>Space Usage</td>
</tr>
<tr>
<td>TERADATA DWM</td>
<td>Enables role access to the Teradata DWM Dump console utility.</td>
<td>Remote Console</td>
<td></td>
</tr>
<tr>
<td>USER</td>
<td>Enables role to select <strong>By User</strong> in the SELECT REPORT dialog box.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td>USER DRILLDOWN</td>
<td>Enables role access to session details for that user.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td>UTILITY</td>
<td>Enables role to select <strong>By Utility</strong> in the SELECT REPORT dialog box.</td>
<td>Query Monitor</td>
<td></td>
</tr>
<tr>
<td>VIEW ACTIONABLE MENU</td>
<td>Enables role access to the <strong>Tools</strong> menu in the summary view.</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
<td></td>
</tr>
<tr>
<td>VIEW ALERT DETAIL</td>
<td>Enables role access to the details view.</td>
<td>Alert Viewer</td>
<td></td>
</tr>
<tr>
<td>VIEW BLOCK</td>
<td>Enables role access to the <strong>Blocked By</strong> tab.</td>
<td>SQL Scratchpad</td>
<td></td>
</tr>
<tr>
<td>VIEW BLOCK DETAILS</td>
<td>Enables role access to the content of the <strong>Blocked By</strong> tab.</td>
<td>SQL Scratchpad</td>
<td></td>
</tr>
<tr>
<td>VIEW BLOCKED BY</td>
<td>Enables role access to the <strong>Blocked By</strong> tab.</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
<td></td>
</tr>
<tr>
<td>VIEW CANARY QUERY</td>
<td>Enables role to view canary queries in the summary view.</td>
<td>Canary Response Times, Productivity</td>
<td></td>
</tr>
<tr>
<td>VIEW DBQL METRICS</td>
<td>Enables role to view the Queries Per Hour metrics.</td>
<td>Productivity</td>
<td></td>
</tr>
<tr>
<td>VIEW DELAY</td>
<td>Enables role access to the <strong>Delay</strong> tab.</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
<td></td>
</tr>
<tr>
<td>Permission Name</td>
<td>Description</td>
<td>Dependency</td>
<td>Portlets Displaying Setting</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>VIEW DETAIL</td>
<td>Enables role access to the details view.</td>
<td>VIEW SUMMARY</td>
<td>My Queries, System Health, Workload Health, Workload Monitor</td>
</tr>
<tr>
<td>VIEW EXPLAIN</td>
<td>Enables role access to the Explain tab.</td>
<td>VIEW SUMMARY, SESSION DRILLDOWN</td>
<td>My Queries, Query Monitor, SQL Scratchpad, Workload Monitor</td>
</tr>
<tr>
<td>VIEW NODES</td>
<td>Enables role access to the summary view.</td>
<td></td>
<td>Node Resources</td>
</tr>
<tr>
<td>VIEW NODE DETAIL</td>
<td>Enables role access to the details view to see nodes.</td>
<td>VIEW SUMMARY, VIEW NODES</td>
<td>Node Resources</td>
</tr>
<tr>
<td>VIEW QUERY BAND</td>
<td>Enables role access to the Query Band tab.</td>
<td>VIEW SUMMARY, SESSION DRILLDOWN</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
</tr>
<tr>
<td>VIEW RULESETS</td>
<td>Enables role to view rulesets.</td>
<td></td>
<td>Workload Designer</td>
</tr>
<tr>
<td>VIEW SQL</td>
<td>Enables role access to the SQL tab.</td>
<td>VIEW SUMMARY, SESSION DRILLDOWN</td>
<td>My Queries, Query Monitor, Workload Monitor</td>
</tr>
<tr>
<td>VIEW STATISTICS</td>
<td>Enables role access to see statistics in the TODAYS STATISTICS view.</td>
<td></td>
<td>Todays Statistics</td>
</tr>
<tr>
<td>VIEW VPROCS</td>
<td>Enables role access to the summary view to see vprocs.</td>
<td></td>
<td>Node Resources</td>
</tr>
<tr>
<td>VIEW VPROC DETAIL</td>
<td>Enables role access to the details view to see vprocs.</td>
<td>VIEW SUMMARY, VIEW VPROCS</td>
<td>Node Resources</td>
</tr>
<tr>
<td>VPROC MANAGER</td>
<td>Enables role access to the Vproc Manager console utility.</td>
<td></td>
<td>Remote Console</td>
</tr>
</tbody>
</table>
Teradata Systems

The Teradata Systems portlet allows the Teradata Viewpoint Administrator to add, configure, enable, and disable Teradata Database systems using specific dialog boxes:

**General**
Configure the system nickname, TDPID, login names, passwords (hidden), and account strings (optional). Test the connection to Teradata Database, and add or delete login names.

**Data Collectors**
Enable, disable, and configure data collectors to capture and retain portlet, disk usage, and resource data.

**System Health**
Enable metrics for the System Health portlet. Configure degraded and critical thresholds for each metric.

**Canary Queries**
Configure canary queries used to test Teradata Database system response times. The SYSTEM HEARTBEAT canary query cannot be removed.

**Alerts**
Add, delete, copy, and configure alerts, or migrate existing Teradata Manager alerts.

**Monitor Rates**
Set Teradata Database internal sample rates for sessions, node logging, and vproc logging.

**Log Table Clean Up**
Select system log tables to clean up.

**Clean Up Schedule**
Schedule clean up of system log tables.

You can view the amount of disk space used:

**Disk usage**
View the percentage of total disk space being consumed by collected data on the managed server.

**Twelve hour change**
View the percentage of disk space used or has become available over the past twelve hours. Positive indicates the amount of space used has increased. Negative indicates the amount of space used has decreased.
Adding a Teradata Database System

You can add a Teradata Database System to Teradata Viewpoint. The system must be added before you can configure the data collectors to monitor the database.

1. Click next to SYSTEMS.

2. Enter a SYSTEM NICKNAME (up to 8 characters).
3 [Optional] Select the **System Enabled** check box to activate the Teradata Database system for monitoring.

4 Enter the **TDPIID** of the Teradata Database system.

5 Enter a **LOGIN** name and password.

You also have the option to specify an account string, add more logins, and test that the login settings are correct.

6 [Optional] In the **CHARACTER SET** section, select default character sets and enter a JDBC Flag value.

- [Optional] Select a character set from the **Session** menu.
- [Optional] Select a character set from the **Monitor** menu.
- [Optional] Enter a **JDBC Flag** value.

7 Click **Apply** to apply the settings.

The icon 🎖️ appears if the operation is successful. The icon ⚠️ appears if the operation fails. Verify that the settings are correct, and try again.

**Deleting a Teradata Database System**

Deleting a Teradata Database system removes the system from Teradata Viewpoint and removes all data collector and canary query information.

1 From the **SYSTEMS** list, click the Teradata Database system name you want to update.

2 From the **SETUP** list, click **General**.

3 Click **Delete System**.

A confirmation message appears.

4 Click **OK**.

**Adding a Login Account**

After a Teradata System has been configured in Teradata Viewpoint, an unlimited number of login accounts can be added and referenced on other Teradata Systems portlet views. The tdwm login is required to load and activate rulesets from Teradata Database. The tdwm login cannot be removed or renamed, but you can enter a password, enter an account string, and test the tdwm login settings.

1 From the **SYSTEMS** list, click the Teradata Database system name you want to update.

2 From the **SETUP** list, click **General**.

3 Under **LOGIN**, click 🏽.

<table>
<thead>
<tr>
<th>LOGIN Name</th>
<th>Password</th>
<th>Account String</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>tdwm</td>
<td>*********</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dba</td>
<td>*********</td>
<td></td>
<td>Test</td>
</tr>
<tr>
<td>dbd</td>
<td>*********</td>
<td></td>
<td>Test</td>
</tr>
</tbody>
</table>

A blank row appears.
4  Enter a LOGIN name and password.
    You also have the option to specify an account string, add more logins, and test that the
    login settings are correct.

5  Click Apply to apply the settings.
    The icon ✔️ appears if the operation is successful. The icon 🔄 appears if the operation
    fails. Verify that the settings are correct, and try again.

Deleting a Login Account

At least one login account must be configured for a Teradata Database system. You cannot
remove the last login account or the tdwm login.

1  From the SYSTEMS list, click the Teradata Database system name you want to update.

2  From the SETUP list, click General.

3  Under LOGIN, click - on the login row to be removed.

The row disappears. The login is removed permanently.

Standard Character Set Configurations

When you configure a Teradata Database system, the CHARACTER SET section of the
GENERAL setup allows you to define the charset that the system uses to communicate with
Teradata Viewpoint. The character set definitions are optional. If you do not define them,
Teradata Viewpoint uses the Teradata Database system settings.

<table>
<thead>
<tr>
<th>CHARACTER SET Fields</th>
<th>Character Set Definition Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session</td>
<td>The UTF8 session character set is strongly recommended for the Teradata Viewpoint session to ensure end-to-end fidelity of character data by avoiding conversion between character sets. However, the UTF8 session character set does not support the KANJI1 server character sets, which are used for storing data dictionary data in Teradata V2R6.x Japanese systems. For these systems, Japanese users must specify the Kanji session character set.</td>
</tr>
<tr>
<td>Monitor</td>
<td>The UNICODE session character set is not currently supported for the Teradata Performance Monitor and Console Partition. To create Teradata Viewpoint object names that connect Monitor and Console Partitions, use Non-Unicode session character sets such as LATIN1252_0A, KANJISJIS_OS, and KANJIEUC_OU.</td>
</tr>
<tr>
<td>JDBC Flag</td>
<td>The JDBC Flag setting is a legacy-support feature to assist the transition away from the unsupported use of the Teradata Database to store non-Latin characters in a Latin column, and the unsupported access of non-ASCII in an ASCII session character set. The JDBC Flag option specifies the CLIENT_CHARSET connection parameter, which can be used to override the Teradata JDBC Driver fixed-mapping of the Teradata session character set to the Java character set. The valid values are the actual Java character set names. Here are two examples of valid JDBC Flag settings:</td>
</tr>
</tbody>
</table>
The following table lists the default Teradata Database system settings.

<table>
<thead>
<tr>
<th>Teradata Database Version</th>
<th>Language Support Mode</th>
<th>Data Dictionary Charset</th>
<th>Teradata Viewpoint Session Charset</th>
<th>Teradata Viewpoint Monitor Charset</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>V12.00 and later</td>
<td>Standard</td>
<td>UNICODE</td>
<td>UTF8</td>
<td>ASCII or LATIN1252_0A</td>
<td>ASCII session only supports the limited 7-bit ASCII characters</td>
</tr>
<tr>
<td>V12.00 and later</td>
<td>Japanese</td>
<td>UNICODE</td>
<td>UTF8</td>
<td>KANJISJIS_OS</td>
<td>Unknown</td>
</tr>
<tr>
<td>V2R6.x</td>
<td>Standard</td>
<td>LATIN</td>
<td>UTF8</td>
<td>ASCII or LATIN1252_0A</td>
<td>Unknown</td>
</tr>
<tr>
<td>V2R6.x</td>
<td>Japanese</td>
<td>KANJI1</td>
<td>KANJISJIS_OS or KANJIIEUC_OU</td>
<td>KANJISJIS_OS or KANJIIEUC_OU</td>
<td>Use either KANJISJIS_OS or KANJIIEUC_OU, for both settings. Do not mix character sets.</td>
</tr>
</tbody>
</table>

**Configuring Data Collectors**

After a Teradata System has been configured in Teradata Viewpoint, data collectors can be configured to monitor the database.

1. From the **SYSTEMS** list, click the Teradata Database system name you want to update.
2. From the **SETUP** list, click **Data Collectors**.
3 Click the data collector name you want to configure.

4 [Optional] Select the **Enable data collector name** check box to enable the data collector to begin processing data.

5 Under **LOGIN**, select the login you want to configure from the list.

6 Under **SAMPLE RATE**, select one of the following options:
   - **Recommended sample rate.** The recommended sample rate is different for each data collector.
   - **Custom sample rate.** The recommended sample rate appears, and you can adjust it to your system requirements.

7 [Sessions Data Collector only] Under **SQL and Explain Thresholds**, set the **Elapsed seconds** and **Total CPU seconds** to determine whether the SQL and Explain text is collected for the session.

8 [Sessions Data Collector only] [Optional] Under **New priority for lower priority action**, type one of the following:
   - $L$ for low (default)
   - $M$ for medium
   - $H$ for high
   - $R$ for rush

   When the Lower Priority action executes for an alert, the session that met the alert rules has its priority changed to the above value.

9 Under **DELETE DATA**, do any of the following:
   - Select the **After** check box to set the retention period using a number and calendar value.
   - Select the **Over** check box, and then set the file size restriction using the **Over** box and list.

10 Click **Apply** to apply the settings.

### Data Collector Rates

Teradata Viewpoint uses a sample rate to collect data from the Teradata Database system and uses a default retention rate to keep the collected data for a time period or up to a certain size. The sample rate and retention rate vary for each data collector and can be adjusted as needed.

Alert Request has no retention rate because this data collector does not store data.

<table>
<thead>
<tr>
<th>Data Collector Name</th>
<th>Recommended Sample Rate</th>
<th>Initial Sample Rate</th>
<th>Initial Retention Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Info</td>
<td>12 hours</td>
<td>12 hours</td>
<td>1 week</td>
</tr>
<tr>
<td>Alert Request</td>
<td>5 minutes</td>
<td>5 minutes</td>
<td>Not applicable</td>
</tr>
<tr>
<td>AWT Info</td>
<td>30 seconds</td>
<td>30 seconds</td>
<td>1 year</td>
</tr>
<tr>
<td>Database Space</td>
<td>1 day</td>
<td>1 day</td>
<td>10 GB</td>
</tr>
<tr>
<td>Disk Space</td>
<td>1 hour</td>
<td>1 hour</td>
<td>1 year</td>
</tr>
<tr>
<td>Data Collector Name</td>
<td>Recommended Sample Rate</td>
<td>Initial Sample Rate</td>
<td>Initial Retention Rate</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------</td>
<td>---------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Lock Info</td>
<td>1 hour</td>
<td>1 hour</td>
<td>10 GB</td>
</tr>
<tr>
<td>Query Count</td>
<td>DBQLFlushRate value from the DBS Control utility display command</td>
<td>1 Hour</td>
<td>10 GB</td>
</tr>
<tr>
<td>Resource Usage</td>
<td>Teradata Database logging sample rate from Teradata Performance Monitor (PMON)</td>
<td>1 hour</td>
<td>10 GB</td>
</tr>
<tr>
<td>Sessions</td>
<td>Teradata Database session sample rate from PMON</td>
<td>30 seconds</td>
<td>10 GB</td>
</tr>
<tr>
<td>System Stats</td>
<td>Teradata Database resource sample rate from PMON</td>
<td>30 seconds</td>
<td>1 year</td>
</tr>
<tr>
<td>Table Space</td>
<td>1 day</td>
<td>1 day</td>
<td>10 GB</td>
</tr>
<tr>
<td>TASM Config</td>
<td>10 minutes</td>
<td>10 minutes</td>
<td>None (both disabled)</td>
</tr>
<tr>
<td>TASM Distribution</td>
<td>60 seconds</td>
<td>60 seconds</td>
<td>1 year</td>
</tr>
<tr>
<td>TASM Exception</td>
<td>Sample rate returned by PM/API TDWM Summary, otherwise 60 seconds</td>
<td>60 seconds</td>
<td>1 year</td>
</tr>
<tr>
<td>TASM State</td>
<td>60 seconds</td>
<td>60 seconds</td>
<td>1 year</td>
</tr>
<tr>
<td>TASM Summary</td>
<td>Sample rate returned by PM/API TDWM Summary, otherwise 60 seconds</td>
<td>60 seconds</td>
<td>1 year</td>
</tr>
</tbody>
</table>

Data Collector Catalog

Data collectors gather information from different sources and make the data available to Teradata Viewpoint portlets.

<table>
<thead>
<tr>
<th>Data Collector Name</th>
<th>Description</th>
<th>Portlets Displaying Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Info</td>
<td>Collects and retains available account strings from the DBC.AccountInfo table. The Queries portlets use this data for the <strong>Change Priority</strong> function.</td>
<td>My Queries, Query Monitor</td>
</tr>
<tr>
<td>Alert Request</td>
<td>Monitors the dbcmngr.AlertRequest and dbcmngr.MonitorRequest tables on the Teradata Database system and collects data for further action by Teradata alerts.</td>
<td>Alert Viewer</td>
</tr>
<tr>
<td>AWT Info</td>
<td>Collects AMP worker task (AWT) related information through the AMP Load (ampload) Teradata Database utility.</td>
<td>Capacity Heatmap, Metrics Analysis, Metrics Graph, System Health</td>
</tr>
<tr>
<td>Canary Queries</td>
<td>Executes and retains user-defined canary queries and the System Heartbeat canary query, which checks the responsiveness of a Teradata Database system. This data is required for system health metrics.</td>
<td>Canary Response Times, Productivity, System Health</td>
</tr>
<tr>
<td>Data Collector Name</td>
<td>Description</td>
<td>Portlets Displaying Data</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Database Space</td>
<td>Collects and retains database-space metrics from the DBC.DataBaseSpace and DBC.DBase tables.</td>
<td>Capacity Heatmap, Metrics Graph, Space Usage, System Health</td>
</tr>
<tr>
<td>Disk Space</td>
<td>Collects and retains disk-space and database-space metrics from the DiskSpace view of the DBC database.</td>
<td>Capacity Heatmap, Metrics Graph, System Health</td>
</tr>
<tr>
<td>Lock Info</td>
<td>Collects and retains snapshots of lock information from Locking Logger, a Teradata Database utility.</td>
<td>Lock Viewer</td>
</tr>
<tr>
<td>Query Count</td>
<td>Collects and retains Teradata Database query counts and DBQL query log data recorded for each login from the tables DBC.DBQLogTbl and DBC.DBQLSummaryTbl.</td>
<td>Capacity Heatmap, Productivity, Todays Statistics, Metrics Graph</td>
</tr>
<tr>
<td>Resource Usage</td>
<td>Collects and retains node and vproc resource usage data from the DC.ResUsageSPMA table for node data and DC.ResUsageIPMA table for vproc data.</td>
<td>Metrics Analysis</td>
</tr>
<tr>
<td>Sessions</td>
<td>Collects and retains Teradata Database session snapshots for each login from the Teradata Monitor partition by using the Teradata Performance Monitor API. The Sessions collector retains utility data for the Query Monitor utility view.</td>
<td>Capacity Heatmap, Metrics Graph, My Queries, Query Monitor, SQL Scratchpad, System Health, Todays Statistics, Workload Monitor</td>
</tr>
<tr>
<td>System Stats</td>
<td>Collects and retains system, node, and vproc statistics information from a Teradata Database. System statistics data is collected from the Teradata Monitor partition by using the PM/API. Physical and virtual resource statistics are collected from Teradata Database system memory. For Teradata Database systems earlier than Version 12.00, the System Statistics collector executes <code>awtmon -s</code> through the Teradata Console partition to collect AMP Worker Task (AWT) usage on MP-RAS systems. AWT usage data is not available on Windows and Linux systems. For Teradata Database Version 12.00 systems and later, the System Statistics collector queries the Teradata Monitor partition to collect AWT usage information. Vproc Manager is used to collect clique information.</td>
<td>Capacity Heatmap, Metrics Analysis, Metrics Graph, Node Resources, System Health, Todays Statistics, Workload Health, Workload Monitor</td>
</tr>
<tr>
<td>Table Space</td>
<td>Collects and retains data about the space used by Teradata Database system tables from the DBC.Dbase, DBC.TVM, DBC.Indexes, and DBC.DataBaseSpace tables.</td>
<td>Capacity Heatmap, Metrics Graph, Space Usage, System Health</td>
</tr>
<tr>
<td>TASM Config</td>
<td>Collects and retains all rule set information from the <code>tdwm</code> database.</td>
<td>My Queries, Query Monitor, Workload Health, Workload Monitor</td>
</tr>
<tr>
<td>TASM Distribution</td>
<td>Collects information about the average percentage of CPU consumption used by each workload for each node in the Teradata Database system. The TASM Distribution data collector executes <code>schmon -M -p -P</code> in the Teradata Console partition to collect information for the CPU Consumption pie chart graph in the Distribution view.</td>
<td>Workload Monitor</td>
</tr>
<tr>
<td>TASM Exception</td>
<td>Collects and retains data from the DBC exception log.</td>
<td>Workload Monitor</td>
</tr>
<tr>
<td>Data Collector Name</td>
<td>Description</td>
<td>Portlets Displaying Data</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>TASM State</td>
<td>Collects and retains system regulation data for Teradata Database Version 12.00 and later. For Teradata Database systems earlier than Version 12.00, the Workload State collector gathers and retains period information.</td>
<td>Workload Monitor</td>
</tr>
<tr>
<td>TASM Summary</td>
<td>Collects and retains active workload data from the tdwm database.</td>
<td>Workload Health, Workload Monitor</td>
</tr>
</tbody>
</table>

**About Data Collector Status**

The **Teradata Systems** portlet displays an icon when a data collector is disabled or functioning with errors. To see the most current status, it is recommended to refresh the system list and the data collector dialog box. You can view the icons in the system and data collector lists:

**Error ▲**

Appears next to a Teradata Database system name or data collector name when one of these errors has been detected:

- Processing exception
- Incorrect Teradata System privileges
- Configuration errors, such as an incorrect password
- Teradata System is offline

**Disabled ◄**

Appears next to a Teradata Database system name or data collector name if it is currently disabled.

**Viewing an Error Log**

1. From the **SYSTEMS** list, click the Teradata Database system whose name is followed by ▲.
2. From the **SETUP** list, click **Data Collectors**.
   - The **DATA COLLECTORS** list refreshes the condition of each collector, identifying the collector that has the error.
3. Click ▲ next to the collector name of the log you want to view.
   - The Java stack trace log appears.
4. Click **Close**.

**Configuring System Health Values**

The **System Health** setup configures metrics and thresholds that are used by the **System Health** and **Productivity** portlets. These thresholds are settings for the data collected by the **System Statistics**, **Sessions**, **Disk Space**, and **Canary Queries** Collectors.

1. From the **SYSTEMS** list, click the Teradata Database system name.
2 From the SETUP list, click System Health.

The System Health dialog box appears.

3 For each metric, select one of the following options:
   - Click Enabled to make the metric visible and use the threshold values to determine the system status.
   - Click Disabled to ignore the metric and the threshold values.
   - Click View Only to make the metric visible but to ignore the threshold values.

4 For each metric, adjust the degraded or critical thresholds.

5 Click Apply.

System Health Metrics

The following table lists the metrics that you can specify in the System Health dialog box.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU UTILIZATION</td>
<td>Total average node CPU usage</td>
<td>Percent</td>
</tr>
<tr>
<td>(CPU) USER</td>
<td>Average percentage of CPU time spent in User Mode</td>
<td>Percent</td>
</tr>
<tr>
<td>(CPU) SYSTEM</td>
<td>Average percentage of CPU time spent in System (Kernel) Mode</td>
<td>Percent</td>
</tr>
<tr>
<td>(CPU) IO WAIT</td>
<td>Average percentage of CPU time spent waiting for I/O</td>
<td>Percent</td>
</tr>
<tr>
<td>NODE CPU SKEW</td>
<td>Comparison of CPU utilization on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>NODE_IO SKEW</td>
<td>Comparison of disk utilization on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU SKEW</td>
<td>Comparison of CPU utilization on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP IO SKEW</td>
<td>Comparison of disk utilization on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP WORKER TASKS</td>
<td>Average number of AMP Worker Tasks in use on each AMP</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>TOTAL DISK SPACE</td>
<td>Percentage of total disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>MAX DISK BY AMP</td>
<td>Percentage of available disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>COMPONENT DOWN</td>
<td>Number of components that are currently offline (such as BYNETs, AMPs)</td>
<td>Number</td>
</tr>
<tr>
<td>MEMORY USED</td>
<td>Average amount of memory currently in use on each node (MB)</td>
<td>Number</td>
</tr>
<tr>
<td>MAX SPOOL BY AMP</td>
<td>Percentage of available spool space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>MEMORY FAILURES</td>
<td>Total number of memory failures across all nodes</td>
<td>Number</td>
</tr>
<tr>
<td>DBC DISK SPACE</td>
<td>Percentage of available DBC disk space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>ACTIVE SESSIONS</td>
<td>Number of sessions with active queries</td>
<td>Number</td>
</tr>
<tr>
<td>SYSTEM HEARTBEAT</td>
<td>Response time of the most recent system heartbeat query (ms)</td>
<td>Number</td>
</tr>
<tr>
<td>SYSTEM HEARTBEAT COPY</td>
<td>Response time of the secondary system heartbeat query (ms)</td>
<td>Number</td>
</tr>
</tbody>
</table>

**Adding or Copying a Canary Query**

After a Teradata System has been configured in Teradata Viewpoint, a canary query can be added to check the state of the system. If the system is active, the query returns a result.

1. From the **SYSTEMS** list, click the Teradata Database system name you want to update.
2. From the **SETUP** list, click **Canary Queries**.
3. Do one of the following:
   - To add a canary query, click 
   - To copy a canary query, click in the row of the canary query you want to copy.

The canary query dialog box appears.
4 Enter a name for the canary query.

5 [Optional] Select the Enabled check box to enable the canary query.

6 Under SQL, enter or modify the query SQL code.

7 Under DEFAULT DATABASE, specify the default database.

8 Under LOGIN, select the login you want to configure from the list.

9 Under COLLECT DATA, specify the data collection frequency in seconds. The recommended sample rate is 120 seconds. The retention rate is one year.

10 Under EXECUTE, select one of the following options:
   - Click 24/7 to execute the query 24 hours a day, 7 days a week.
   - Click Custom to execute the query during a time range by specifying the start time, end time, start day, and end day.

11 Under DELETE DATA, do any of the following:
   - Select the After check box to set the retention period using a number and calendar value.
   - Select the Over check box, and then set the file size restriction using the Over box and list.

12 Click Apply to apply the settings.
   The icon ✅ appears if the operation is successful. The icon ⚠ appears if the operation fails. Verify that the settings are correct, and try again.

Deleting a Canary Query
SYSTEM HEARTBEAT is a canary query that cannot be deleted. It is used to check whether the Teradata Database system is responsive.

1 From the SYSTEMS list, click the Teradata Database system name you want to update.
2 From the SETUP list, click Canary Queries.

3 Click  in the row of the canary query you want to delete.

A confirmation message appears.

4 Click OK.

The canary query row disappears.

About Alerts

Alerts monitor the performance on a Teradata Database system and automatically take action when events occur. You can add, copy, and configure alerts, as well as migrate Teradata Manager alerts.

You can activate alert actions that send a notification, or take some other type of action, when a metric exceeds a threshold.

After you add alert action sets in the Alert Setup portlet, they appear in the Teradata Systems portlet.

The types of alert actions you can choose are:

Send an Email

Choose a defined email address and text message. Event information, such as date, time, event name, threshold, and actual value, is automatically added to the body of the email message.

Run a Program

Choose a program to execute (.exe).

Run a BTEQ Script

Choose a BTEQ script.

Notify SNMP System

Choose an SNMP trap.

You can also choose alert actions for sessions including:

Abort Session

Abort the Teradata Database session for which an alert was detected. This action is only available for sessions.

Lower Priority

Set the priority of the Teradata Database session for which an alert was detected to the one specified in the New priority for lower priority action text box, located under Data Collectors setup for Sessions.
Alert Types

You can set alerts that take place when performance or database space events occur on one or more Teradata Database systems. Following is a list of alert types.

<table>
<thead>
<tr>
<th>Alert Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Set an alert to occur when the performance on a Teradata Database reaches the specified threshold.</td>
</tr>
<tr>
<td>Node</td>
<td>Set an alert to occur when the performance on a Teradata Database reaches the specified threshold at the node level.</td>
</tr>
<tr>
<td>Vproc</td>
<td>Set an alert to occur when the performance on a Teradata Database reaches the specified threshold at the vproc level.</td>
</tr>
<tr>
<td>Database Space</td>
<td>Set an alert to occur when the space used on any resource, such as an AMP, exceeds the specified percentage.</td>
</tr>
<tr>
<td>Session</td>
<td>Set an alert to occur when the performance on a Teradata Database reaches the specified threshold at the session level.</td>
</tr>
<tr>
<td>Canary Queries</td>
<td>Set an alert to occur when the response time for a canary query exceeds the threshold.</td>
</tr>
<tr>
<td>System Health</td>
<td>Set an alert to occur when the system health of a Teradata Database reaches the specified level.</td>
</tr>
</tbody>
</table>

Migrating Alerts

After a Teradata System has been configured in Teradata Viewpoint, all of the alerts can be migrated from Teradata Manager to Teradata Viewpoint.

Alerts can only be migrated when there are no alerts in Teradata Viewpoint for a Teradata Database system; therefore, migrate existing Teradata Manager alerts before adding and copying alerts.

1. From the SYSTEMS list, click the Teradata Database system name you want to update.
2. From the SETUP list, click Alerts.
3. From the ALERT TYPES list, click an alert type.
4. Under ALERTS, click Migrate Alerts.
5 Enter a username and password that has permission to read data from the migrating database.

6 [Optional] Under **SNMP Config**, select the SNMP configuration assigned to any migrated action sets containing an SNMP action. This is required when the alert actions being migrated contain any SNMP actions. The SNMP configurations are defined in the **Alert Setup** portlet.

7 Click **Apply**. A message appears in the dialog box with the number of alerts that were migrated.

**Adding and Copying Alerts**

After a Teradata System has been configured in Teradata Viewpoint, an alert can be added. Alerts can only be migrated when there are no alerts in Teradata Viewpoint for a Teradata Database system; therefore, migrate existing Teradata Manager alerts before adding and copying alerts.

1 From the **SYSTEMS** list, click the Teradata Database system name you want to update.

2 From the **SETUP** list, click **Alerts**.

3 From the **ALERT TYPES** list, click an alert type.

4 Do one of the following:
   - To add an alert, click ![Add Alert]
   - To copy an alert, click ![Copy Alert] in the row of the alert you want to copy.
The alert dialog box appears.

5 Enter a name for the alert.

6 [Optional] Select the Enabled check box to enable the alert.

7 Under Alert Rules, do the following:
   a [Optional] Select databases to include or exclude for the Database Space alert type.
   b Specify All databases, All databases except, or Only include databases.
   c Select a metric from the menus and enter a threshold value.
       You also have the option to add ▼ or remove ▲ rules.
       The alert triggers based on the value entered.
   d [Optional] Enter the number of minutes in the Only trigger if above is met for box.
       The alert triggers if the rule is true for the amount of minutes you entered.

8 [Optional] Under Except these users, enter the name of the user for the Session alert type.
   You also have the option to add ▼ or remove ▲ users.
   Any session with the user is excluded from receiving the alert.

9 Under Alert Actions, do the following:
   a Select an alert action from the menu.
   b Enter the number of minutes in the Do not run twice in box.
       The alert action does not run twice in the minutes you entered.

10 Under Severity, select a severity from the menu.

11 [Optional] Under Message, enter a message that appears when the alert action executes.

12 Click Apply to apply the settings.
   The icon ▫ appears if the operation is successful. The icon ▶ appears if the operation fails. Verify that the settings are correct, and try again.

Deleting Alerts
An alert can be deleted any time after it has been added to a Teradata Database system.

1 From the SYSTEMS list, click the Teradata Database system name you want to update.

2 From the SETUP list, click Alerts.

3 From the ALERT TYPES list, click an alert type.

4 Under ALERTS, select the alert name.

5 Click ▼ in the row of the alert you want to delete.
A confirmation message appears.

6 Click OK.

The alert row disappears.

### Alert Metrics

The following table lists the metrics that you can specify in the system alert dialog box.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Node CPU Usage</td>
<td>Average percent of CPU usage of all online nodes in the configuration</td>
<td>Percent</td>
</tr>
<tr>
<td>Node Disk Usage</td>
<td>Average percent of disk usage of all online nodes in the configuration</td>
<td>Percent</td>
</tr>
<tr>
<td>Net A Usage</td>
<td>Percent of BYNET A usage (BYNET receiver usage)</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Usage</td>
<td>Average percent of CPU usage of all online AMPs in the configuration</td>
<td>Percent</td>
</tr>
<tr>
<td>PE CPU Usage</td>
<td>Average percent of CPU usage of all online PEs in the configuration</td>
<td>Percent</td>
</tr>
<tr>
<td>Node CPU Skew</td>
<td>Comparison of CPU use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Skew</td>
<td>Comparison of CPU use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>Total Sessions</td>
<td>Total number of logged on sessions</td>
<td>Number</td>
</tr>
<tr>
<td>Blocked Sessions</td>
<td>Total number of blocked sessions</td>
<td>Number</td>
</tr>
</tbody>
</table>

The following table lists the metrics that you can specify in the node alert dialog box.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Status of the node, where U means the resource is up and D means the resource is down</td>
<td>Character</td>
</tr>
<tr>
<td>CPU Usage</td>
<td>Percent of CPU usage that is not spent being active (not idle)</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk Usage</td>
<td>Percent of disk usage for this resource</td>
<td>Percent</td>
</tr>
<tr>
<td>Net A Usage</td>
<td>Total BYNET utilization (average of the online BYNETs)</td>
<td>Percent</td>
</tr>
<tr>
<td>CIC Usage</td>
<td>Percent of Channel Interface Controller usage for this resource</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk Out Req Avg</td>
<td>Average number of outstanding disk requests for this resource</td>
<td>Number</td>
</tr>
<tr>
<td>Disk I/O</td>
<td>Number of disk I/Os</td>
<td>Number</td>
</tr>
<tr>
<td>Host I/O</td>
<td>Number of host I/Os</td>
<td>Number</td>
</tr>
<tr>
<td>Swaps</td>
<td>Total number of swap reads and swap writes</td>
<td>Number</td>
</tr>
<tr>
<td>Mem Failures</td>
<td>Segment allocation attempts that failed</td>
<td>Number</td>
</tr>
</tbody>
</table>

The following table lists the metrics that you can specify in the vproc alert dialog box.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Status of the vproc, where U means the resource is up and D means the resource is down</td>
<td>Character</td>
</tr>
</tbody>
</table>
The following table lists the metrics that you can specify in the database space alert dialog box.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Perm %</td>
<td>Percentage of the total permanent disk space the database is currently using (Current Perm divided by Max Perm)</td>
<td>Percent</td>
</tr>
<tr>
<td>Current Perm Max %</td>
<td>Current Perm Max * Number of Vprocs / Max Perm</td>
<td>Percent</td>
</tr>
</tbody>
</table>

The following table lists the metrics that you can specify in the session alert dialog box.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account</td>
<td>Account from which a query was submitted</td>
<td>Character</td>
</tr>
<tr>
<td>CPU Skew</td>
<td>CPU skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU delta</td>
<td>Total CPU usage time consumed, in seconds, since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>AMP CPU</td>
<td>Current elapsed CPU time, in seconds, used on all AMPs by the associated session for executing requests</td>
<td>Number</td>
</tr>
<tr>
<td>AMP I/O</td>
<td>Current number of logical Reads and Writes issued across all AMPs by the associated session</td>
<td>Number</td>
</tr>
<tr>
<td>Hot AMP CPU</td>
<td>CPU time of the highest CPU utilized AMP during the collection interval</td>
<td>Number</td>
</tr>
<tr>
<td>Connection Time</td>
<td>How long the session has been connected</td>
<td>Number</td>
</tr>
<tr>
<td>Blocked Time</td>
<td>How long the query has been blocked</td>
<td>Number</td>
</tr>
<tr>
<td>Idle Time</td>
<td>How long the query has been idle</td>
<td>Number</td>
</tr>
<tr>
<td>Sessions Per User</td>
<td>Number of sessions logged on under this username</td>
<td>Number</td>
</tr>
<tr>
<td>Partition</td>
<td>Partition to which the session is connected (SQL, CONSOLE, MONITOR)</td>
<td>Character</td>
</tr>
<tr>
<td>Username</td>
<td>Name of the user who submitted the query</td>
<td>Character</td>
</tr>
</tbody>
</table>

The following table lists the metrics that you can specify in the canary query alert dialog box.
Metric | Description | Type
--- | --- | ---
Response Time | Number of milliseconds it took for the canary query to return a response | Number

**Setting Monitor Rates**

You can set Teradata Database internal sample rates for sessions and resources. The sample rate you set becomes the recommended sample rate for each collector. Enabling the monitoring and logging process allows each collector to begin collecting data.

1. From the **SYSTEMS** list, click the Teradata Database system name you want to update.
2. From the **SETUP** list, click **Monitor Rates**.

![Monitor Rates](image)

3. [Optional] Do one of the following:
   - Select the check box to enable monitoring and logging process.
   - Clear the check box to disable monitoring and logging process.

4. [Optional] Enter the **Session Sampling** sample rate in the text box.
   The number you enter becomes the recommended sample rate for the **Sessions** collector.

5. [Optional] Select the **Node/Vproc Sampling** sample rate.
   The number you choose becomes the recommended sample rate for the **System Statistics** collector.

6. [Optional] Select the logging rate.
   The number you choose becomes the recommended sample rate for the **Resource Usage** collector.

7. Click **Apply** to apply the settings.

**Monitor Rates**

After a Teradata System has been configured in Viewpoint, you can set Teradata Database internal sample rates for sessions, node/vproc, node logging, and vproc logging. These rates determine how often PM/API data are refreshed. Note the following when setting rates:

- The rates are based on the numbers set in Teradata Database.
The sample rates for node/vproc, node logging, and vproc logging must be an integer divisor of 3600.

• The sample rate is valid when the new rate is an integer divisor of both current logging rates.
• The logging rate is valid when the new rate is an integer multiple of the current sample rate.
• The sample rate is applied before the logging rates are applied. When setting all three values at the same time, the sample rate must be a divisor of the old and the new logging rates. The logging rates must be a multiple of the old and the new sample rate.

<table>
<thead>
<tr>
<th>Sampling Types</th>
<th>Recommended Sample Rate</th>
<th>Maximum Sample Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions</td>
<td>30 seconds</td>
<td>3600 seconds</td>
</tr>
<tr>
<td>Node/Vproc</td>
<td>30 seconds</td>
<td>3600 seconds</td>
</tr>
<tr>
<td>Node logging</td>
<td>600 seconds</td>
<td>3600 seconds</td>
</tr>
<tr>
<td>Vproc logging</td>
<td>600 seconds</td>
<td>3600 seconds</td>
</tr>
</tbody>
</table>

**Configuring Log Table Clean Up**

You can configure log table clean up to remove unnecessary information and reallocate space in the Teradata Database. After you enable the clean up process for a table and configure the retention period, you must set the time of the clean up schedule. The clean up process permanently deletes data and does not archive it.

1. From the **SYSTEMS** list, click the Teradata Database system name you want to update.
2. From the **SETUP** list, click **Log Table Clean Up**.
3. From the **TABLES** list, click a table.
4. [Optional] Under **Settings for table name**, do one of the following:
   - Select the **Enabled** check box to activate clean up and include the table in the clean up schedule.
• Clear the **Enabled** check box to disable clean up and exclude the table from the clean up schedule.

5 Under **LOGIN**, select the user you want to run the clean up task.

6 Under **CLEAN UP**, set the retention period using a number and calendar value.

7 Click **Apply**.

**Clean Up Tables**

The following clean up processes delete the associated system log tables:

<table>
<thead>
<tr>
<th>Clean Up Process Name</th>
<th>System Log Table Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DBQL Log</strong></td>
<td>DBC.DBQLSummaryTbl</td>
</tr>
<tr>
<td></td>
<td>DBC.DBQLStepTbl</td>
</tr>
<tr>
<td></td>
<td>DBC.DBQLLogTbl</td>
</tr>
<tr>
<td></td>
<td>DBC.DBQLObjTbl</td>
</tr>
<tr>
<td></td>
<td>DBC.DBQLExplainTbl</td>
</tr>
<tr>
<td></td>
<td>DBC.DBQLSqlTbl</td>
</tr>
<tr>
<td><strong>Account Log</strong></td>
<td>DBC.AccLogTbl</td>
</tr>
<tr>
<td><strong>Resource Usage</strong></td>
<td>DBC.ResUsageSpma</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageSvpr</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageShst</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageIpma</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageIvpr</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageScpu</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageSlvdv</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageSawt (V12 and later)</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageSp (V12 and later)</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageSpdsk (V12 and later)</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageSvdsk (V12 and later)</td>
</tr>
<tr>
<td></td>
<td>DBC.ResUsageSobj (V2R6 only)</td>
</tr>
<tr>
<td><strong>Event Log</strong></td>
<td>DBC.EventLog</td>
</tr>
<tr>
<td><strong>TDWM</strong></td>
<td>DBC.TDWMSummaryLog</td>
</tr>
<tr>
<td></td>
<td>DBC.TDWMEventLog</td>
</tr>
<tr>
<td></td>
<td>DBC.TDWMEExceptionLog</td>
</tr>
<tr>
<td><strong>SW Event Log</strong></td>
<td>DBC.SW_Event_Log</td>
</tr>
</tbody>
</table>

**Scheduling Clean Up**

After the log table clean up has been configured, you can set a schedule. The schedule sets the time to delete all log tables that have been enabled for the clean up process. The clean up process permanently deletes data and does not archive it.
1. From the **SYSTEMS** list, click the Teradata Database system name you want to update.

2. From the **SETUP** list, click **Clean Up Schedule**.

3. [Optional] Under **Clean Up Scheduler**, do one of the following:
   - Select the **Enabled** check box to activate the clean up schedule.
   - Clear the **Enabled** check box to disable the clean up schedule.

4. Under **LOGIN**, select the user you want to collect the current time and Teradata Database version.

5. Under **DELETE TIME**, enter a time at which the clean up task is run on the Viewpoint server by the DCS.
   - **Current Teradata Time** shows your information, or **Unknown** shows that a connection to Teradata Database cannot be made.

6. Click **Apply**.

### Viewing Disk Usage

1. Click **Disk usage**.

2. [Optional] Mouse over the sparkline and graph to activate the information balloons and see detailed information.
3 [Optional] Click in a Teradata Database system box in the graph to view the disk usage for each data collector on that Teradata Database system.

4 [Optional] Click the collector name in the graph to see the corresponding configuration dialog box.

**Disk Usage Graphics**

The graphics on the **Disk usage** view show disk usage over time and the distribution of data on the Teradata Viewpoint server.

<table>
<thead>
<tr>
<th>Graphics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sparkline</td>
<td>Shows 3 months of data. Information balloons show detailed data about a point in time.</td>
</tr>
<tr>
<td>Graph</td>
<td>Shows how the space used by the Teradata Viewpoint server is divided among Teradata Database systems and their data collectors. Mouse over or click Teradata Database system boxes in the graph to see detailed disk space and data collector information. If a system contains a region that is not associated with a collector, the information balloon displays <strong>Unknown</strong> and the amount of data space.</td>
</tr>
</tbody>
</table>

**User Manager**

The **User Manager** portlet allows the Teradata Viewpoint Administrator to manage Teradata Viewpoint user accounts. Using this portlet, you can:

- Define or modify a user account.
- Reset forgotten or compromised passwords.
- Assign roles to users.
- Set role precedence.
- Search for existing users.
The User Manager portlet provides the following views:

**USER LIST**

Allows you to add users or to search for and select an existing user account to modify. A search tool is provided to help locate an individual user or groups of users when the user list is long. It is the default view.

**USER DETAILS**

Shows details about the selected user. This view includes the following tabs:

- **General** (default): Modify the selected user's account, including name and email address.
- **Roles**: Assign available roles to the selected user and set role precedence.

*Note:* A role must be defined using the Roles Manager portlet before it can be assigned to a user.

### About the User List View

The User List view displays a list of all Teradata Viewpoint system users. Initially displayed are **FIRST NAME**, **LAST NAME**, **PORTAL USER NAME**, and **EMAIL** for each user. You can view, select, and search for individual user details. You can also add Teradata Viewpoint accounts from the User List view.

You can resize the column width or sort the contents of a column alphabetically.

### Adding a User

You can add a user account. You must have Teradata Viewpoint Administrator privileges to access the User Manager portlet.

If your Teradata Viewpoint portal is configured to use auto-provisioning, a user account is created automatically the first time a user logs on to Teradata Viewpoint. By default, auto-provisioned accounts are authenticated externally and assigned a default role. The authentication program (for example, LDAP) and default role are set during configuration.

1. From the User List view, click **Add User**.

   A dialog box appears with the General tab selected (default).
2 Enter the user’s:
   - First name
   - Last name
   - Email address

3 Choose an authentication method:
   - Select the **Externally Authenticated** check box to authenticate the selected user from an external source, such as LDAP.
   - Clear the **Externally Authenticated** check box to authenticate the selected user from the Teradata Viewpoint internal database.

4 In the **Password** field, enter a preliminary password for the user account.
   - If using external authentication, such as LDAP, the password fields do not appear in this dialog box. The password is stored in the external source and validated from that source.

5 In the **Re-enter Password** field, enter the password again, exactly as it was entered previously.

6 Click **Apply**.
   - A confirmation message appears.

**Searching for a User**

You can search for an existing Teradata Viewpoint user, resize columns, and sort the information in the columns.

1 From the **User List** view, click the **Find Users** list.
2 Select one of the following:

- **First Name**. Search for all users with first names that contain the search criterion.
- **Last Name**. Search for all users with last names that contain the search criterion.
- **Portal Username**. Search for all users with portal usernames that contain the search criterion.
- **Email**. Search for all users with email addresses that contain the search criterion.
- **Portal Role**. Search for all users assigned to a portal role name that contains the search criterion.

3 In the **contains** field, enter the search criterion.

4 Click **Find**.

Users with information matching the search criterion are listed in the search results.

5 [Optional] Drag the column border in either direction to resize the column.

6 [Optional] Sort on a column by clicking the column heading.

**About the User Details View**

The user details view allows you to delete a user, edit Teradata Viewpoint user accounts, and assign roles to users.
You can use the **Delete User** button or the **General** and **Roles** tabs to manage user accounts and details:

**General**

Edit the selected user account, or delete the account from the user list. The **General** dialog box allows you to:

- Change the user's **First Name**, **Last Name**, and **Email** address
- Change an existing **Password**.
- Select **Externally Authenticated** for accounts authenticated by LDAP or another source external to **Teradata Viewpoint**.

**Note:** If the **Externally Authenticated** check box is selected, the password-related fields are not available in the dialog box.

**Roles**

Manage role assignments and priority. The **Roles** dialog box provides a list of available roles. Roles can be selected and assigned to the current user account. Use the **Roles** tab to:

- Assign available roles to, or remove them from, the selected user.
- Set role priority.

**Note:** A role must be defined using the **Roles Manager** portlet before it can be assigned to a user.

**Assigning User Roles**

You can assign roles to an existing Teradata Viewpoint user account. If your Teradata Viewpoint portal is configured to use auto-provisioning, a user account is created automatically the first time a user logs on to Teradata Viewpoint. By default, auto-
provisioned accounts are authenticated externally and assigned a default role. The authentication source (for example, LDAP) and default role are set during configuration.

1. From the User List view, browse the list of users or click Find Users to perform a search.
2. Click a user’s name.
   The General tab appears and displays information about the selected user.
3. Click the Roles tab.
   The Roles dialog box appears. Existing roles are listed in the AVAILABLE PORTAL ROLES pane. Roles assigned to the user are shown in the ROLES FOR <User> pane.

4. Assign portal roles to this user:
   - To assign one role to the selected user, select the role from the list under AVAILABLE PORTAL ROLES.
   - To assign more than one role to the selected user, press Ctrl while selecting multiple roles from the list under AVAILABLE PORTAL ROLES.
5. Click >>.
   The selected roles appear in the ROLES FOR <User> pane. In the AVAILABLE PORTAL ROLES pane, the assigned roles are dimmed.

6. Click Apply.

**Setting Role Priority**

You can set role priority for existing Teradata Viewpoint roles. Roles assigned higher priority take precedence over lower-priority roles.
1 From the User List view, browse the list of users or click Find Users to perform a search.

2 Click a user’s name.

   The General tab appears and displays information about the selected user.

3 Click the Roles tab.

4 Select a role from the ROLES FOR <User> pane to change the role's priority.

5 Change the role priority by doing one of the following:
   
   - Click Up to increase the selected role priority. Roles at the top of the list have higher priority.
   
   - Click Down to decrease the selected role priority. Roles at the bottom of the list are lower in priority.

6 Click Apply.

**Editing a User**

You can edit an existing Teradata Viewpoint user account.

1 From the User List view, browse the list of users or click Find Users to perform a search.

2 Click a user’s name.

   The General tab appears and displays information about the selected user.

3 [Optional] Change any of the following information:

   - First name
   - Last name
   - Email address

   The portal username cannot be changed. The username is defined when the user account is created using the User Manager portlet or it is stored in LDAP when the user is externally authenticated.

4 Choose an authentication method:

   - Select the Externally Authenticated check box to authenticate the selected user from an external source, such as LDAP.
   - Clear the Externally Authenticated check box to authenticate the selected user from the Teradata Viewpoint internal database.
5  [Optional] Change the password:
   a  Select the **Change Password** check box.
      The **Password** and **Re-enter Password** fields change color.
   b  In the **Password** field, enter the password.
   c  In the **Re-enter Password** field, enter the password again, *exactly* as it was entered previously.
      If **Externally Authenticated** is selected, the **Change Password** check box and related password fields are unavailable, and the user’s password must be changed in the external source.

6  Click **Apply**.

**Changing a User Password**

You can change a Teradata Viewpoint user password.

If **Externally Authenticated** is selected, the **Change Password** check box and related password fields are unavailable, and the password must be changed in the external source.

1  From the **User List** view, browse the list of users or click **Find Users** to perform a search.
2  Click a user’s name.
   The **General** tab appears and displays information about the selected user.
3  Select the **Change Password** check box.
   If **Externally Authenticated** is selected, the **Change Password** check box and related password fields are unavailable, and the password must be changed in the external application.
   The **Password** and **Re-enter Password** fields change color.
4  In the **Password** field, enter a password.
5  In the **Re-enter Password** field, enter the password again, exactly as it was entered previously.
6  Click **Apply**.

**Deleting a User**

You can delete a Teradata Viewpoint user account.

1  From the **User List** view, browse the list of users or click **Find Users** to perform a search.
2  Click a user’s name.
   The **General** tab appears and displays information about the selected user.
3  Click **Delete User**.
   A confirmation message appears.
   If **Delete User** does not appear, it is because you are logged on under the user account you are trying to delete.
4  Click **OK**.
CHAPTER 8
Alert Viewer

The Alert Viewer portlet allows users to view alerts defined for the system. The alert information in the summary view is updated every 30 seconds. Every alert has a timestamp, displaying the date and time at which the alert was issued.

You can filter the alerts by for example severity, time period, type, or name. You can also combine the filters to narrow the results further.

The ALERT DETAILS view displays detailed information about what triggered the alert, the source of the alert, and any relevant messages.

About Alerts

An alert is an event that the Teradata System Administrator defines as being significant. The Teradata System Administrator assigns alert severity levels to rank alerts, and can also include an explanatory message. The severity levels are: critical, high, medium, or low. The alerts displayed in the Alert Viewer portlet are specific to your system.

Alert Example

The Teradata System Administrator can define that a database exceeding a certain amount of storage usage triggers an alert. After it is exceeded, an alert appears in the
Alert Viewer portlet with details to assist you in performing cleanup before the database becomes full.

About Filters and Sorting

Filters allow you to change displayed data by showing only rows that match your filter criteria. You can sort the information in the columns.

Filtering allows you to:

- Click in a filter box, start typing, and then press Enter. As you type, each matching value appears in bold in the column. After the view refreshes, only the information matching the value you entered is displayed.
- Narrow your search further by filtering on multiple columns in succession.

Sorting allows you to:

- Sort on a column by clicking the column heading. A second click sorts in descending order.
- Sort on two columns consecutively. Primary sort order is indicated by a dark blue column heading, and secondary sort order is indicated by a light blue column heading.
- Sort in ascending or descending order on all pages when there are multiple pages.

The filtering, sorting, and page number settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

Filtering by Severity

You can filter the results to show only alerts with a specific severity level.

1. In the toolbar, click the button for the severity level you want to display.

Selecting a Time Period

You can filter the results to show alerts issued within the last 5 minutes, 1 hour, 1 day, or 1 week.

1. Select a time period from the list.

Configuring Columns to Display

Use the Columns dialog box to select, lock, and order columns. You can resize columns in the table.

1. In the table, click .
2. In the Columns dialog box, select the check boxes of columns to display.
   Mouse over the name to see the complete name.
3. [Optional] Click next to the column name.
   The column remains stationary on the left when scrolling horizontally.
4. [Optional] Click and drag the row to reorder the column.
5. Click Apply to save changes and close the Columns dialog box.
[Optional] In the table, drag the column heading border to resize the column.

The column selection, order, and lock settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

### Clearing Filters

You can clear the filter boxes and the highlighted content from the table.

1. Do one of the following:
   - To clear individual filter boxes, click.
   - To clear all filter boxes, mouse over, and if the icon changes, click.

The content is no longer highlighted in the table, and all content appears in the table.

### Viewing Alert Details

The **ALERT DETAILS** view displays details about a specific alert. The details include information about what triggered the alert, the source of the alert, and any relevant messages.

1. In the summary view, click anywhere in a row to display the **ALERT DETAILS** view for that alert.

The **ALERT DETAILS** view appears. If the **Source** is Viewpoint, the following fields appear:

- **Alert Type**. The system action defines the alert type.
- **Resulting Action**. The Teradata Viewpoint Administrator defines the resulting action in Teradata Systems Alerts.
Calendar

The Calendar portlet allows you to schedule and communicate events that might impact one or more Teradata Database systems. You must have appropriate permissions to manage system events. Unlike other portlets, only one instance of the Calendar portlet can be open in the Teradata Viewpoint portal. After the Calendar portlet is added to a portal page, the Calendar menu option is no longer available on the Tools menu.

The Calendar portlet provides the following views:

**Week View**

The Week view displays all events between Sunday and Saturday of the selected week. In this view, only one day of the week is expanded at a time and event indicators on other days of the week are displayed at the scheduled time in the appropriate day column.

**Month View**

The Month view displays all events with start times falling between Sunday prior to the start of the selected month and Saturday after the end of the month. In this view, event indicators are color-coded squares.

An event cannot last longer than 24 hours. You can define a time and priority to an event and, when you save it, an event indicator (a colored box) appears in the Week view or Month view. A blue indicator means normal and a red indicates high priority events. Mouse over an event indicator to display details about the event. All times shown are for the time zone defined in the user profile.

**About the Calendar Week View**

The Week view displays all events falling between Sunday and Saturday of the selected week. In this view, only one day of the week can be expanded at a time. The selected day can include one or more event summaries. The summary shows the event start and end times, and the event title. The remaining days are collapsed into narrow columns. Click in any day column to expand and display a different day of the week. Today’s date is shaded darker if it falls within the selected week.
From the **Week** view, you can see event details by clicking anywhere in the event summary or event indicator. Events scheduled on other days of the week are indicated by a vertical line located at the scheduled time in the appropriate day column.

**Add Event**  
Open the **Add Event** dialog box to add an event to the calendar.

**Today**  
View today in the weekly calendar.

- Display the **Week** view.

- Display the **Month** view containing the selected week.

- Display the previous week.

- Display the next week.

**About the Calendar Month View**

The **Month** view displays all events with start times that occur during the selected month. Events shown in the selected month that start either in the previous or following month are indicated by a lighter color. Today is shaded darker if it falls within the selected month.
From the **Month** view, you can see event details by clicking on a date (number) or an event indicator.

<table>
<thead>
<tr>
<th><strong>Add Event</strong></th>
<th>Open the <strong>Add Event</strong> dialog box to add an event to the calendar.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Today</strong></td>
<td>Open the monthly calendar that includes today.</td>
</tr>
<tr>
<td><img src="image" alt="Day Selector" /></td>
<td>Display the <strong>Week</strong> view. If you click the date (number), the selected day is expanded in the <strong>Week</strong> view.</td>
</tr>
<tr>
<td><img src="image" alt="Day Selector" /></td>
<td>Display the <strong>Month</strong> view.</td>
</tr>
<tr>
<td><img src="image" alt="Day Selector" /></td>
<td>Display the previous month.</td>
</tr>
<tr>
<td><img src="image" alt="Day Selector" /></td>
<td>Display the next month.</td>
</tr>
</tbody>
</table>

### About the Calendar Event Details View

The **Event Details** view displays the details of the selected event, including event priority, who created it (the author), whether it was modified, and when it is scheduled to occur. The event title and description are also included in this view.
From this view, you can manage the calendar and scheduled events.

<table>
<thead>
<tr>
<th>Back</th>
<th>Return to the last displayed calendar view.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit</td>
<td>Open the Edit Event dialog box to edit the event details.</td>
</tr>
<tr>
<td>Delete</td>
<td>Delete this event.</td>
</tr>
<tr>
<td></td>
<td>Display the Week view containing the event.</td>
</tr>
<tr>
<td></td>
<td>Display the Month view containing the event.</td>
</tr>
<tr>
<td></td>
<td>Display the previous event.</td>
</tr>
<tr>
<td></td>
<td>Display the next event.</td>
</tr>
</tbody>
</table>

**Adding an Event**

Adding an event changes the system event calendar and affects all users. By default, new events are added to the currently selected day.

1. From either the Calendar Week or Month view, click Add Event.

   The ADD EVENT dialog box appears with the current date in the START and END date fields.
2 Set the START date:
   a Click inside the START date field.
      A pop-up calendar appears.
      b Click ▼ or ▼ to navigate to the appropriate month.
      c Select the date from the pop-up calendar.
3 Set the END date.
4 Select the event START and END times from the list.
5 Select AM (morning) or PM (afternoon) from the list.
6 Select a priority:
   • Normal (default)
• High

7 Enter the EVENT TITLE.

8 [Optional] Enter the event DESCRIPTION.

9 Click OK.

Editing an Event

Editing an event changes the event instance affecting all users.

1 From either the Calendar Week or Month view, select the event you want to edit. The event details view appears.

2 Click Edit.

The EDIT EVENT dialog box appears, showing event details.

3 Set the START date:
   a Click inside the START date field.

A pop-up calendar appears.
Click or to navigate to the appropriate month.

Select the date from the pop-up calendar.

Set the END date.

Select the event START and END times from the list.

Select AM (morning) or PM (afternoon) from the list.

Select a priority:
  • Normal (default)
  • High

Enter the EVENT TITLE.

[Optional] Enter the event DESCRIPTION.

Click OK.

**Deleting an Event**

Deleting an event removes the event instance from the database and affects all users.

1 From either the Calendar Week or Month view, select the event you want to delete.

2 In the Event Details view, click Delete to remove the event from the calendar. A confirmation message appears.

3 Click OK.
Canary Response Times

The Canary Response Times portlet allows you to analyze trends in single-system performance over a 60-minute or a 120-minute period using canary queries. Canary queries measure the time in milliseconds it takes for a user-defined query to run to completion. The same query is run repeatedly at a preselected interval to compare system workload over time. The longer the query takes to complete, the heavier the system workload at that time.

Canary response times can help you plan maintenance activities or schedule your workloads appropriately. For example, you can use this portlet to identify heavy workload periods on a Teradata Database system so that you can avoid assigning tasks when system performance is marginal. You can also use canary response times to compare current performance with average performance measured across 1 or more weeks of historical data. Additionally, you can monitor and compare the performance of multiple Teradata Database systems by adding a Canary Response Times portlet to the portal page for each monitored system.

The summary view displays a graphic overview of selected canary query metrics monitored over the previous 60-minute or 120-minute period. Samples are taken once every minute, and a data point is added to the graph for each selected canary query metric.

Use the PREFERENCES view to select and organize canary query metrics to display, change thresholds, and adjust the vertical axis range for each metric. The Teradata Viewpoint Administrator defines default metrics for the Canary Response Times portlet in the Teradata Systems portlet. If enabled for your profile, you can set metrics that override the defaults.

The Canary Response Times portlet also gives you a means for comparing current and historical data by displaying past performance as an average of metric data points collected over time. The duration over which the averages are calculated can be changed using the Past Averages tab.

About the Canary Response Times View

The Canary Response Times portlet monitors the workload of a single Teradata Database system over time. The summary view shows current and historical performance data using sparklines. The sparkline is a horizontal graph, showing the time (in milliseconds) a query takes to complete.

You can monitor the performance of multiple systems by adding a Canary Response Times portlet instance for each Teradata Database system you want to monitor. Canary response times, such as SYSTEM HEARTBEAT, are represented by a data point that is added to the
sparkline once every 60 seconds. Mouse over a sparkline to see an information balloon containing detailed information about the data point.

The sparkline types are:

**Current Data**

Shows the time (in milliseconds) that a query takes to complete. Each data point shown on the sparkline is the average of all response times recorded during a 120-second interval, by default. The result is a curve sparkline. A large dot at the *NOW* point on the sparkline indicates the value of the last data point captured. A number to the right of the sparklines also indicates the *NOW* data-point value.

The Teradata Viewpoint Administrator sets the default data collection rate.

**Past Average**

Presents the averages for a user-selected number of weeks. The sparkline is shown as a skyline chart with flat, solid data points. Use this sparkline to compare the current performance from the previous 60-minute or 120-minute period with the system performance during the same 60-minute or 120-minute period 1 or more weeks in the past. Use the past-average data shown from *NOW* to 30 minutes or 60 minutes in the future to estimate system workload and enhance decision-making regarding workload assignments and resource allocation.

The summary views are:

**Normal**

The skyline shows 90 minutes of the average-workload data values from a user-selected number of weeks in the past. The curve sparkline shows the actual data for the past 60 minutes using 1-minute data points.

**Maximized**

The skyline shows 180 minutes of the average-workload data values from a user-selected number of weeks in the past. The curve sparkline shows the actual data for the past 120 minutes using 1-minute data points.

Toggle between the normal and maximized summary views using the + (maximize) and - (minimize) portlet buttons.

**Canary Response Times Metrics**

The metrics available for display are canary queries.
### About the Preferences View

The **PREFERENCES** view allows you to customize the portlet to monitor key metric trends that are important to efficient operation of your Teradata Database system. You can select only one system to monitor for each portlet instance.

From the portlet frame, click 🆕 to access the **PREFERENCES** view and the following tabs:

- **System**
  - Select a Teradata Database system to monitor.

- **Metrics**
  - Select and organize metrics to monitor in the summary view. Drag metrics from a list of all available metrics to the **Preview** pane where you can preview the results as you go.

- **Settings**
  - Define settings for the metrics selected for display. Set thresholds to highlight metric values that are outside normal operating ranges. Set maximum vertical-axis ranges to limit the range of values displayed for selected metrics.

- **Past Averages**
  - Adjust the number of weeks of data points used to calculate the average value for each displayed metric.

#### Selecting a System to Monitor

Use the **System** tab in the **PREFERENCES** view to select a Teradata Database system to monitor. Only one system can be selected for each portlet instance.

1. From the portlet frame, click 🆕 to access the **PREFERENCES** view.
2. Click the **System** tab.
3. [Optional] Click **Clear Defaults** to clear all default settings for this portlet.
4. Select a system from the list.
5 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click **OK**.

**Selecting Metrics to Monitor**

Use the **Metrics** tab in the **PREFERENCES** view to select and organize the metrics shown in the summary view.

1 From the portlet frame, click ![Access Preferences View](image) to access the **PREFERENCES** view.

2 Click the **Metrics** tab.

The **Preview** pane uses sample data to show how metric rows are displayed in the summary view.

3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Do any of the following to change the way metric rows are displayed:
   - Add a metric row. Drag a metric from the **Select metrics for display** list to the **Preview** pane.
   - Remove a metric row. Drag a metric from the **Preview** pane to the **Metric Removal** pane.
   - Change metric row order. Drag a metric already in the **Preview** pane to a new location in the pane (up or down).
Changes to the metrics affect only the system currently selected, provided that the metrics are available on that system.

5. [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6. Click **OK**.

### Setting Metric Thresholds

Use the **Settings** tab in the **PREFERENCES** view to set the **THRESHOLD** and **VERTICAL AXIS RANGE** values for the metrics selected for display. Only metrics selected using the **Metrics** tab appear in the list of available metrics. Changes to the metrics affect only the system currently selected, provided that the metrics are available on that system.

1. From the portlet frame, click **Preferences** to access the **PREFERENCES** view.
2. Click the **Settings** tab.

   ![Preferences Tab](image)

3. [Optional] Click **Clear Defaults** to clear all default settings for this portlet.
4. [Optional] Enter the **THRESHOLD** setting for each available metric.
   The threshold line does not appear in the view when the value entered is zero or blank.
5. [Optional] Enter the **VERTICAL AXIS RANGE** for each available metric.
   The sparkline scales automatically when the value entered is zero or blank.
6. [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.
7. Click **OK**.

### Setting Past Averages

Use the **Past Averages** tab in the **PREFERENCES** view to specify the number of weeks of data points used to calculate the average values displayed in metric graphs.

1. From the portlet frame, click **Preferences** to access the **PREFERENCES** view.
2. Click the **Past Averages** tab.

   ![Preferences Tab](image)

3. [Optional] Click **Clear Defaults** to clear all default settings for this portlet.
4. Enter the number of weeks (1 to 99 weeks).
The default is 2 weeks.

5 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click **OK**.
Capacity Heatmap

The Capacity Heatmap portlet allows you to analyze resource usage trends on a Teradata Database system to identify periods when a system is either over-utilized or under-utilized. You can use this information to schedule resource-intensive jobs with minimal impact to other users.

The Capacity Heatmap portlet displays a grid with days on the horizontal axis and hours on the vertical axis. The metric and system are selected using selection menus. Time-range buttons on the toolbar allow you to select 1-month or 3-month periods. Each color-coded square represents an hour and provides a visual indication of the metric value during a 1-hour period.

The PREFERENCES view allows you to set the work week and shift specifications.

About the Capacity Heatmap View

The CAPACITY HEATMAP view displays a graph of variations and trends in system resource usage. The graph plots days on the horizontal axis and hours along the vertical axis. Customize the view using the menus, toolbar, and date-range slider to select metrics and date ranges.

The following list describes the features in this view:

Selection Menus

Shows the selections that define the metric currently being displayed. You can change the metric by changing the selections.

Toolbar

Contains the time-range buttons. Select a time-range button to change the graph. You can use the Display and threshold buttons to define how the cells are shaded. The time-range start and end dates are displayed on the toolbar next to the time-range buttons.

Date-Range Slider

Controls the amount of historical data displayed in the view and adjusts to display from 1 week to approximately 4 months of historical data. Dates outside the date-range slider timeline are shaded lighter. The darker-shaded area between the slider handles represents the current date range being displayed.
Cell

Contains data about an hour on a specific date in the graph. Mouse over any cell to display an information balloon containing the date, hour, and metric value for the 1-hour block.

Work Week and Shift Indicator

Highlights times when most users are normally accessing system resources with a box around the work week and work shift hours. Specify work day and shift hours using the PREFERENCES view.

Trend-Reporting Metrics

Database Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Perm</td>
<td>Sum of the current amount of permanent space (disk space) used across all vprocs</td>
<td>Number</td>
</tr>
<tr>
<td>Current Perm Max</td>
<td>Maximum permanent space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Perm Min</td>
<td>Minimum permanent space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Spool</td>
<td>Sum of the current amount of spool space (disk space) used across all vprocs</td>
<td>Number</td>
</tr>
<tr>
<td>Current Spool Max</td>
<td>Maximum spool space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Current Spool Min</td>
<td>Minimum spool space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Temp</td>
<td>Sum of the current amount of temporary space (disk space) used across all vprocs</td>
<td>Number</td>
</tr>
<tr>
<td>Current Temp Max</td>
<td>Maximum temporary space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Temp Min</td>
<td>Minimum temporary space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Perm</td>
<td>Sum of the largest amount of permanent space used across all vprocs since the last reset of the peak perm value</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Perm Max</td>
<td>Maximum of the largest amount of permanent space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Perm Min</td>
<td>Minimum of the largest amount of permanent space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Spool</td>
<td>Sum of the largest amount of spool used across all vprocs since the last reset of the peak perm value</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Spool Max</td>
<td>Maximum of the largest amount of spool used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Spool Min</td>
<td>Minimum of the largest amount of spool used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Temp</td>
<td>Sum of the largest amount of temporary space used across all vprocs since the last reset of the peak perm value</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Temp Max</td>
<td>Maximum of the largest amount of temporary space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Temp Min</td>
<td>Minimum of the largest amount of temporary space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Perm Limit</td>
<td>Maximum space available for permanent space storage of all index tables, data tables, subtables, stored procedures, triggers, and permanent journals</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Limit</td>
<td>Maximum space available for spool space storage of all index tables, data tables, subtables, stored procedures, triggers, and permanent journals</td>
<td>Number</td>
</tr>
<tr>
<td>Temp Limit</td>
<td>Maximum space available for temporary space storage of all index tables, data tables, subtables, stored procedures, triggers, and permanent journals</td>
<td>Number</td>
</tr>
</tbody>
</table>

### Performance Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocking Duration</td>
<td>Total time the heartbeat query is blocked</td>
<td>Number</td>
</tr>
<tr>
<td>Concurrency</td>
<td>Average number of active tasks running on the Teradata Database while the heartbeat query is running</td>
<td>Number</td>
</tr>
<tr>
<td>Response Time</td>
<td>Average response time of the selected canary query</td>
<td>Number</td>
</tr>
<tr>
<td>Retrieve Time</td>
<td>Average time to retrieve all results</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Rows Returned</td>
<td>Average number of rows returned by the selected canary query</td>
<td>Number</td>
</tr>
<tr>
<td>Total Time</td>
<td>Combined response time and retrieve time</td>
<td>Number</td>
</tr>
</tbody>
</table>

**Query Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abort Total</td>
<td>Number of aborted queries</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Avg</td>
<td>Average number of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Max</td>
<td>Maximum number of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Min</td>
<td>Minimum number of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Stddev</td>
<td>Standard deviation of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>AMP CPU Skew Avg</td>
<td>Average percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Skew Max</td>
<td>Maximum percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Skew Min</td>
<td>Minimum percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Skew Stddev</td>
<td>Standard deviation percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Avg</td>
<td>Average percent AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Max</td>
<td>Maximum percent AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Min</td>
<td>Minimum percent AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Stddev</td>
<td>Standard deviation of AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>Cache Total</td>
<td>Number of queries found in step cache</td>
<td>Number</td>
</tr>
<tr>
<td>Concurrency</td>
<td>Average number of queries executing simultaneously during the hour</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Avg</td>
<td>Average query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Max</td>
<td>Maximum query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Min</td>
<td>Minimum query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Stddev</td>
<td>Standard deviation of query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Avg</td>
<td>Average time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Max</td>
<td>Maximum time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Min</td>
<td>Minimum time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Stddev</td>
<td>Standard deviation of time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>Max Steps in Parallelism Avg</td>
<td>Average number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Max Steps in Parallelism Max</td>
<td>Maximum number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Max Steps in Parallelism Min</td>
<td>Minimum number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Max Steps in Parallelism Stddev</td>
<td>Standard deviation of number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Avg</td>
<td>Average number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Max</td>
<td>Maximum number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Min</td>
<td>Minimum number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Stddev</td>
<td>Standard deviation of number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Query Count</td>
<td>Queries logged in dbc.QryLog, or the sum of Querycount from dbc.QryLogsummary during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Avg</td>
<td>Average query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Max</td>
<td>Maximum query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Min</td>
<td>Minimum query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Stddev</td>
<td>Standard deviation of query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Avg</td>
<td>Average number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Max</td>
<td>Maximum number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Min</td>
<td>Minimum number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Stddev</td>
<td>Standard deviation of number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Avg</td>
<td>Average amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Max</td>
<td>Maximum amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Min</td>
<td>Minimum amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Stddev</td>
<td>Standard deviation of amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Avg</td>
<td>Average number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Max</td>
<td>Maximum number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Min</td>
<td>Minimum number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Stddev</td>
<td>Standard deviation of number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Total CPU Time Avg</td>
<td>Average CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Total CPU Time Max</td>
<td>Maximum CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Total CPU Time Min</td>
<td>Minimum CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Total CPU Time Stddev</td>
<td>Standard deviation of CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Avg</td>
<td>Average I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Max</td>
<td>Maximum I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Min</td>
<td>Minimum I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Stddev</td>
<td>Standard deviation of I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Warning Total</td>
<td>Total number of queries with warnings</td>
<td>Number</td>
</tr>
</tbody>
</table>

**System Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Sessions</td>
<td>Number of sessions with active queries</td>
<td>Number</td>
</tr>
<tr>
<td>AMP CPU Skew</td>
<td>Comparison of CPU use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew</td>
<td>Comparison of disk use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>Average Outstanding Disk Reqs</td>
<td>Outstanding disk requests (disk queue size)</td>
<td>Number</td>
</tr>
<tr>
<td>AWT</td>
<td>Average number of AMP worker tasks in use on each AMP</td>
<td>Number</td>
</tr>
<tr>
<td>Components Down</td>
<td>Number of components, such as BYNETs or AMPs that are down</td>
<td>Number</td>
</tr>
<tr>
<td>CPU</td>
<td>Average node CPU use. CPU is calculated as the sum of the user CPU, system CPU and wait I/O CPU usage percentages.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU AWT Processing</td>
<td>CPU resources spent processing an AMP worker task. Normalized by multiplying the value returned from the Teradata database by the number of physical CPUs on the associated node of the AWT.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU/Disk Ratio</td>
<td>Ratio of CPU use to disk use. Calculated as the node CPU time divided by the physical disk usage.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU Dispatcher Processing</td>
<td>CPU resources spent in PE Dispatcher processing</td>
<td>Percent</td>
</tr>
<tr>
<td>DBC Disk Space</td>
<td>Available DBC disk space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk I/O</td>
<td>Number of disk I/Os</td>
<td>Number</td>
</tr>
<tr>
<td>Disk Reads</td>
<td>Total physical disk reads per system during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Disk Usage</td>
<td>Disk use on the system</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk Writes</td>
<td>Total physical disk writes per system during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>FSG Cache Miss</td>
<td>The percentage of FSG cache misses. Calculated as physical I/Os divided by logical I/Os.</td>
<td>Number</td>
</tr>
<tr>
<td>Host Block Reads</td>
<td>Total message blocks (one or more messages sent in one physical group) received from all clients</td>
<td>Number</td>
</tr>
<tr>
<td>Host Block Writes</td>
<td>Total message blocks sent to all hosts</td>
<td>Number</td>
</tr>
<tr>
<td>Index Ratio</td>
<td>The percentage of index hits. Calculated as the index I/Os divided by the data block I/Os.</td>
<td>Number</td>
</tr>
<tr>
<td>Logical MB/Sec</td>
<td>Logical I/O of the system in megabytes per second</td>
<td>Number</td>
</tr>
<tr>
<td>Max Disk Space By AMP</td>
<td>Available disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Max Spool Space By AMP</td>
<td>Available spool space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Memory Failures</td>
<td>Total memory failures across all nodes</td>
<td>Number</td>
</tr>
<tr>
<td>Memory Resources</td>
<td>Total segments allocated to memory resources</td>
<td>Number</td>
</tr>
<tr>
<td>Net A Usage</td>
<td>Percent of BYNET A usage (BYNET receiver usage)</td>
<td>Percent</td>
</tr>
<tr>
<td>Net Reads</td>
<td>Total reads from the BYNET during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Net Writes</td>
<td>Total messages written to the BYNET during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Node CPU Skew</td>
<td>Comparison of CPU use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>Node CPU Usage</td>
<td>Average percent of CPU usage of all online nodes in the configuration</td>
<td>Percent</td>
</tr>
<tr>
<td>Node I/O Skew</td>
<td>Comparison of disk use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>Nodes Down</td>
<td>Number of system nodes down</td>
<td>Number</td>
</tr>
<tr>
<td>Parallelism</td>
<td>Percentage of parallelism, calculated as the average CPU usage / maximum CPU usage x 100</td>
<td>Percent</td>
</tr>
<tr>
<td>Parser Usage</td>
<td>Percent of CPU time the parser uses. It might exceed 100%. Normalized by multiplying the value returned from Teradata Database by the number of physical CPUs on the associated node of the parser.</td>
<td>Percent</td>
</tr>
<tr>
<td>PE CPU Usage</td>
<td>Average CPU usage of the PEs. Calculated as the average usage of the parser and the dispatcher (both normalized values). Normalized by multiplying the value by the number of physical CPUs on the associated node of the PE.</td>
<td>Percent</td>
</tr>
<tr>
<td>Read I/O</td>
<td>Percent of I/O that are reads</td>
<td>Percent</td>
</tr>
<tr>
<td>Session Login Count</td>
<td>Sessions currently logged on to the system</td>
<td>Number</td>
</tr>
<tr>
<td>Swap Drops</td>
<td>Total pages or segments dropped from memory during the sample period due to swapping</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Swap Reads</td>
<td>Total pages or segments read into memory from the disk after a prior write or drop during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Swap Writes</td>
<td>Total pages or segments written into swap area from memory during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>System CPU</td>
<td>Average CPU time spent in System mode</td>
<td>Percent</td>
</tr>
<tr>
<td>Total AMP CPU</td>
<td>Total AMP CPU use</td>
<td>Percent</td>
</tr>
<tr>
<td>Total Disk Space</td>
<td>Total disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Total Node CPU</td>
<td>Total node CPU use</td>
<td>Percent</td>
</tr>
<tr>
<td>User CPU</td>
<td>Average CPU time spent in User mode</td>
<td>Percent</td>
</tr>
<tr>
<td>Vproc CPU Usage</td>
<td>Average percent of the CPU usage of all online vprocs in the configuration. Normalized by multiplying the value returned from Teradata Database by the number of physical CPUs in the associated vproc.</td>
<td>Percent</td>
</tr>
<tr>
<td>Wait I/O CPU</td>
<td>Average CPU time spent waiting for I/O</td>
<td>Percent</td>
</tr>
</tbody>
</table>

### Table Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index Count</td>
<td>Total number of indexes</td>
<td>Number</td>
</tr>
<tr>
<td>Table Size</td>
<td>Table size in bytes, including index, fallback, and journal subtables</td>
<td>Number</td>
</tr>
</tbody>
</table>

### About the Capacity Heatmap Menus and Toolbar

The menus and toolbar allow you to specify the display attributes of the CAPACITY HEATMAP view.

Use the selection menus to define a metric to monitor by selecting:
- System
- Category
- Metric
- Source or Variant

The first time you add the portlet to the page, the first available metric that you have permission to view is displayed. However, if you only have permission to view Table metrics, no data appears in the portlet until you select a metric using the selection menus.

The 1mo and 3mo buttons allow you to adjust the time range displayed. When clicked, 1 month or slightly more than 3 months of data up to the current end date appears in the view.
As you adjust the time range, the toolbar refreshes automatically to display the new time range in the toolbar.

The Display button allows you to show or hide cell values and adjust high and low values that determine cell shading. The Display cell values check box is only available when the metric displayed is a percentage. If the selected time range results in narrow cells, cell values are not displayed even though the Display cell values check box is selected.

The threshold button displays the current threshold value and allows you to set the threshold slider and adjust the threshold. The threshold button and slider only appear when the metric displayed is a percentage.

If the threshold value is within the gray-scale range defined in the DISPLAY OPTIONS menu, the cells are displayed in a shade of the exception color equivalent to the corresponding gray-scale shade for that cell value.

### Selecting Metrics and Systems to Monitor

You can use selection menus above the toolbar to choose a metric and system to monitor in the portlet, starting with the highest level menu on the far left. Different menus choices are available based on the previous menu, so not all menus apply to all metrics.

You are not required to make a selection from every menu each time you modify a metric selection.

1. In the selection menu, click the currently selected system name to display a list of available systems.
2. Select a system from the menu.
3. Click Next.
4. Select a category from the menu.
5. Click Next.
6. Select a metric from the menu.
7. Click Next.
8. [Optional] Select a source or variant from the menu.
   The menu for source or variant (sum, average, minimum, maximum, standard deviation of that metric) is only available for certain metric categories.
9. Click Next.

### Adjusting the Date Range

Use the toolbar to set the range of dates to display for the selected metric and system.

1. Mouse over the date-range slider to activate the start-date and end-date handles.
2 Drag the start-date handle until the intended start date is displayed in the toolbar.

3 Drag the end-date handle until the intended end date is displayed in the toolbar.

4 [Optional] Drag the date-range slider left or right to move the start-date and end-date handles in unison.

5 [Optional] Click 1 mo.

One month of historical data is displayed ending at the current end date.

6 [Optional] Click 3 mo.

Slightly more than three months of historical data is displayed ending at the current end date.

Setting Cell Values and Shading

The DISPLAY OPTIONS dialog box allows you to display cell values and to set metric thresholds for applying cell shading for each system monitored. The shading provides a visual overview by highlighting interesting values.

You must repeat this procedure for each available metric to ensure appropriate shading is applied when the metric is selected.

1 From the CAPACITY HEATMAP view, click Display.

The DISPLAY OPTIONS dialog box appears.

2 Do one of the following:

- Select the Display cell values check box to display cell values.
- Clear the Display cell values check box to display cells without values.

The Display cell values check box is only available when the metric displayed is a percentage. If the selected date range results in narrow cells, cell values are not displayed even though the Display cell values check box is selected.

3 Set the lower and upper threshold values in the Apply shading to values between boxes.

4 Click OK.

Values below the defined range appear in a very light shade of gray, while values above the range have a very dark shade. Values within the defined range appear in three shades of gray.
Setting the Threshold Value

The threshold button displays the current threshold value. Use the threshold button to access the threshold slider and adjust exception highlighting to show when the system is over-utilized or under-utilized.

The threshold button and slider only appear when the metric displayed is a percentage.

1 In the toolbar, click the threshold button.

The threshold slider appears.

2 Do one of the following:
   - Click to set an upper threshold, highlighting all values greater than the selected value in shades of red.
   - Click to set a lower threshold, highlighting all values less than the selected value in shades of gray.

3 Drag up or down to adjust the threshold value.

The CAPACITY HEATMAP view highlights change to reflect values above or below the threshold setting.

4 Click anywhere off the threshold slider to close the slider and return to the portlet.

About the Preferences View

The PREFERENCES view allows you to specify the work days and hours that are outlined with a border in the CAPACITY HEATMAP view. This setting helps to visually emphasize the days and hours during which most users are using system resources.

From the portlet frame, click to access the PREFERENCES view.

Configuring the Work Week and Shift

Use the Work week and shift tab in the PREFERENCES view to outline specific work days and hours with a dark gray border in the CAPACITY HEATMAP view. The work-week-and-shift-border helps you easily identify the days and hours when system resources are used most.
1. From the portlet frame, click 🔄 to access the PREFERENCES view.

2. Click the Work week and shift tab.

3. [Optional] Click Clear Defaults to clear all default settings for this portlet.

4. Select the number of shifts (work days) per week from the Total number of shifts per week list.
   A single row displays for each shift.

5. For each shift, click the appropriate arrow, and then select the following:
   - Start day
   - Start time
   - Shift duration

6. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

7. Click OK.

Example with Overlapping Shifts

When multiple shifts are defined on the same day and the hours you specify overlap, they are combined into one shift and are enclosed in one set of shift-indicator lines. The first shift starts at 6 AM and lasts for 8 hours, and the second shift starts at 1 PM and lasts for 8 hours. After you save these settings, the work-week lines and shift-indicator lines show a single shift from 6 AM to 9 PM. The Work week and shift tab counts the combined Total number of shifts per week and the Shift duration indicates a longer single shift.
External Content

The External Content portlet allows you to access your company browser-based tools from within the Teradata Viewpoint portal. Upon opening the External Content portlet, the web page appears, as set by the Teradata Viewpoint Administrator. If you have the appropriate permissions, you can use the PREFERENCES view to change the URL.

Caution: Any valid web URL can be used. However, the portlet does not validate page content. Accessing some URLs might display the page outside the portlet or redirect the portal page entirely.

About the Preferences View

The PREFERENCES view allows you to customize the URL that appears when the External Content portlet is opened. You must have the appropriate permissions to change the URL.

Changing the URL

Use the PREFERENCES view to change the URL set by the Teradata Viewpoint Administrator.

1. From the portlet frame, click to access the PREFERENCES view.

![Preferences View](image)

2. Enter the URL of your choice.

3. Press Enter.

   A confirmation message appears.

4. Click Save.

   The new URL is saved.

Setting the Default URL

Use the PREFERENCES view to change the default URL set by the Teradata Viewpoint Administrator.
From the portlet frame, click to access the PREFERENCES view.

[Image: PREFERENCES: EXTERNAL CONTENT]

URL:  

[Options]

Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

Enter the URL of your choice.

Click OK.

A confirmation message appears.

Click Save.

The new URL is saved as the default URL.
Lock Viewer

The Lock Viewer portlet allows you to view the lock data such as transaction identifiers, session identifiers, lock object identifiers, and global deadlocks. Viewing lock information helps you determine whether system performance has been degraded by a database lock.

Locate locks:
- In a specific database
- In a specific time frame
- Caused by a specific user
- That are blocking a specific user

About the Lock Viewer View

The LOCK VIEWER view displays a report containing information about the database locks that have occurred in the last 5 minutes, hour, day, or week. Lock data is displayed in the report only after the lock contention is resolved. Real-time lock contention data is not available. The Teradata Viewpoint Administrator must enable the appropriate collectors to display data in the LOCK VIEWER view.

The following list describes the features in this view:

Selection Menus
- Shows the system and time frame for which the lock information is collected. You can choose a different system and time frame.
- You can use the rewind feature with any time frame selection to retrieve lock data and compare it to data for a different date and time. You can only use the 5 minutes time frame with the rewind feature, and it is typically used to troubleshoot lock contentions.

Filters
- Changes the displayed data to only show rows that match your filter criteria. You can use the filters to search for locks in a specific database, caused by a specific user, or that are blocking a specific user.

Lock Log Report
- Shows lock data for transaction identifiers, session identifiers, lock object identifiers, and global deadlocks.
Selecting a System and Time Frame

You can use selection menus above the filter to choose a system and time frame, starting with the highest level menu on the far left.

1. In the selection menu, click the currently selected system name to display a list of available systems.

2. Select a system from the menu.

3. Click Next.

4. Select a time frame from the SELECT TIME FRAME dialog box.

5. Click Next.
The report appears in the summary view.

**Viewing the Lock Log Report**

Use the Lock Log Report to view the lock data such as transaction identifiers, session identifiers, lock object identifiers, and global deadlocks. Lock data is displayed in the report only after the lock contention is resolved. Real-time lock contention data is not available.

1. In the selection menu, choose a system and a time frame.

   ![Lock Viewer](image)

   The Lock Log report appears with the database locks that occurred within the period of time you specified.

2. [Optional] Drag the column border in either direction to resize the column.

**Summary Locks**

This topic describes the information that appears in the Lock Log Report.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLOCKING HOST</td>
<td>Logical host ID of the transaction that imposed the lock</td>
<td>Number</td>
</tr>
<tr>
<td>BLOCKING LEVEL</td>
<td>Lock level of the transaction that imposed the lock. The following values indicate the level:</td>
<td>Alpha</td>
</tr>
<tr>
<td></td>
<td>- Database Locked at the database level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Table Locked at the table level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- RowHash Locked at the row level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- RowRange Locked for a range of rows</td>
<td></td>
</tr>
<tr>
<td>BLOCKING MODE</td>
<td>Lock level mode of the transaction that imposed the lock. The following values indicate the mode:</td>
<td>Alpha</td>
</tr>
<tr>
<td></td>
<td>- Ac Access</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ex Exclusive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Rd Read</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Wr Write</td>
<td></td>
</tr>
<tr>
<td>BLOCKING SESSION</td>
<td>Session number of the transaction that imposed the lock. The following session numbers are used to indicate database internal sessions:</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td>- 0 System User</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 1 System Accounting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 2 System Recovery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 3 Archive/Restore</td>
<td></td>
</tr>
<tr>
<td>Column</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>BLOCKING USER</td>
<td>Username who is blocking the query of another user</td>
<td>Alpha</td>
</tr>
<tr>
<td>BLOCKTIME</td>
<td>Date and time at which the block occurred, displayed as MM/DD/YY HH:MM:SS</td>
<td>Number</td>
</tr>
<tr>
<td>DATABASE</td>
<td>Database name on which the lock was requested</td>
<td>Alpha or Number</td>
</tr>
<tr>
<td>DEADLOCK</td>
<td>Indicates whether the lock contention results in a deadlock. The following values indicate the type of deadlock:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• N No deadlock</td>
<td>Alpha</td>
</tr>
<tr>
<td></td>
<td>• Y Local deadlock</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• G Global deadlock</td>
<td></td>
</tr>
<tr>
<td>DELAY</td>
<td>Total time, in seconds, the transaction waited for the block</td>
<td>Number</td>
</tr>
<tr>
<td>HOST</td>
<td>Logical host ID of the transaction that was waiting for the lock</td>
<td>Number</td>
</tr>
<tr>
<td>LEVEL</td>
<td>Lock level of the transaction that was waiting for the lock. The following values indicate the level:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Database Locked at the database level</td>
<td>Alpha</td>
</tr>
<tr>
<td></td>
<td>• Table Locked at the table level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• RowHash Locked at the row level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• RowRange Locked for a range of rows</td>
<td></td>
</tr>
<tr>
<td>MODE</td>
<td>Lock level mode of the transaction that was waiting for the lock. The following values indicate the mode:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ac Access</td>
<td>Alpha</td>
</tr>
<tr>
<td></td>
<td>• Ex Exclusive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Rd Read</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Wr Write</td>
<td></td>
</tr>
<tr>
<td>MULTIPLE BLOCKER</td>
<td>Indicates whether more than one transaction encountered the same lock contention. The following values indicate the status:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Y Two or more blocked transactions</td>
<td>Alpha</td>
</tr>
<tr>
<td></td>
<td>• N One blocked transaction</td>
<td></td>
</tr>
<tr>
<td>PROCESSOR ID</td>
<td>Unique identifier of the AMP where the lock was requested</td>
<td>Number</td>
</tr>
<tr>
<td>SESSION</td>
<td>Session number of the transaction that was locked. The following session numbers are used to indicate database internal sessions:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 0 System User</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td>• 1 System Accounting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 2 System Recovery</td>
<td></td>
</tr>
<tr>
<td>TABLE</td>
<td>Table name on which the lock was requested</td>
<td>Alpha or Number</td>
</tr>
<tr>
<td>USER</td>
<td>Username whose query is blocked by another user</td>
<td>Alpha or Number</td>
</tr>
</tbody>
</table>
About Filters and Sorting

Filters allow you to change displayed data by showing only rows that match your filter criteria. You can also use filters to set thresholds. When thresholds are exceeded, the values are highlighted in the table view. You can sort the information in the columns.

Filtering allows you to:
- Click in a filter box, start typing, and then press Enter. As you type, each matching value appears in bold in the column. After the view refreshes, only the information matching the value you entered is displayed.
- Narrow your search further by filtering on multiple columns in succession.

Sorting allows you to:
- Sort on a column by clicking the column heading. A second click sorts in descending order.
- Sort on two columns consecutively. Primary sort order is indicated by a dark blue column heading, and secondary sort order is indicated by a light blue column heading.
- Sort in ascending or descending order on all pages when there are multiple pages.

The filtering, sorting, and page number settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

Filter Symbols

Use a wildcard character or symbol in the filter to search for words that have spelling variations or contain a specific pattern of characters. Avoid using punctuation, such as quotation marks, in the filter.

<table>
<thead>
<tr>
<th>Wildcard or Symbol</th>
<th>Description</th>
<th>Example</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>Use this wildcard character to match alpha or numeric characters in the position it occupies. Type this wildcard character at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>cat?</td>
<td>cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>?cat</td>
<td>scat, Scatter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat?l</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat???</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p????er</td>
<td>packer, parser, proper</td>
</tr>
<tr>
<td>*</td>
<td>Use this wildcard character to match zero, one, or multiple alpha or numeric characters in the position it occupies. Type this symbol at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>*cat</td>
<td>cat, cats, catalog, scatter, wildcat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*l</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*</td>
<td>cat, cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>ews</em>er</td>
<td>newscaster, newspaper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*%</td>
<td>what's 100%?</td>
</tr>
</tbody>
</table>
| =                  | Use this symbol at the beginning of your search to match alpha or numeric characters literally. The search results are case-sensitive. This symbol can be used in conjunction with *, ?, and \.
<p>|                    |                                                                             | =CAT     | CAT                                    |
|                    |                                                                             | =cat?    | cats                                   |
|                    |                                                                             | =Cat*    | Cat, Catalog                           |
|                    |                                                                             | =Cat_    | Cat_                                   |</p>
<table>
<thead>
<tr>
<th>Wildcard or Symbol</th>
<th>Description</th>
<th>Example</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>\</td>
<td>Use this symbol in front of a wildcard character so the wildcard is interpreted as a regular character and not as a wildcard. This symbol can be used in conjunction with =, ?, &amp;, and *.</td>
<td>=Cat?</td>
<td>Cat?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*=?</td>
<td>what’s 100%?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat*</td>
<td>cat*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat?</td>
<td>cat?, Cat?</td>
</tr>
<tr>
<td>&gt;</td>
<td>Use this symbol to match any numeric value that is greater than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &gt; and the number.</td>
<td>&gt;60</td>
<td>61, 62, 70, 500, and so forth</td>
</tr>
<tr>
<td>&lt;</td>
<td>Use this symbol to match any numeric value that is less than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &lt; and the number.</td>
<td>&lt;60</td>
<td>59, 58, 50, 8, and so forth</td>
</tr>
</tbody>
</table>

**Clearing Filters**

You can clear the filter boxes and the highlighted content from the table.

1. Do one of the following:
   - To clear individual filter boxes, click 
   - To clear all filter boxes, mouse over , and if the icon changes, click .

   The content is no longer highlighted in the table, and all content appears in the table.

**Configuring Columns to Display**

Use the Columns dialog box to set thresholds and select, lock, and order columns. You can resize columns in the table.

1. In the table, click .

2. In the Columns dialog box, select the check boxes of columns to display. Mouse over the name to see the complete name.

3. [Optional] Click next to the column name. The column remains stationary on the left when scrolling horizontally.

4. [Optional] Click Set, type a threshold value, and click OK. Values exceeding the threshold are highlighted and displayed in the table.
5  [Optional] Click and drag the row to reorder the column.

6  Click Apply to save changes and close the Columns dialog box.

7  [Optional] In the table, drag the column heading border in either direction to resize the column.

The thresholds and column selection, order, and lock settings that you choose for the default or minimized view are not saved when you switch to the maximized view.
The Metrics Analysisportlet allows you to analyze resource usage trends on one or more Teradata databases. Trends are graphed according to metrics such as CPU, memory, and throughput within a specified time range. The information is refreshed every 60 seconds.

The METRICS ANALYSIS view displays a graph with time on the horizontal axis, metric values on the vertical axis, and a different color for each metric sparkline. Sparklines show the average metric values as a line and have enhanced interactive features such as performance envelopes and information balloons that show the actual, minimum, and maximum metric values. Time-range buttons allow you to monitor current usage within the last hour or view usage trends over the last day, week, month, 3 months, or 6 months.

The PREFERENCES view allows you to select and organize metrics to display, set thresholds, and adjust the vertical axis range for each metric.

About the Metrics Analysis View

The METRICS ANALYSIS view displays a graph that represents Teradata Database resource usage. One or more Teradata databases can be monitored in the time range using the same or different metrics. Up to 10 metrics can be selected with different thresholds and vertical axis ranges. Each sparkline is assigned a color for every metric plotted in the graph.

The following list describes the features in this view:

**Toolbar**

Contains the time-range buttons. Select a time-range button to change the graph.

**Graph**

Plots the time range on the horizontal axis and the metric values on the vertical axis. The sparkline is a colored line that represents the average metric values. Click a sparkline to see the highlighted sparkline and performance envelope. The performance envelope appears in a lighter shade of the sparkline color and represents the upper and lower metric values.

**Time Range**

Shows the range of time selected with the time-range button on the Toolbar. For example, if one hour is selected, times from the previous hour appear across the bottom of the graph.
Metrics

Lists the metrics that are defined in the PREFERENCES view. Each metric has a color and a checkbox. The metric name appears along with the name of the system being monitored if there is more than one system enabled. Select a metric name to see the sparkline highlighted and surrounded by the performance envelope in the graph.

About Metric Thresholds

Set thresholds to highlight metric values that are outside normal operating ranges. Set maximum vertical-axis ranges to limit the range of values displayed for selected metrics. After a metric threshold is set in the PREFERENCES view, the threshold line is displayed across the graph with the threshold value to the right of the graph when you select a metric sparkline. As you mouse over the selected sparkline, information balloons display the data point value and the minimum and maximum performance envelope values. The sparkline and information balloons change to red when the threshold is exceeded during the time range. Threshold settings are optional and can be set any time after the metric has been configured.
Setting the Time Range

You can set the time range that is used to plot the graph.

1. In the toolbar, click a time-range button.

The portlet refreshes, and the graph is redrawn.

Removing Metrics from the Graph

You can disable metric sparklines.

1. Clear the color-coded checkbox on the metric line.

The metric sparkline disappears from the graph, but not from the list below the graph.

About the Toolbar

The toolbar allows you to choose the time range to display in the graph. The graph displays oldest data on the left and the most recent data on the right. For each metric, data is collected every 15 seconds and averaged according to the time range chosen.

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hour</td>
<td>Displays the metric values for the last hour, plotted by minute.</td>
</tr>
</tbody>
</table>
### Analysis Metrics

The following metrics are available to analyze resource usage.

#### System Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Sessions</td>
<td>Number of sessions with active queries</td>
<td>Number</td>
</tr>
<tr>
<td>AMP CPU Skew</td>
<td>Comparison of CPU use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew</td>
<td>Comparison of disk use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>Average Outstanding Disk Reqs</td>
<td>Outstanding disk requests (disk queue size)</td>
<td>Number</td>
</tr>
<tr>
<td>AWT</td>
<td>Average number of AMP worker tasks in use on each AMP</td>
<td>Number</td>
</tr>
<tr>
<td>Components Down</td>
<td>Number of components, such as BYNETs or AMPs that are down</td>
<td>Number</td>
</tr>
<tr>
<td>CPU</td>
<td>Average node CPU use. Calculated as the sum of the user CPU, system CPU, and wait I/O CPU usage percentages.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU AWT Processing</td>
<td>CPU resources spent processing an AMP worker task. Normalized by multiplying the value returned from Teradata Database by the number of physical CPUs on the associated node of the AWT.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU/Disk Ratio</td>
<td>Ratio of CPU use to disk use. Calculated as the node CPU time divided by the physical disk usage.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU Dispatcher Processing</td>
<td>CPU resources spent in PE Dispatcher processing</td>
<td>Percent</td>
</tr>
<tr>
<td>DBC Disk Space</td>
<td>Available DBC disk space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk I/O</td>
<td>Number of disk I/Os</td>
<td>Number</td>
</tr>
<tr>
<td>Disk Reads</td>
<td>Total physical disk reads per system during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Disk Usage</td>
<td>Disk use on the system</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk Writes</td>
<td>Total physical disk writes per system during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>FSG Cache Miss</td>
<td>Percentage of FSG cache misses. Calculated as the physical I/Os divided by the logical I/Os.</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Host Block Reads</td>
<td>Message blocks (one or more messages sent in one physical group) received from all clients</td>
<td>Number</td>
</tr>
<tr>
<td>Host Block Writes</td>
<td>Message blocks sent to all hosts</td>
<td>Number</td>
</tr>
<tr>
<td>Index Ratio</td>
<td>Index I/Os divided by the data block I/Os</td>
<td>Number</td>
</tr>
<tr>
<td>Logical MB/Sec</td>
<td>Logical I/O of the system in megabytes per second</td>
<td>Number</td>
</tr>
<tr>
<td>Max Disk Space By AMP</td>
<td>Available disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Max Spool Space By AMP</td>
<td>Available spool space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Memory Failures</td>
<td>Memory failures across all nodes</td>
<td>Number</td>
</tr>
<tr>
<td>Memory Resources</td>
<td>Segments allocated to memory resources</td>
<td>Number</td>
</tr>
<tr>
<td>Net A Usage</td>
<td>Percent of BYNET A usage (BYNET receiver usage)</td>
<td>Percent</td>
</tr>
<tr>
<td>Net Reads</td>
<td>Reads from the BYNET during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Net Writes</td>
<td>Messages written to the BYNET during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Node CPU Skew</td>
<td>Comparison of CPU use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>Node CPU Usage</td>
<td>Average percent of CPU usage of all online nodes in the configuration</td>
<td>Percent</td>
</tr>
<tr>
<td>Node I/O Skew</td>
<td>Comparison of disk use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>Nodes Down</td>
<td>Number of system nodes down</td>
<td>Number</td>
</tr>
<tr>
<td>Parallelism</td>
<td>Percentage of parallelism, calculated as the average CPU usage / maximum CPU usage x 100</td>
<td>Percent</td>
</tr>
<tr>
<td>Parser Usage</td>
<td>Percent of CPU time the parser uses. It might exceed 100%. Normalized by multiplying the value returned from Teradata Database by the number of physical CPUs on the associated node of the parser.</td>
<td>Percent</td>
</tr>
<tr>
<td>PE CPU Usage</td>
<td>Average CPU usage of the PEs, calculated as the average usage of the parser and the dispatcher (both normalized values). Normalized by multiplying the value by the number of physical CPUs on the associated node of the PE.</td>
<td>Percent</td>
</tr>
<tr>
<td>Read I/O</td>
<td>Percent of I/O that are reads</td>
<td>Percent</td>
</tr>
<tr>
<td>Session Login Count</td>
<td>Sessions currently logged on to the system</td>
<td>Number</td>
</tr>
<tr>
<td>Swap Drops</td>
<td>Pages or segments dropped from memory during the sample period due to swapping</td>
<td>Number</td>
</tr>
<tr>
<td>Swap Reads</td>
<td>Pages or segments read into memory from the disk after a prior write or drop during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Swap Writes</td>
<td>Pages or segments written into swap area from memory during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>System CPU</td>
<td>Average CPU time spent in System mode</td>
<td>Percent</td>
</tr>
<tr>
<td>Total AMP CPU</td>
<td>Total AMP CPU use</td>
<td>Percent</td>
</tr>
</tbody>
</table>
### Metric Colors

A fixed set of 10 colors is used for the sparkline, performance envelope, and information balloon. Each metric you select is listed below the graph, and its color is determined by the position selected in the **PREFERENCES** view.

<table>
<thead>
<tr>
<th>Metric Position</th>
<th>Color Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Gold</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Aqua</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pink</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Gray</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Lime</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Teal</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Purple</td>
<td></td>
</tr>
</tbody>
</table>

### About the Preferences View

The **PREFERENCES** view allows you to customize the appearance of the graph.

In this view, you can:

- Add metrics to monitor and display.
- Delete metrics that you do not want to monitor or display.
- Select the **ENABLE** check box to plot the metric in the graph.
- Clear the **ENABLE** check box to remove the metric from the graph, but still list it below the graph.
- Reorder metrics to change their position and color.
- Select systems to monitor and display.
- Set a threshold that helps you track the performance of each metric.
- Set a vertical axis range to limit the maximum value to display.

From the portlet frame, click ▶️ to access the **PREFERENCES** view.
Adding Metrics

You can add metrics that are plotted in the graph.

1. From the portlet frame, click to access the PREFERENCES view.
2. Click the Metrics tab.
3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. Click to add a metric.
   Up to 10 metrics can be listed.
5. Select a metric from the METRIC list.
6. [Optional] Select a system from the SYSTEM list.
   The SYSTEM list is available when more than one Teradata Viewpoint server is enabled for the Data Collection Service.
7. [Optional] Enter a THRESHOLD value.
   You can change the THRESHOLD settings for the metric at any time.
8. [Optional] Enter a VERTICAL AXIS RANGE value.
   You can change the VERTICAL AXIS RANGE settings for the metric at any time.
9. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
10. Click OK.

Changing the Metrics Display Order

You can change the order of the metrics that are listed below the graph. Reordering the metric list affects which color is assigned to the metric.

1. From the portlet frame, click to access the PREFERENCES view.
2. Click the Metrics tab.
3 [Optional] Click Clear Defaults to clear all default settings for this portlet.

4 On the metric row, click and drag the row to its new location.

5 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.

**Enabling and Disabling Metrics**

You can enable and disable metrics from the graph. When a metric is disabled, the metric sparkline is not plotted in the graph; however, data points are still being collected, so the metric is included in the list under the graph and can be reactivated at a later time.

1 From the portlet frame, click to access the Preferences view.

2 Select the Metrics tab.

3 [Optional] Click Clear Defaults to clear all default settings for this portlet.

4 Do one of the following:
   - Clear ENABLE on the metric line to disable the metric.
   - Select ENABLE on the metric line to enable the metric.

5 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.

**Deleting Metrics**

You can delete metrics from the graph. When a metric is deleted in the Preferences view, the metric sparkline is not plotted in the graph, and the metric is not included in the list under the graph.

1 From the portlet frame, click to access the Preferences view.

2 Select the Metrics tab.
3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Click on the metric row of the metric you want to delete.

The metric row disappears.

5 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click **OK**.
Metrics Graph

The **Metrics Graph** portlet allows you to analyze resource usage trends on a Teradata Database system within a specified time range to help identify daily or weekly periods when a system is either over-utilized or under-utilized. You can use this information to determine when to schedule resource-intensive jobs with minimal impact to other users.

The **METRICS GRAPH** view displays a graph with time on the horizontal axis and metric values on the vertical axis. The metric and system are selected using selection menus. Time-range buttons on the toolbar allow you to select 1-month or 3-month periods. The date range displayed can be adjusted dynamically using the date-range slider. The vertical scale for the metric values can be expanded or compressed by dragging the number up or down.

Each point on the graph represents the value collected for the selected metric during the preceding 1-hour period.

**About the Metrics Graph View**

The **METRICS GRAPH** view displays a graph of variations and trends in system resource usage. The graph plots the time range on the horizontal axis and the metric values on the vertical axis. Customize the view using the menus, toolbar, and date-range slider to select metrics and date ranges.

The following list describes the features in this view:

**Selection Menus**

Shows the selections that define the metric currently being displayed. You can change the metric by changing the selections.

**Toolbar**

Contains the time-range buttons. Select a time-range button to change the graph. The time-range start and end dates are displayed on the toolbar next to the time-range buttons.

**Date-Range Slider**

Controls the amount of historical data displayed in the view and adjusts to display from 2 days to approximately 4 months of historical data. Dates outside the date-range slider timeline are shaded lighter. The darker-shaded area between the slider handles represents the current date range being displayed.
Metric Value

Shows the numerical value of metric on the vertical axis. Mouse over a number and drag it up or down to expand or compress the vertical scale.

Sparkline

Displays metric data values in the graph. Mouse over a sparkline to see an information balloon containing the date and time the value was collected and the metric value.

Trend-Reporting Metrics

Database Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Perm</td>
<td>Sum of the current amount of permanent space (disk space) used across all vprocs</td>
<td>Number</td>
</tr>
<tr>
<td>Current Perm Max</td>
<td>Maximum permanent space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Perm Min</td>
<td>Minimum permanent space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Spool</td>
<td>Sum of the current amount of spool space (disk space) used across all vprocs</td>
<td>Number</td>
</tr>
<tr>
<td>Current Spool Max</td>
<td>Maximum spool space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Spool Min</td>
<td>Minimum spool space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Current Temp</td>
<td>Sum of the current amount of temporary space (disk space) used across all vprocs</td>
<td>Number</td>
</tr>
<tr>
<td>Current Temp Max</td>
<td>Maximum temporary space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Current Temp Min</td>
<td>Minimum temporary space used on a single vproc</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Perm</td>
<td>Sum of the largest amount of permanent space used across all vprocs since the last reset of the peak perm value</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Perm Max</td>
<td>Maximum of the largest amount of permanent space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Perm Min</td>
<td>Minimum of the largest amount of permanent space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Spool</td>
<td>Sum of the largest amount of spool used across all vprocs since the last reset of the peak perm value</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Spool Max</td>
<td>Maximum of the largest amount of spool used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Spool Min</td>
<td>Minimum of the largest amount of spool used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Temp</td>
<td>Sum of the largest amount of temporary space used across all vprocs since the last reset of the peak perm value</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Temp Max</td>
<td>Maximum of the largest amount of temporary space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Temp Min</td>
<td>Minimum of the largest amount of temporary space used on a single vproc since the last reset</td>
<td>Number</td>
</tr>
<tr>
<td>Perm Limit</td>
<td>Maximum space available for permanent space storage of all index tables, data tables, subtables, stored procedures, triggers, and permanent journals</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Limit</td>
<td>Maximum space available for spool space storage of all index tables, data tables, subtables, stored procedures, triggers, and permanent journals</td>
<td>Number</td>
</tr>
<tr>
<td>Temp Limit</td>
<td>Maximum space available for temporary space storage of all index tables, data tables, subtables, stored procedures, triggers, and permanent journals</td>
<td>Number</td>
</tr>
</tbody>
</table>

### Performance Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocking Duration</td>
<td>Total time the heartbeat query is blocked</td>
<td>Number</td>
</tr>
<tr>
<td>Concurrency</td>
<td>Average number of active tasks running on the Teradata Database while the heartbeat query is running</td>
<td>Number</td>
</tr>
<tr>
<td>Response Time</td>
<td>Average response time of the selected canary query</td>
<td>Number</td>
</tr>
<tr>
<td>Retrieve Time</td>
<td>Average time to retrieve all results</td>
<td>Number</td>
</tr>
<tr>
<td>Rows Returned</td>
<td>Average number of rows returned by the selected canary query</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Total Time</td>
<td>Combined response time and retrieve time</td>
<td>Number</td>
</tr>
</tbody>
</table>

**Query Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abort Total</td>
<td>Number of aborted queries</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Avg</td>
<td>Average number of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Max</td>
<td>Maximum number of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Min</td>
<td>Minimum number of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>Active AMPs Stddev</td>
<td>Standard deviation of active AMPs</td>
<td>Number</td>
</tr>
<tr>
<td>AMP CPU Skew Avg</td>
<td>Average percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Skew Max</td>
<td>Maximum percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Skew Min</td>
<td>Minimum percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU Skew Stddev</td>
<td>Standard deviation percent of AMP CPU skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Avg</td>
<td>Average percent AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Max</td>
<td>Maximum percent AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Min</td>
<td>Minimum percent AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew Stddev</td>
<td>Standard deviation of AMP I/O skew</td>
<td>Percent</td>
</tr>
<tr>
<td>Cache Total</td>
<td>Number of queries found in step cache</td>
<td>Number</td>
</tr>
<tr>
<td>Concurrency</td>
<td>Average number of queries executing simultaneously during the hour</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Avg</td>
<td>Average query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Max</td>
<td>Maximum query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Min</td>
<td>Minimum query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>Delay Time Stddev</td>
<td>Standard deviation of query delay time</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Avg</td>
<td>Average time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Max</td>
<td>Maximum time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Min</td>
<td>Minimum time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Stddev</td>
<td>Standard deviation of time it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>Max Steps in Parallelism Avg</td>
<td>Average number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Max Steps in Parallelism Max</td>
<td>Maximum number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Max Steps in Parallelism Min</td>
<td>Minimum number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Max Steps in Parallelism Stddev</td>
<td>Standard deviation of number of level-2 query steps executed in parallel</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Avg</td>
<td>Average number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Max</td>
<td>Maximum number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Min</td>
<td>Minimum number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Number of Steps Stddev</td>
<td>Standard deviation of number of query steps</td>
<td>Number</td>
</tr>
<tr>
<td>Query Count</td>
<td>Queries logged in dbc.QryLog, or the sum of Querycount from dbc.QryLogsummary during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Avg</td>
<td>Average query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Max</td>
<td>Maximum query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Min</td>
<td>Minimum query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Query Seconds Stddev</td>
<td>Standard deviation of query run time</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Avg</td>
<td>Average number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Max</td>
<td>Maximum number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Min</td>
<td>Minimum number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Result Rows Stddev</td>
<td>Standard deviation of number of result rows for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Avg</td>
<td>Average amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Max</td>
<td>Maximum amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Min</td>
<td>Minimum amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Stddev</td>
<td>Standard deviation of amount of spool the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Avg</td>
<td>Average number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Max</td>
<td>Maximum number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Min</td>
<td>Minimum number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Steps with Parallelism Stddev</td>
<td>Standard deviation of number of query steps with parallel steps</td>
<td>Number</td>
</tr>
<tr>
<td>Total CPU Time Avg</td>
<td>Average CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Total CPU Time Max</td>
<td>Maximum CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Total CPU Time Min</td>
<td>Minimum CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Total CPU Time Stddev</td>
<td>Standard deviation of CPU time. CPU time is calculated as the total AMP CPU time plus the total parser and dispatcher CPU time for the query.</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Avg</td>
<td>Average I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Max</td>
<td>Maximum I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Min</td>
<td>Minimum I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Total I/O Count Stddev</td>
<td>Standard deviation of I/O count for the query</td>
<td>Number</td>
</tr>
<tr>
<td>Warning Total</td>
<td>Total number of queries with warnings</td>
<td>Number</td>
</tr>
</tbody>
</table>

**System Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Sessions</td>
<td>Number of sessions with active queries</td>
<td>Number</td>
</tr>
<tr>
<td>AMP CPU Skew</td>
<td>Comparison of CPU use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP I/O Skew</td>
<td>Comparison of disk use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>Average Outstanding Disk Reqs</td>
<td>Outstanding disk requests (disk queue size)</td>
<td>Number</td>
</tr>
<tr>
<td>AWT</td>
<td>Average number of AMP worker tasks in use on each AMP</td>
<td>Number</td>
</tr>
<tr>
<td>Components Down</td>
<td>Number of components, such as BYNETs or AMPs that are down</td>
<td>Number</td>
</tr>
<tr>
<td>CPU</td>
<td>Average node CPU use. CPU is calculated as the sum of the user CPU, system CPU and wait I/O CPU usage percentages.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU AWT Processing</td>
<td>CPU resources spent processing an AMP worker task. Normalized by multiplying the value returned from the Teradata database by the number of physical CPUs on the associated node of the AWT.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU/Disk Ratio</td>
<td>Ratio of CPU use to disk use. Calculated as the node CPU time divided by the physical disk usage.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU Dispatcher Processing</td>
<td>CPU resources spent in PE Dispatcher processing</td>
<td>Percent</td>
</tr>
<tr>
<td>DBC Disk Space</td>
<td>Available DBC disk space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk I/O</td>
<td>Number of disk I/Os</td>
<td>Number</td>
</tr>
<tr>
<td>Disk Reads</td>
<td>Total physical disk reads per system during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Disk Usage</td>
<td>Disk use on the system</td>
<td>Percent</td>
</tr>
<tr>
<td>Disk Writes</td>
<td>Total physical disk writes per system during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>FSG Cache Miss</td>
<td>The percentage of FSG cache misses. Calculated as physical I/Os divided by logical I/Os.</td>
<td>Number</td>
</tr>
<tr>
<td>Host Block Reads</td>
<td>Total message blocks (one or more messages sent in one physical group) received from all clients</td>
<td>Number</td>
</tr>
<tr>
<td>Host Block Writes</td>
<td>Total message blocks sent to all hosts</td>
<td>Number</td>
</tr>
<tr>
<td>Index Ratio</td>
<td>The percentage of index hits. Calculated as the index I/Os divided by the data block I/Os.</td>
<td>Number</td>
</tr>
<tr>
<td>Logical MB/Sec</td>
<td>Logical I/O of the system in megabytes per second</td>
<td>Number</td>
</tr>
<tr>
<td>Max Disk Space By AMP</td>
<td>Available disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Max Spool Space By AMP</td>
<td>Available spool space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>Memory Failures</td>
<td>Total memory failures across all nodes</td>
<td>Number</td>
</tr>
<tr>
<td>Memory Resources</td>
<td>Total segments allocated to memory resources</td>
<td>Number</td>
</tr>
<tr>
<td>Net A Usage</td>
<td>Percent of BYNET A usage (BYNET receiver usage)</td>
<td>Percent</td>
</tr>
<tr>
<td>Net Reads</td>
<td>Total reads from the BYNET during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Net Writes</td>
<td>Total messages written to the BYNET during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Node CPU Skew</td>
<td>Comparison of CPU use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>Node CPU Usage</td>
<td>Average percent of CPU usage of all online nodes in the configuration</td>
<td>Percent</td>
</tr>
<tr>
<td>Node I/O Skew</td>
<td>Comparison of disk use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>Nodes Down</td>
<td>Number of system nodes down</td>
<td>Number</td>
</tr>
<tr>
<td>Parallelism</td>
<td>Percentage of parallelism, calculated as the average CPU usage / maximum CPU usage x 100</td>
<td>Percent</td>
</tr>
<tr>
<td>Parser Usage</td>
<td>Percent of CPU time the parser uses. It might exceed 100%. Normalized by multiplying the value returned from Teradata Database by the number of physical CPUs on the associated node of the parser.</td>
<td>Percent</td>
</tr>
<tr>
<td>PE CPU Usage</td>
<td>Average CPU usage of the PEs. Calculated as the average usage of the parser and the dispatcher (both normalized values). Normalized by multiplying the value by the number of physical CPUs on the associated node of the PE.</td>
<td>Percent</td>
</tr>
<tr>
<td>Read I/O</td>
<td>Percent of I/O that are reads</td>
<td>Percent</td>
</tr>
<tr>
<td>Session Login Count</td>
<td>Sessions currently logged on to the system</td>
<td>Number</td>
</tr>
<tr>
<td>Swap Drops</td>
<td>Total pages or segments dropped from memory during the sample period due to swapping</td>
<td>Number</td>
</tr>
<tr>
<td>Swap Reads</td>
<td>Total pages or segments read into memory from the disk after a prior write or drop during the sample period</td>
<td>Number</td>
</tr>
</tbody>
</table>
About the Metrics Graph Menus and Toolbar

The menus and toolbar allow you to specify the display attributes of the METRICS GRAPH view.

Use the selection menus to define a metric to monitor by selecting a:

- **System**
- **Category**
- **Metric**
- **Source** or **Variant**

The first time you add the portlet to the page, the first available metric that you have permission to view is displayed. However, if you only have permission to view Table metrics, no data appears in the portlet until you select a metric using the selection menus.

The **1 mo** and **3 mo** buttons allow you to adjust the time range displayed. When clicked, 1 month or 3 months of data up to the current end date appears in the view. As you adjust the time range, the toolbar refreshes automatically to display the new time range in the toolbar.
Selecting Metrics and Systems to Monitor

You can use selection menus above the toolbar to choose a metric and system to monitor in the portlet, starting with the highest level menu on the far left. Different menus choices are available based on the previous menu, so not all menus apply to all metrics.

You are not required to make a selection from every menu each time you modify a metric selection.

1. In the selection menu, click the currently selected system name to display a list of available systems.

2. Select a system from the menu.

3. Click Next.

4. Select a category from the menu.

5. Click Next.

6. Select a metric from the menu.

7. Click Next.

8. [Optional] Select a source or variant from the menu.
   The menu for source or variant (sum, average, minimum, maximum, standard deviation of that metric) is only available for certain metric categories.

9. Click Next.

Adjusting the Date Range

Use the toolbar to set the range of dates to display for the selected metric and system.

1. Mouse over the date-range slider to activate the start-date and end-date handles.

2. Drag the start-date handle until the intended start date is displayed in the toolbar.

3. Drag the end-date handle until the intended end date is displayed in the toolbar.

4. [Optional] Drag the date-range slider left or right to move the start-date and end-date handles in unison.

5. [Optional] Click 1 mo.
One month of historical data is displayed ending at the current end date.

6  [Optional] Click 3 mo.

Three months of historical data is displayed ending at the current end date.
My Queries

The My Queries portlet allows you to view and manage your queries across multiple Teradata Database systems. You can see if queries are queued or blocked, and you can see their impact on system resources.

Use the My Queries portlet to view information about queries in either the summary view or the details view. The summary view contains a table with one row allocated to each of the sessions logged on under one or more user names. Select a row in the summary view to see additional session and query information in the details view. Use the SQL, Explain, Blocked By, or Query Band tab in the details view to display information for the selected session.

The PREFERENCES view allows you to select one or more Teradata Database systems, and then select one or more users per system to monitor. From this view, you can also select a format for the SQL that appears in the query details view.

About the My Queries View

The MY QUERIES view displays queries running on one or more Teradata Database systems, displaying sessions running under your logon.

After you add an account in the Profile portlet for each system you want to monitor, your queries display in the My Queries portlet.

The MY QUERIES view displays information about each session in a table, with columns configured specifically for the current view. These statistics are sampled and the table is refreshed every 30 seconds. Highlighted values in any row indicate that a session has exceeded threshold criteria for a specific metric. Click anywhere in a row to see session details.

The portlet allows you to filter and sort to find the queries you want.
About Filters and Sorting

Filters allow you to change displayed data by showing only rows that match your filter criteria. You can also use filters to set thresholds. When thresholds are exceeded, the values are highlighted in the table view. You can sort the information in the columns.

Filtering allows you to:

- Click in a filter box, start typing, and then press Enter. As you type, each matching value appears in bold in the column. After the view refreshes, only the information matching the value you entered is displayed.
- Narrow your search further by filtering on multiple columns in succession.

Sorting allows you to:

- Sort on a column by clicking the column heading. A second click sorts in descending order.
- Sort on two columns consecutively. Primary sort order is indicated by a dark blue column heading, and secondary sort order is indicated by a light blue column heading.
- Sort in ascending or descending order on all pages when there are multiple pages.

The filtering, sorting, and page number settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

Filter Symbols

Use a wildcard character or symbol in the filter to search for words that have spelling variations or contain a specific pattern of characters. Avoid using punctuation, such as quotation marks, in the filter.

<table>
<thead>
<tr>
<th>Wildcard or Symbol</th>
<th>Description</th>
<th>Example</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>Use this wildcard character to match alpha or numeric characters in the position it occupies. Type this wildcard character at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search.</td>
<td>cat?</td>
<td>cats, catalog</td>
</tr>
<tr>
<td>?cat</td>
<td></td>
<td>scat, Scatter</td>
<td></td>
</tr>
<tr>
<td>cat?l</td>
<td></td>
<td>catalog</td>
<td></td>
</tr>
<tr>
<td>cat??</td>
<td></td>
<td>catalog</td>
<td></td>
</tr>
<tr>
<td>Wildcard or Symbol</td>
<td>Description</td>
<td>Example</td>
<td>Results</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>This wildcard character can be used in conjunction with any other symbol.</td>
<td>p???er</td>
<td>packer, parser, proper</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Use this wildcard character to match zero, one, or multiple alpha or numeric characters in the position it occupies. Type this symbol at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>*cat</td>
<td>cat, cats, catalog, scatter, wildcat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*l</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*</td>
<td>cat, cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>ews</em>er</td>
<td>Newscaster, newspaper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*%</td>
<td>What's 100%?</td>
</tr>
<tr>
<td>=</td>
<td>Use this symbol at the beginning of your search to match alpha or numeric characters literally. The search results are case-sensitive. This symbol can be used in conjunction with *, ?, and .</td>
<td>=CAT</td>
<td>CAT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat?</td>
<td>Cats</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat*</td>
<td>Cat, Cats, Catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat_</td>
<td>Cat_</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat?</td>
<td>Cat?</td>
</tr>
<tr>
<td>\</td>
<td>Use this symbol in front of a wildcard character so the wildcard is interpreted as a regular character and not as a wildcard. This symbol can be used in conjunction with =, ?, &amp; and *.</td>
<td>*?</td>
<td>What's 100%?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat*</td>
<td>Cat*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat?</td>
<td>Cat?, Cat?</td>
</tr>
<tr>
<td>&gt;</td>
<td>Use this symbol to match any numeric value that is greater than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &gt; and the number.</td>
<td>&gt;60</td>
<td>61, 62, 70, 500, and so forth</td>
</tr>
<tr>
<td>&lt;</td>
<td>Use this symbol to match any numeric value that is less than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &lt; and the number.</td>
<td>&lt;60</td>
<td>59, 58, 50, 8, and so forth</td>
</tr>
</tbody>
</table>

### Clearing Filters

You can clear the filter boxes and the highlighted content from the table.

1. Do one of the following:
   - To clear individual filter boxes, click 🖨.
   - To clear all filter boxes, mouse over 🔊, and if the icon changes, click ✗.

   The content is no longer highlighted in the table, and all content appears in the table.
Configuring Columns to Display

Use the Columns dialog box to set thresholds and select, lock, and order columns. You can resize columns in the table.

1. In the table, click .
2. In the Columns dialog box, select the check boxes of columns to display. Mouse over the name to see the complete name.
3. [Optional] Click \( \text{next to the column name.} \)
   The column remains stationary on the left when scrolling horizontally.
4. [Optional] Click Set, type a threshold value, and click OK.
   Values exceeding the threshold are highlighted and displayed in the table.
5. [Optional] Click and drag the row to reorder the column.
6. Click Apply to save changes and close the Columns dialog box.
7. [Optional] In the table, drag the column heading border \( \) in either direction to resize the column.
   The thresholds and column selection, order, and lock settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

Summary View Metrics

Metrics appearing in the summary view can be selected using the Columns dialog box. Metrics available for monitoring and display are listed below.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCOUNT</td>
<td>Account from which a query was submitted</td>
<td>Character</td>
</tr>
<tr>
<td>BLOCKED TIME</td>
<td>How long the query has been blocked</td>
<td>Number</td>
</tr>
<tr>
<td>CPU SKEW</td>
<td>CPU skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU USE</td>
<td>Percent of the total amount of available CPU used by the query</td>
<td>Percent</td>
</tr>
<tr>
<td>Delta CPU</td>
<td>Total CPU usage time consumed, in seconds, since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>Delta I/O</td>
<td>I/O count since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>DURATION</td>
<td>How long the query has been running</td>
<td>Number</td>
</tr>
<tr>
<td>HOST</td>
<td>Number of host systems</td>
<td>Number</td>
</tr>
<tr>
<td>IMPACT CPU</td>
<td>CPU time in seconds of the highest CPU utilized AMP during the collection interval times the total number of AMPs participating for this session during the last session collection interval</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>IN STATE</td>
<td>How long the query has been in the current state</td>
<td>Number</td>
</tr>
<tr>
<td>I/O SKW</td>
<td>I/O skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td>PARTITION</td>
<td>Partition in which the query is running</td>
<td>Character</td>
</tr>
<tr>
<td>PJI</td>
<td>Ratio of the CPU milliseconds per I/O for the query, where a larger Product Join Index number indicates system performance degradation</td>
<td>Number</td>
</tr>
<tr>
<td>QUERY BAND</td>
<td>Entire query band string (query bands are a set of name-value pairs defined by the user to tag sessions or transactions with an ID through an SQL interface)</td>
<td>Character</td>
</tr>
<tr>
<td>REQ CPU</td>
<td>Number of CPU seconds needed to run the query</td>
<td>Number</td>
</tr>
<tr>
<td>REQ I/O</td>
<td>Number of disk I/Os performed to run the query</td>
<td>Number</td>
</tr>
<tr>
<td>SESSION ID</td>
<td>Unique session identifier</td>
<td>Number</td>
</tr>
<tr>
<td>SPOOL</td>
<td>Amount of spool space the query requires</td>
<td>Number</td>
</tr>
<tr>
<td>START</td>
<td>Time that the query started running on Teradata Database</td>
<td>Number</td>
</tr>
<tr>
<td>STATE ICON</td>
<td>Icon representing the current state of the query</td>
<td>Icon</td>
</tr>
<tr>
<td>STATE</td>
<td>Text describing the current state of the query</td>
<td>Character</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>Full name of the system running the query</td>
<td>Character</td>
</tr>
<tr>
<td>TEMP SPACE</td>
<td>Amount of temp space used by the query</td>
<td>Number</td>
</tr>
<tr>
<td>UNNECESSARY I/O</td>
<td>All AMP I/O divided by all AMP CPU, displayed in milliseconds, to reveal large amounts of I/O occurring over a short period of time</td>
<td>Number</td>
</tr>
<tr>
<td>USERNAME</td>
<td>Name of the user who submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>WORKLOAD</td>
<td>Workload in which the query is running</td>
<td>Character</td>
</tr>
</tbody>
</table>

**Symbol Reference**

The following symbols appear in summary and details views:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>ABORTING</td>
<td>Query has been aborted, and changes are being rolled back.</td>
</tr>
<tr>
<td>➡️</td>
<td>ACTIVE</td>
<td>Query is running.</td>
</tr>
<tr>
<td>➡️●</td>
<td>BLOCKED</td>
<td>Query is waiting for a lock held by another query.</td>
</tr>
<tr>
<td>⏳️</td>
<td>DELAYED</td>
<td>Query is in a delay queue waiting to run.</td>
</tr>
<tr>
<td>□</td>
<td>IDLE</td>
<td>No query is running.</td>
</tr>
<tr>
<td>?</td>
<td>OTHER</td>
<td>Query is in an unknown state.</td>
</tr>
<tr>
<td>⏳️*</td>
<td>PARSING</td>
<td>Query is being parsed before running.</td>
</tr>
<tr>
<td>⏳️†</td>
<td>QTDELAYED</td>
<td>Query is waiting for rows to be inserted into a queue table.</td>
</tr>
</tbody>
</table>
### About the Details View

The details view displays statistics and information about the selected session. This view can be accessed by clicking on a session row in the summary view.

When viewing a request, you can see detailed read-only information from the following tabs:

- **Overview**
  - Key statistics for a session. Any value exceeding preset thresholds is highlighted.

- **SQL**
  - SQL for the selected query.

- **Explain**
  - Explain steps for the query, including step statistics and explain text.

- **Blocked By**
  - Details about other queries that are blocking this query.

- **Query Band**
  - Displays the query band name and value for the selected query.

- **Delay**
  - Details about rules delaying this query.

Use the **Next** and **Previous** buttons to move through sessions without returning to the summary view.
## Details View Metrics

### Query Information

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STATE</strong></td>
<td>Query state, such as ACTIVE, BLOCKED, TERMINATE</td>
<td>Character</td>
</tr>
<tr>
<td><strong>TIME IN STATE</strong></td>
<td>How long the query has been in the current state, displayed as HH:MM:SS</td>
<td>Number</td>
</tr>
<tr>
<td><strong>TOTAL DURATION</strong></td>
<td>How long the query has run, displayed as HH:MM:SS</td>
<td>Number</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Total CPU usage time, in seconds, consumed by the query</td>
<td>Number</td>
</tr>
<tr>
<td><strong>CPU delta</strong></td>
<td>Total CPU usage time consumed, in seconds, since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td><strong>I/O</strong></td>
<td>Number of I/O operations the query performed</td>
<td>Number</td>
</tr>
<tr>
<td><strong>I/O delta</strong></td>
<td>I/O count since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td><strong>UNNECESSARY I/O</strong></td>
<td>All AMP I/O divided by all AMP CPU, displayed in milliseconds, to reveal large amounts of I/O occurring over a short period of time</td>
<td>Number</td>
</tr>
<tr>
<td><strong>IMPACT CPU</strong></td>
<td>CPU time in seconds of the highest CPU utilized AMP during the collection interval times the total number of AMPS participating for this session during the last session collection interval</td>
<td>Number</td>
</tr>
<tr>
<td><strong>CPU SKEW</strong></td>
<td>CPU skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>I/O SKEW</strong></td>
<td>I/O skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>SPOOL</strong></td>
<td>Amount of spool space the query is using</td>
<td>Number</td>
</tr>
<tr>
<td><strong>TEMP SPACE</strong></td>
<td>Amount of temp space the query is using</td>
<td>Number</td>
</tr>
<tr>
<td><strong>WORKLOAD</strong></td>
<td>Workload where the query is actively running</td>
<td>Character</td>
</tr>
</tbody>
</table>
### Metric

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PJI</td>
<td>Ratio of the CPU milliseconds per I/O for the query, where a larger Product Join Index number indicates system performance degradation</td>
<td>Number</td>
</tr>
<tr>
<td>CPU USE</td>
<td>Percent of the total amount of available CPU used by the query</td>
<td>Percent</td>
</tr>
</tbody>
</table>

### Session Information

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER</td>
<td>Name of the user that submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>ACCOUNT</td>
<td>Account of the user that submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>SOURCE</td>
<td>Source details, such as application name, IP address, and host user name</td>
<td>Character</td>
</tr>
<tr>
<td>PARTITION</td>
<td>Partition in which the query is running</td>
<td>Character</td>
</tr>
<tr>
<td>REQUESTS</td>
<td>Number of queries submitted by the session</td>
<td>Number</td>
</tr>
</tbody>
</table>

### About the Details Overview Tab

The **Overview** tab provides detailed information about key metrics for the selected session and its queries. The metric values displayed provide a snapshot of Teradata Database system status. Metrics that exceed preset thresholds are highlighted.

### About the Details SQL Tab

The **SQL** tab displays the SQL for the selected query. This information is read-only.

### About the Details Explain Tab

The **Explain** tab displays an abbreviated version of the Step statistics and the Explain text that result from an Explain request in an SQL session. This information is read-only, and no actions are available from this tab. The **Explain** tab displays completed steps at the top of the list and future steps at the bottom. The tab periodically refreshes to display updated information. Each Explain step is uniquely identified with a number where the background of the number box indicates status:

- Completed steps are at the top of the list and indicated by a black number box.
- Active steps are indicated by a pulsating number box (flashes gray and white).
- Steps to run are at the bottom of the list and indicated by a white number box.

Each numbered step includes:

**EST. TIME**  
Estimated execution time for the step.

**EST. I/O**    
Estimated number of I/Os for the step.

**ACTUAL TIME**  
Actual CPU time consumed by the step, or blank if the step has not run.
ACTUAL I/O

Actual number of I/Os for the step, or blank if the step has not run.

About the Details Blocked By Tab

The Blocked By tab displays details about other queries that are blocking this query. This information is read-only, and no actions are available from this tab. This tab is available when the selected query is blocked. The Blocked By tab displays:

USERNAME

Name of the user that is running the query that holds the lock.

HOST

Host ID that is logged on to the session.

SESSION ID

Session ID in which the blocking query was run.

LOCK TYPE

Type of lock.

STATUS

Lock status.

LOCKED

Name of the locked object.

About the Details Query Band Tab

The Query Band tab displays the query band name and value for the selected query. This information is read-only. For each query, the Query Band tab displays:

NAME

The name of the query band.

VALUE

The value of the query band.

About the Details Delay Tab

The Delay tab displays details about rules that are delaying this query. The Delay tab is available if the system being monitored is a Teradata Database 13.10 system or newer. The information on the Delay tab is read-only, and no actions are available from this tab. This tab is available when the selected query is delayed. The Delay tab displays all rules that apply to the query and a scroll bar appears if there are more than two rules. The Delay tab displays:

BLOCKING COUNT

Number of consecutive times this session has blocked at least one other session.
UTILITY THROTTLE DELAY TIME
Amount of time request has been delayed by a utility throttle rule.

SYSTEM THROTTLE DELAY TIME
Amount of time request has been delayed by a system throttle rule.

WORKLOAD THROTTLE DELAY TIME
Amount of time request has been delayed by a workload throttle rule.

RULE NAME
Name of rule causing request delay.

RULE TYPE
TASM type of rule causing request delay.

OVERRIDABLE
Indicates if the Teradata Database Administrator can abort or release the request.

About the Tools Menu

The Tools menu allows you to manage queries and sessions.

Use the Tools menu to balance system resources:

Abort
Abort the selected query or session.

Change Priority
Change the priority of the selected query or session.

Change Workload
Change the workload of the selected query or session.

Release Query
Release the selected query from a delay queue.

You must log in with a user ID that has permission to abort, change priorities or workloads, or release queries. If you log out, close a portlet, or open a new portlet instance, you must log in again.

Note: If Teradata Active System Management (TASM) is enabled, Change Workload is available from the Tools menu. If TASM is disabled, Change Priority is available from the menu. If you do not see Change Workload or Change Priority in the menu, the system you are monitoring does not support these features or you do not have permission to use them. If the query you are monitoring is delayed, only Release Query is available.

Aborting a Query or a Session

You can abort a query or a session of queries that is blocking other queries or consuming too many resources.
From the summary view, click the row of the query you want to abort.

2 Click **Tools > Abort**.

3 [Optional] Log in.

4 Click **Next**.

5 Select one of the following:
   - **Abort Query** to abort the selected query.
   - **Abort Session** to abort the selected query and log off the session.

6 Click **Next**.

7 Click **Next** to confirm your selection.

**Changing the Priority of a Query or Session**

You can change the priority of a query or session to allow higher priority queries to run or to balance session resources.

This menu item is only available when workloads are not enabled and the system being monitored supports this feature.

1 From the summary view, click the row of the query with a priority that needs to change.

2 Click **Tools > Change Priority**.

3 [Optional] Log in.

4 Click **Next**.

5 From the list of accounts that have been assigned to the user, select an account to copy the account name to the **Edit new account string** box.

6 [Optional] Edit the account string or enter a new account string.

7 Click **Next**.

8 Select one of the following:
   - **Move just this query** to change the priority of the selected query.
   - **Move this query and all future queries associated with this session** to change the priority of the selected query and all subsequent queries in the current session.

9 Click **Next**.

10 Click **Next** to confirm your selection.

**Changing the Workload of a Query or Session**

You can change the workload of a query or session to either allow higher priority workloads to run or to balance workload resources.

This menu item is only available when workloads are enabled and the system being monitored supports this feature.

1 From the summary view, click the row of the query with the workload that needs to change.

2 Click **Tools > Change Workload**.
3 [Optional] Log in.
4 Click Next.
5 [Optional] Select a different workload from the list.
6 Click Next to confirm your selection.
7 Select one of the following:
   • **Move just this query** to change the workload of the selected query.
   • **Move this query and all future queries associated with this session** to change the workload of the selected query and all subsequent queries in the same session.
8 Click Next.
9 Click Next to confirm your selection.

**Releasing a Query**

You can release a query that is queued and waiting to run.

1 From the summary view, click the row of the query you want to release.
2 Click Tools > Release Query.
3 [Optional] Log in.
4 Click Next.
5 Click Next to confirm your selection.

**Changing Multiple Sessions**

You can change system resources for multiple sessions, users, or account strings in the following locations:

- All sessions table from the summary view
- User sessions table from the details view
- Account strings table from the details view

1 Click on a session from the summary view.
2 [Optional] Access user or account string tables from the details view.
   a Click on a session.
   b Click the USER or ACCOUNT link under SESSION INFO.
3 Select an action from the Tools menu.
   Check boxes appear next to the sessions.
4 Do one of the following:
   • Select the check box in the column heading to select all sessions.
   • Select the check boxes for specific sessions.
5 Select Submit.
6 [Optional] Log in.
7 Follow the instructions on subsequent screens.

**About the Preferences View**

The PREFERENCES view allows you to select systems and users to monitor and to select a format for the SQL that appears in the query details view.

From the portlet frame, click to access the PREFERENCES view and the following tabs:

- **Systems**
  
  Select the Teradata Database systems and login user names to monitor.

- **Display**
  
  Choose formatted or unformatted SQL to display on the SQL tab of the query details view.

**Selecting Systems and Users to Monitor**

Use the Systems tab in the PREFERENCES view to select Teradata Database systems and login user names to monitor.

Define user names for each system using the Profile portlet. Only predefined user names appear on the Systems tab.

1 From the portlet frame, click to access the PREFERENCES view.
2 Click the Systems tab.
3 Click to expand system names and show available user names.

4 [Optional] Click Clear Defaults to clear all default settings for this portlet.
5 For each Teradata Database system and user name you want to monitor:
   a Select the systems on which you want to monitor queries.
Select the user names for each system that you want to monitor.

6 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

7 Click **OK**.

### Selecting Display Options

The **Display** tab in the **PREFERENCES** view allows you to format the SQL that appears on the **SQL** tab of the query details view.

1 From the portlet frame, click ![access the PREFERENCES view](image) to access the **PREFERENCES** view.

2 Click the **Display** tab.

3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Do one of the following:
   - Select the **Format SQL** check box to use formatted SQL.
   - Clear the **Format SQL** check box to use unformatted SQL.

5 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click **OK**.
Node Resources

The Node Resources portlet allows you to monitor physical and virtual resources to locate over or under-utilized resources and isolate performance or system issues. You choose which system and resources to monitor on your Teradata Database system.

The Node Resources portlet provides metrics about:

- Percentage of CPU used by nodes or vprocs
- How system resource usage is spread across the vprocs
- How much physical disk I/O, BYNET traffic, or host reads and writes are occurring
- Whether congestion or excessive swapping is an issue on a single or group of nodes or vprocs

These metrics allow you to analyze data and detect issues such as poor node or vproc parallel efficiency, or higher than expected disk read/write ratio or swap I/O rate.

The Node Resources portlet provides controls that let you choose what information is displayed. The information is refreshed every 60 seconds.

The PREFERENCES view allows you to choose which metrics appear in the portlet views.

About the Summary Views

The summary views provide a status of the resources on your Teradata Database system so you can monitor and locate issues. The NODES summary view displays the status of nodes, grouped by clique. The VPROCS summary view displays the status of vprocs in a node.

The following list describes the features in these views:

Selection Menus

Shows the system and resources currently being displayed. Choose a system, including multi-generational systems, and type of node.

Toolbar

Contains a count of the total resources on the selected system, the number of resources outside the threshold, and the number of down resources that are out of service or offline.
**Preview Sliders**

Displays resources that are outside the threshold or down. You can customize the metrics displayed from the **PREFERENCES** view.

**Resource Totals**

Displays the total number of nodes or vprocs that are outside the threshold.

**Clique ID**

Displays the status of nodes, grouped by clique, when you select any of the **Nodes** views from the selection menus.

**Node ID**

Displays the status of vprocs in a node when you select any of the **Vprocs** views from the selection menus. You can click a node ID to view the details view for that node.

**Preview Squares**

Displays node or vproc status by color-coded squares, depending on the resource you chose from the selection menus.

Following is an example of the **NODES** summary view that you see when you select **All Nodes > Nodes > ALL** from the selection menu.

Following is an example of the **VPROCS** summary view that you see when you select **All Nodes > Vprocs > ALL** from the selection menu.
Selecting a System to Monitor

You can use selection menus above the toolbar to choose a system and type of resource to monitor in the portlet, starting with the highest level menu on the far left. Different menu choices are available based on the previous menu.

1. In the selection menu, click the currently selected system name to display a list of available systems.

2. Select a system from the menu.

3. Click Next.

4. Select a type of resource from the menu.

5. Click Next.

6. Select Nodes or Vprocs from the menu.

7. Click Next.

8. Do one of the following:
   - Select Nodes, and then select ALL, With AMPs, or Without AMPs from the menu.
   - Select Vprocs, and then select ALL, AMPs, or PEs from the menu.


Selection Menu Choices

The Node Resources portlet displays data for a single Teradata Database system. The selection menu allows you to choose the type of data that appears in the summary views,
preview squares, and details views. Depending on your system, you may have access to multi-generational systems.

<table>
<thead>
<tr>
<th>Selection Menu Choices</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodes &gt; ALL</td>
<td>Node data on all nodes, grouped by clique</td>
</tr>
<tr>
<td>Nodes &gt; With AMPs</td>
<td>Node data on all nodes with AMPs, grouped by clique</td>
</tr>
<tr>
<td>Nodes &gt; Without AMPs</td>
<td>Node data on all nodes without AMPs, grouped by clique</td>
</tr>
<tr>
<td>Vprocs &gt; ALL</td>
<td>Vproc data on all AMPs and vprocs, grouped by node</td>
</tr>
<tr>
<td>Vprocs &gt; AMP</td>
<td>Vproc data only on AMPs, grouped by node</td>
</tr>
<tr>
<td>Vprocs &gt; PE</td>
<td>Vproc data only on PEs, grouped by node</td>
</tr>
<tr>
<td>5500H, 5350, 4980, and so forth</td>
<td>Multi-generational system data</td>
</tr>
<tr>
<td></td>
<td>For example, by selecting 5500H, you can view and compare data for 5500H nodes within a system. Typically, you would not compare metrics on older hardware with metrics on newer hardware.</td>
</tr>
</tbody>
</table>

**About the Toolbar**

The toolbar allows you to filter the display attributes in the table view by using the resource count status buttons. The toolbar displays a summary count of:

- The **total** resources on the selected system
- The > **threshold** resources that are outside the threshold
- The number of **down** resources that are out of service or offline

After you click on any button, the table view appears with statistics and information about the selected resources to help you isolate issues.

**About the Preview Sliders**

Preview sliders display metrics of resources that are outside the threshold or down and help you determine if there is skew across the nodes or vprocs. The metrics and thresholds that appear in the preview sliders are set in the **PREFERENCES** view.

As you move a slider:

- A box to the right of each slider displays the total number of nodes or vprocs that are outside the threshold.
- A box above the slider displays a percentage + or - from the average. The left side of the slider represents the average. As you move the slider to the right, the metric is further away from the average.
- Preview squares reflect the resources that are outside the threshold.

You can click a node ID to view the details view for that node.
A single vproc might be counted for each resource total, however, that vproc is only counted once in the > threshold status button.

**About the Preview Squares**

Preview squares are color-coded squares that help you determine status for a particular resource. Preview squares display data in the summary views and details views according to the resources selected from the selection menu.

Mouse over a preview square to display an information balloon containing the metrics for the resource selected. The information in the balloon corresponds to the metrics in the 3 preview sliders. Click a preview square to see the details view for that resource.

The following table describes the meaning of the preview squares.

<table>
<thead>
<tr>
<th>Preview Square</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray</td>
<td>Normal</td>
<td>No threshold is set or no metric is outside of the threshold.</td>
</tr>
<tr>
<td>Orange</td>
<td>Warning</td>
<td>At least one metric for a resource is outside the threshold.</td>
</tr>
<tr>
<td>Black</td>
<td>Down</td>
<td>Set automatically when the node goes down or when the Teradata Database Administrator takes the resource out of service or offline.</td>
</tr>
</tbody>
</table>

**Summary View Metrics**

Select metrics to appear in the summary view for nodes, vprocs, AMPs, and PEs using the Columns dialog box. Some metrics are only available in certain views.

**N**

- Nodes > ALL
- Nodes > With AMPs
- Nodes > Without AMPs

**V**

- Vprocs > ALL
### Node Resources

**A**

**Vprocs > AMP**

**P**

**Vprocs > PE**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIC USAGE</td>
<td>Percent of Channel Interface Controller usage for this resource</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>CPU USAGE</td>
<td>Percent of CPU usage that is spent being active (not idle)</td>
<td>Percent</td>
<td>N, V, A, P</td>
</tr>
<tr>
<td>DISK I/O</td>
<td>Number of disk I/Os for this resource</td>
<td>Number</td>
<td>N, V, A</td>
</tr>
<tr>
<td>DISK OUT REQ AVG</td>
<td>Average number of outstanding disk requests for this resource</td>
<td>Number</td>
<td>N, V, A</td>
</tr>
<tr>
<td>DISK READS</td>
<td>Total number of physical disk reads for this resource during the sample interval</td>
<td>Number</td>
<td>N, V, A</td>
</tr>
<tr>
<td>DISK USAGE</td>
<td>Percentage of disk usage for this resource</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>DISK WRITES</td>
<td>Total number of physical disk writes for this resource during the sample interval</td>
<td>Number</td>
<td>N, V, A</td>
</tr>
<tr>
<td>HOST BLOCK READS</td>
<td>Number of message blocks received from all hosts. A message block may consist of multiple messages.</td>
<td>Number</td>
<td>N, V, P</td>
</tr>
<tr>
<td>HOST BLOCK WRITES</td>
<td>Number of message blocks sent to all hosts. A message block may consist of multiple messages.</td>
<td>Number</td>
<td>N, V, P</td>
</tr>
<tr>
<td>HOST I/O</td>
<td>Number of host I/Os for this resource</td>
<td>Number</td>
<td>N, V, P</td>
</tr>
<tr>
<td>MEM AGINGS</td>
<td>Memory agings and collections done on old segments</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>MEM ALLOCATE KB</td>
<td>Kilobytes allocated to memory resources</td>
<td>Number</td>
<td>N, V, A, P</td>
</tr>
<tr>
<td>MEM ALLOCATES</td>
<td>Segments allocated to memory resources</td>
<td>Number</td>
<td>N, V, A, P</td>
</tr>
<tr>
<td>MEM FAILURES</td>
<td>Memory segment allocation attempts that failed</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>NET A USAGE</td>
<td>Total BYNET utilization (average of the online BYNETs)</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>NET READS</td>
<td>Messages read from the BYNET and input into the resource during the sample interval</td>
<td>Number</td>
<td>N, V, A, P</td>
</tr>
<tr>
<td>NET WRITES</td>
<td>Messages written from the resource and output to the BYNET during the sample interval</td>
<td>Number</td>
<td>N, V, A, P</td>
</tr>
<tr>
<td>NV MEM AGINGS</td>
<td>Backup storage disk segments flushed from nonvolatile memory (on Teradata Database V2R6.x)</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>NV MEM ALLOCATE SEGS</td>
<td>Complete and partial nonvolatile memory allocations of disk segments read (written) for backup storage (on Teradata Database V2R6.x)</td>
<td>Number</td>
<td>N, V, A</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
<td>View</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>NV MEM ALLOCATE</td>
<td>Kilobytes of nonvolatile memory allocated for AMP backup storage (on Teradata Database V2R6.x)</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>PERCENT AMP WORKER TASK</td>
<td>CPU resources spent in AMP Worker Task (AWT) processing</td>
<td>Percent</td>
<td>V, A</td>
</tr>
<tr>
<td>PERCENT KERNEL</td>
<td>Time spent in UNIX PDE Kernel waiting for I/Os to complete</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>PERCENT SERVICE</td>
<td>CPU resources spent in UNIX PDE user service processing</td>
<td>Percent</td>
<td>N, V, A, P</td>
</tr>
<tr>
<td>PERCENT DISPATCHER</td>
<td>Percent of CPU resources spent in PE Dispatcher processing</td>
<td>Percent</td>
<td>V, P</td>
</tr>
<tr>
<td>PERCENT USER</td>
<td>CPU resources spent in non-service user code processing</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>PARSER USAGE</td>
<td>Percent of CPU resources spent in PE Parser processing</td>
<td>Percent</td>
<td>V, A, P</td>
</tr>
<tr>
<td>SWAPS</td>
<td>Total number of swap reads and swap writes</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>SWAP DROPS</td>
<td>Pages and segments dropped from resource memory during the sample period due to swapping</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>SWAP READS</td>
<td>Segments read into resource memory from the disk during the sample interval due to swapping</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>SWAP WRITES</td>
<td>Segments written to disk from resource memory during the sample interval due to swapping</td>
<td>Number</td>
<td>N</td>
</tr>
</tbody>
</table>

**About the Table View**

The table view displays statistics and information about the resources at one time, helping you to isolate performance or system issues. This view is useful for comparing multiple vprocs. The table view can be accessed from the summary views by clicking a resource count status button in the toolbar or clicking any metric name in the preview slider.

Select and organize the displayed columns by clicking 📅.

Click on a row to access the details view for a particular node or vproc, depending on the resource you chose from the selection menus. Following is an example of the table view for nodes.
About Filters and Sorting

Filters allow you to change displayed data by showing only rows that match your filter criteria. You can also use filters to set thresholds. When thresholds are exceeded, the values are highlighted in the table view. You can sort the information in the columns.

Filtering allows you to:

- Click in a filter box, start typing, and then press Enter. As you type, each matching value appears in bold in the column. After the view refreshes, only the information matching the value you entered is displayed.
- Narrow your search further by filtering on multiple columns in succession.

Sorting allows you to:

- Sort on a column by clicking the column heading. A second click sorts in descending order.
- Sort on two columns consecutively. Primary sort order is indicated by a dark blue column heading, and secondary sort order is indicated by a light blue column heading.
- Sort in ascending or descending order on all pages when there are multiple pages.

The filtering, sorting, and page number settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

Filter Symbols

Use a wildcard character or symbol in the filter to search for words that have spelling variations or contain a specific pattern of characters. Avoid using punctuation, such as quotation marks, in the filter.

<table>
<thead>
<tr>
<th>Wildcard or Symbol</th>
<th>Description</th>
<th>Example</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>Use this wildcard character to match alpha or numeric characters in the position it occupies. Type this wildcard character at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search.</td>
<td>cat?</td>
<td>cats, catalog</td>
</tr>
<tr>
<td>?cat</td>
<td>This wildcard character can be used in conjunction with any other symbol.</td>
<td>scat, Scatter</td>
<td></td>
</tr>
<tr>
<td>cat?</td>
<td></td>
<td>catalog</td>
<td></td>
</tr>
<tr>
<td>cat????</td>
<td></td>
<td>catalog</td>
<td></td>
</tr>
<tr>
<td>p????er</td>
<td></td>
<td>packer, parser, proper</td>
<td></td>
</tr>
<tr>
<td>Wildcard or Symbol</td>
<td>Description</td>
<td>Example</td>
<td>Results</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>*</td>
<td>Use this wildcard character to match zero, one, or multiple alpha or numeric characters in the position it occupies. Type this symbol at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>*cat</td>
<td>cat, cats, catalog, scatter, wildcard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*</td>
<td>cat, cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>ews</em>er</td>
<td>newscaster, newspaper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*%</td>
<td>what’s 100%?</td>
</tr>
<tr>
<td>=</td>
<td>Use this symbol at the beginning of your search to match alpha or numeric characters literally. The search results are case-sensitive. This symbol can be used in conjunction with *, ?, and .</td>
<td>=CAT</td>
<td>CAT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat?</td>
<td>cats</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat*</td>
<td>Cat, Cats, Catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat_</td>
<td>Cat_</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat?</td>
<td>Cat?</td>
</tr>
</tbody>
</table>
| \                 | Use this symbol in front of a wildcard character so the wildcard is interpreted as a regular character and not as a wildcard. This symbol can be used in conjunction with =, ?, &,
| \                 |             | *? | what’s 100%? |
| \                 |             | =cat\* | cat* |
| \                 |             | cat\? | cat?, Cat? |
| >                  | Use this symbol to match any numeric value that is greater than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only > and the number. | >60 | 61, 62, 70, 500, and so forth |
| <                  | Use this symbol to match any numeric value that is less than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only < and the number. | <60 | 59, 58, 50, 8, and so forth |

**Clearing Filters**

You can clear the filter boxes and the highlighted content from the table.

1. Do one of the following:
   - To clear individual filter boxes, click.
   - To clear all filter boxes, mouse over, and if the icon changes, click.

The content is no longer highlighted in the table, and all content appears in the table.

**Configuring Columns to Display**

Use the Columns dialog box to set thresholds and select, lock, and order columns. You can resize columns in the table.
1. In the table, click [ ].

2. In the **Columns** dialog box, select the check boxes of columns to display. Mouse over the name to see the complete name.

3. [Optional] Click [ ] next to the column name. The column remains stationary on the left when scrolling horizontally.

4. [Optional] Click **Set**, type a threshold value, and click **OK**. Qualifying data is highlighted in the table.

5. [Optional] Click [ ] and drag the row to reorder the column.

6. Click **Apply** to save changes and close the **Columns** dialog box.

7. [Optional] In the table, drag the column heading border [ ] in either direction to resize the column.

   The thresholds and column selection, order, and lock settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

---

### About the Details View

The details view displays statistics and information about a particular node or vproc to help you isolate performance or system issues. This view can be accessed by clicking on a preview square in the summary view or a row in the table view.

Preview squares at the bottom of the view help you determine status for a particular vproc within the node. Mouse over a square to display an information balloon containing metrics for that vproc. Mouse over other preview squares to compare the metric values with other vprocs. When viewing a vproc, the parent node number is shown in the information balloon. Click on a preview square to directly access the details view for another vproc. Click on the node ID to view the details view for that node.
## Details View Metrics

The following table lists the metrics that may appear in the details view.

If the processing is skewed towards one or more AMPs (that is, the parallelism is not 100%), the metrics may display a value greater than 100%. This is due to the way the data is normalized.

Some metrics are only available in certain views.

N

<table>
<thead>
<tr>
<th>Nodes &gt; ALL, Nodes &gt; With AMPs, Nodes &gt; Without AMPs</th>
</tr>
</thead>
</table>

V

| Vprocs > ALL, Vprocs > AMP, Vprocs > PE |

<table>
<thead>
<tr>
<th>Metric/Name</th>
<th>Description</th>
<th>Type</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATUS</td>
<td>Status of the node or vproc, where <strong>U</strong> means the resource is up, <strong>D</strong> means the resource is down, and <strong>S</strong> means the resource is in stand-by state</td>
<td>Character</td>
<td>N, V</td>
</tr>
<tr>
<td>CLIQUE #</td>
<td>Location of the clique in the rack. When there is one clique, a dash displays</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>NODE #</td>
<td>Unique identifier for each node (cabinet ID and node ID)</td>
<td>Number</td>
<td>V</td>
</tr>
<tr>
<td>NODE TYPE</td>
<td>Type of node</td>
<td>Various</td>
<td>N</td>
</tr>
<tr>
<td>TYPE</td>
<td>Type of vproc</td>
<td>Character</td>
<td>V</td>
</tr>
<tr>
<td>AMP COUNT</td>
<td>Number of AMPs currently executing session requests on this node</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>PE COUNT</td>
<td>Number of PEs currently active on this node</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>Metric/Name</td>
<td>Description</td>
<td>Type</td>
<td>View</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>HOST ID/CLUSTER</td>
<td>Host Id is the logical host identifier associated with a PE or session. Cluster is the cluster number associated with an AMP.</td>
<td>Number</td>
<td>V</td>
</tr>
<tr>
<td>SESSION LOG COUNT</td>
<td>Sessions currently logged on to this PE</td>
<td>Number</td>
<td>V</td>
</tr>
<tr>
<td>SESSION RUN COUNT</td>
<td>Sessions sending TSR messages to this vproc</td>
<td>Number</td>
<td>V</td>
</tr>
<tr>
<td>CPU USAGE</td>
<td>Percent of CPU usage that is not spent being active (not idle)</td>
<td>Percent</td>
<td>N, V</td>
</tr>
<tr>
<td>PERCENT KERNEL</td>
<td>Time spent in UNIX PDE Kernel waiting for I/Os to complete</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>% SERVICE</td>
<td>Percent of CPU resources spent in UNIX-PDE user service processing</td>
<td>Percent</td>
<td>N, V</td>
</tr>
<tr>
<td>% USER</td>
<td>CPU resources spent in non-service user code processing</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>PERCENT AMP WORKER TASK</td>
<td>CPU Resources spent in AMP Worker Task (AWT) processing</td>
<td>Percent</td>
<td>V</td>
</tr>
<tr>
<td>PARSER USAGE</td>
<td>Percent of CPU resources spent in PE Parser processing</td>
<td>Percent</td>
<td>V</td>
</tr>
<tr>
<td>PERCENT DISPATCHER</td>
<td>Percent of CPU resources spent in PE Dispatcher processing</td>
<td>Percent</td>
<td>V</td>
</tr>
<tr>
<td>NET A USAGE</td>
<td>Total BYNET utilization (average of the online BYNETs)</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>DISK USAGE</td>
<td>Percent of disk usage for this resource</td>
<td>Percent</td>
<td>N, V</td>
</tr>
<tr>
<td>CIC USAGE</td>
<td>Percent of Channel Interface Controller usage for this resource</td>
<td>Percent</td>
<td>N, V</td>
</tr>
<tr>
<td>DISK READS</td>
<td>Total physical disk reads for this resource during the sample interval</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>DISK WRITES</td>
<td>Total physical disk writes for this resource during the sample interval</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>DISK I/O</td>
<td>Number of disk I/Os</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>DISK OUT REQ AVG</td>
<td>Average number of outstanding disk requests for this resource</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>HOST BLOCK READS</td>
<td>Message blocks received from all hosts. A message block may consist of multiple messages.</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>HOST BLOCK WRITES</td>
<td>Message blocks sent to all hosts. A message block may consist of multiple messages.</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>HOST I/O</td>
<td>Number of host I/Os</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>SWAP READS</td>
<td>Segments read into node memory from the disk during the sample interval due to swapping</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>Metric/Name</td>
<td>Description</td>
<td>Type</td>
<td>View</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------</td>
<td>------</td>
</tr>
<tr>
<td>SWAP WRITES</td>
<td>Segments written to disk from node memory during the sample interval due to swapping</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>SWAP DROPS</td>
<td>Pages and segments dropped from node memory during the sample period due to swapping</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>SWAPS</td>
<td>Total number of swap reads and swap writes</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>MEM ALLOCATES or MEM ALLOCS</td>
<td>Segments allocated to memory resources</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>MEM ALLOCATE KB</td>
<td>Kilobytes allocated to memory resources</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>MEM FAILURES</td>
<td>Segment allocation attempts that failed</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>MEM SEGS AGINGS</td>
<td>Memory agings and collections done on old segments</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>NET READS</td>
<td>Messages read from the BYNET and input into the node during the sample interval</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>NET WRITES</td>
<td>Messages written from the node and output to the BYNET during the sample interval</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>NV MEM AGINGS</td>
<td>Backup storage disk segments flushed from nonvolatile memory (on Teradata Database V2R6.x)</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>NV MEM ALLOCATE</td>
<td>Kilobytes of nonvolatile memory allocated for AMP backup storage (on Teradata Database V2R6.x)</td>
<td>Number</td>
<td>N</td>
</tr>
<tr>
<td>NV MEM ALLOCATE SEGs</td>
<td>Complete and partial nonvolatile memory allocations of disk segments read (written) for backup storage (on Teradata Database V2R6.x)</td>
<td>Number</td>
<td>N, V</td>
</tr>
<tr>
<td>PE CPU USE</td>
<td>CPU usage of the parsing engines</td>
<td>Percent</td>
<td>V</td>
</tr>
<tr>
<td>AVAILABLE AWT</td>
<td>Total available AMP worker tasks</td>
<td>Number</td>
<td>V</td>
</tr>
<tr>
<td>AWT IN USE</td>
<td>Total in-use AMP worker tasks</td>
<td>Number</td>
<td>V</td>
</tr>
<tr>
<td>MESSAGE COUNT</td>
<td>Messages waiting on the vproc</td>
<td>Number</td>
<td>V</td>
</tr>
<tr>
<td>MESSAGE DQ COUNT</td>
<td>Messages processed from the queue</td>
<td>Number</td>
<td>V</td>
</tr>
</tbody>
</table>

### About the Preferences View

The **PREFERENCES** view allows you to customize the way resource information is displayed in the portlet views.

From the portlet frame, click ![link](https://example.com) to access the **PREFERENCES** view and the following tabs:
Slider Metrics

Select the metrics to display in the preview sliders for each view. Set the maximum threshold percent for each metric.

Display

Display or hide nodes or cliques in the summary views that are operating within set thresholds.

Setting Metric Thresholds

Use the Slider Metrics tab in the PREFERENCES view to set metric thresholds. Use MaxThreshold % to set the maximum range of the preview sliders in the summary views.

1  From the portlet frame, click to access the PREFERENCES view.

2  Click the Slider Metrics tab.

3  [Optional] Click Clear Defaults to clear all default settings for this portlet.

4  Select a view from the list.

5  Select a metric from the list.

6  Enter the maximum threshold percent for each metric.

   The maximum range of the preview sliders changes in the summary views.

7  [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

8  Click OK.

Hiding Nodes and Cliques

Use the Display tab in the PREFERENCES view to display or hide nodes or cliques in the summary views.

1  From the portlet frame, click to access the PREFERENCES view.

2  Click the Display tab.
3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Do one of the following:
   - Select the **Hide nodes or cliques that are operating within set thresholds** check box to hide nodes or cliques in the summary views.
   - Clear the **Hide nodes or cliques that are operating within set thresholds** check box to display nodes or cliques in the summary views.

5 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click **OK**.
Productivity

The Productivity portlet allows you to analyze trends in single-system performance over a 24-hour or a 48-hour period. You can also compare current performance with average performance measured across one or more weeks of historical data. Additionally, you can monitor and compare the productivity of multiple Teradata Database systems by adding a Productivity portlet to the view for each system to be monitored.

The summary view displays a graphic overview of selected metrics monitored over 24 or 48 hours. Samples are taken once every 15 minutes, and a data point is added to the graph for each user-selected metric.

Use the PREFERENCES view to select and organize metrics to display, set thresholds, and adjust the vertical axis range for each metric.

The Productivity portlet also gives you a means for comparing current with historical data by displaying past performance as an average of metric data points collected over time. Adjust the duration over which the averages are calculated using the Past Averages tab.

About the Productivity View

The PRODUCTIVITY view displays a high-level overview of the performance trends for a single Teradata Database system during the preceding 24 hours or 48 hours. You can monitor the productivity of multiple systems by adding a Productivity portlet instance for each Teradata Database system to be monitored. Data trends are represented in a horizontal graph called a sparkline. Mouse over a sparkline to see an information balloon containing detailed information about the data point. There are three types of sparkline:

CANARY RESPONSE TIME

Canary-response-time metrics show the time (in milliseconds) a query takes to complete. Canary response times, such as SYSTEM HEARTBEAT are represented by a curve sparkline. Every 15 minutes, a new data point is added to the sparkline, representing the average canary response time recorded during the interval. A large dot and a number at the end of the sparkline indicate the last data point captured.

QUERIES PER HOUR

Queries-per-hour (QPH) metrics show the number of queries against the database for each hour over the 24-hour or 48-hour period for the selected metric. For example, the TOTAL QPH sparkline is a skyline sparkline, used to represent QPH
metrics. A flat, solid data point represents the number of queries for each hour on the timeline.

**SYSTEM HEALTH**

The **SYSTEM HEALTH** metric provides an overview of the worst state of the monitored system sampled at 15-minute intervals during the 24-hour or 48-hour period. **SYSTEM HEALTH** is represented by a *bar* sparkline. The values on the sparkline represent the worst system state experienced during each 15-minute period.

### Productivity Metrics

Select metrics to appear in the **Productivity** portlet using the **Metrics** tab in the **PREFERENCES** view.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Default Sparkline</th>
<th>Past Average Line</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canary Response Times</td>
<td>Curve</td>
<td>Yes</td>
<td>No</td>
<td>Select individual canary query metrics</td>
</tr>
<tr>
<td>Metrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Metrics: System Health</td>
<td>Bar</td>
<td>No</td>
<td>Yes</td>
<td>Shows system status as Healthy, Degraded, Critical, or Down</td>
</tr>
<tr>
<td>System Metrics: System Heartbeat</td>
<td>Curve</td>
<td>Yes</td>
<td>Yes</td>
<td>Shows whether the Teradata Database system is responsive</td>
</tr>
<tr>
<td>System Metrics: Total QPH</td>
<td>Skyline</td>
<td>Yes</td>
<td>Yes</td>
<td>Select total queries per hour metrics</td>
</tr>
<tr>
<td>Queries Per Hour Metrics</td>
<td>Skyline</td>
<td>Yes</td>
<td>No</td>
<td>Select individual queries per hour metrics</td>
</tr>
</tbody>
</table>

### About the Preferences View

The **PREFERENCES** view allows you to customize the portlet to monitor key metric trends that are important to efficient operation of your Teradata Database system. You can select only one system to monitor for each portlet instance.

From the portlet frame, click on the map to access the **PREFERENCES** view and the following tabs:
System

Select a Teradata Database system to monitor.

Metrics

Select and organize metrics to monitor in the summary view. Drag metrics from a list of all available metrics to the Preview pane where you can preview the results as you go.

Settings

Define settings for the metrics selected for display. Set thresholds to highlight metric values that are outside normal operating ranges. Set maximum vertical-axis ranges to limit the range of values displayed for selected metrics.

Past Averages

Adjust the number of weeks of data points used to calculate the average value for each displayed metric.

Selecting a System to Monitor

Use the System tab in the PREFERENCES view to select a Teradata Database system to monitor. Only one system can be selected for each portlet instance.

1 From the portlet frame, click to access the PREFERENCES view.

2 Click the System tab.

3 [Optional] Click Clear Defaults to clear all default settings for this portlet.

4 Select a system from the list.

5 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.

Selecting Metrics to Monitor

Use the Metrics tab in the PREFERENCES view to select and organize the metrics shown in the summary view.

1 From the portlet frame, click to access the PREFERENCES view.

2 Click the Metrics tab.

The Preview pane uses sample data to show how metric rows are displayed in the summary view.
3 [Optional] Click Clear Defaults to clear all default settings for this portlet.

4 Do any of the following to change the way metric rows are displayed:
   - Add a metric row. Drag a metric from the Select metrics for display list to the Preview pane.
   - Remove a metric row. Drag a metric from the Preview pane to the Metric Removal pane.
   - Change metric row order. Drag a metric already in the Preview pane to a new location in the pane (up or down).

Changes to the metrics affect only the system currently selected, provided that the metrics are available on that system.

5 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.

**Setting Metric Thresholds**

Use the Settings tab in the PREFERENCES view to set the THRESHOLD and VERTICAL AXIS RANGE values for the metrics selected for display. Only metrics selected using the Metrics tab appear in the list of available metrics.

Only the Teradata Viewpoint Administrator can enable System Health metrics and configure the degraded and critical thresholds. These selections are made in the Teradata Systems portlet.

1 From the portlet frame, click to access the PREFERENCES view.

2 Click the Settings tab.
3  [Optional] Click Clear Defaults to clear all default settings for this portlet.

4  [Optional] Enter the THRESHOLD setting for each available metric.
    The threshold line does not appear in the view when the value entered is zero or blank.

5  [Optional] Enter the VERTICAL AXIS RANGE for each available metric.
    The sparkline scales automatically when the value entered is zero or blank.

6  [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

7  Click OK.

Setting Past Averages

Use the Past Averages tab in the PREFERENCES view to specify the number of weeks of data points used to calculate the average values displayed in metric graphs.

1  From the portlet frame, click to access the PREFERENCES view.

2  Click the Past Averages tab.

3  [Optional] Click Clear Defaults to clear all default settings for this portlet.

4  Enter the number of weeks (1 to 99 weeks).
    The default is 2 weeks.

5  [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6  Click OK.
Query Monitor

The Query Monitorportlet allows you to view information about queries running in a Teradata Database system so you can spot problem queries. You can analyze and decide whether a query is important, useful, and well written. After you have identified a problem query, you can take action to correct the problem by changing the priority or workload, releasing the query, or aborting the query or session. You can take these actions for one query or session, or multiple queries or sessions at a time.

The summary view contains a table with one row allocated to each of the sessions, account strings, users, or utilities running on the database.

The portlet allows you to filter queries in all of the session views. You can set thresholds for any column and when the threshold is exceeded, the information is highlighted in the sessions table.

Select a row to access session and query information in the details view.

Using Query Monitor, you can also determine the types of utilities that are running most frequently on the system and then set utility limits. You can spot utilities that are using a large number of partition connections and, potentially, a high number of resources.

From the PREFERENCES view, you can set the criteria values used to display sessions in the My Criteria view and customize the information displayed in the views. Set criteria values to display only those sessions currently running on the selected system that exceed the specified criteria. For example, you can troubleshoot Teradata Database system problems to quickly explore details about queries such as the current state of a query or how long a query has been blocked.

Monitor multiple Teradata Database systems by opening additional instances of the Query Monitorportlet.

About the Query Monitor View

The QUERY MONITOR view displays a summary of sessions running on the selected Teradata Database system.

Selection Menu

Shows the system and resources currently being displayed. Choose a system and session view. Options include viewing by account string, session, user, or utility.
Tools Menu

Available from the All view or My Criteria view. Use the Tools menu to abort, change priority, change the workload, or release a query for one or multiple queries or sessions.

Bar Graph

Provides a Top sessions by menu where you can select one of several metrics. The graph refreshes to display sessions with the largest value compared with the total number of sessions currently running.

Toolbar

Provides a count of the sessions in each of the states. Click on a state to filter out all states, other than the selected state, from the view.

Filters

Filters allow you to change displayed data by only showing rows that match your search criteria. You can also use filters to set thresholds for any columns in any session view. When the threshold is exceeded, the value is highlighted in the sessions table. Click to set these thresholds.

Sessions Table

Provides summary information about each session in columns configured specifically for the current view. The view is refreshed every 30 seconds. You can sort to find the sessions you want. Click anywhere in a row in the sessions table to see session details. You can set the criteria values for what displays in the sessions table in the My Criteria view using the PREFERENCES view. You can set criteria values only for the My Criteria view. When a session has crossed the set threshold, it displays in the sessions table. You also have the option to view utilities. You can determine the types of utilities that are running and if any are using a high amount of resources.
Selecting a System to Monitor

You can use selection menus above the toolbar to choose a system, type of view, and information to monitor in the portlet, starting with the highest level menu on the far left. Different menu choices are available based on the previous menu.

You are not required to make a selection from every menu each time you modify a selection.

1 In the selection menu, click the currently selected system name to display a list of available systems.

2 Select a system from the menu.

3 Click Next.

4 Select a type of view from the menu.

5 Click Next.

6 Select an additional type of view from the menu.

7 Click Next.

Selection Menu Choices

The Query Monitor portlet displays data for a single Teradata Database system. The selection menu defines the information and metrics that appear in the summary view, session views, details views, and utility view.
### Selection Menu Choices

<table>
<thead>
<tr>
<th>Description</th>
<th>Selection Menu Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displays the sessions table for all sessions</td>
<td>By Session &gt; ALL</td>
</tr>
<tr>
<td>Displays the sessions table for sessions that exceed the set criteria values and the metrics enabled in the PREFERENCES view</td>
<td>By Session &gt; My Criteria</td>
</tr>
<tr>
<td>Displays rows of account strings in the sessions table</td>
<td>By Account String</td>
</tr>
<tr>
<td>Displays rows of users in the sessions table</td>
<td>By User</td>
</tr>
<tr>
<td>Displays rows of utilities in the sessions table</td>
<td>By Utility</td>
</tr>
</tbody>
</table>

### About the Bar Graph

The bar graph provides a Top sessions by menu where you can select one of several metrics. A few seconds later, the graph refreshes to display sessions with the largest value compared with the total number of sessions currently running. Click on any session ID in the bar graph to see session details.

Use the maximized view to view some of the smaller sessions by clicking Other.

The Display tab in the PREFERENCES view allows you to show or hide the bar graph in the summary view.

### About the Toolbar

The toolbar allows you to specify the display attributes of the view.

The query count status buttons provide near-real-time status of the number of sessions in each state category. Click on any query count status button to filter for the selected category. For example, click DELAY to display the sessions running a query that is queued waiting to run in the selected Teradata Database system.

**TOTAL**

Sessions currently running in the selected Teradata Database system.

**ACTIVE**

Sessions running a query that is in progress.

**BLOCK**

Sessions running a query that is waiting for a locked resource such as a database table or view.

**ABORT**

Sessions running a query that is in the process of aborting (rolling back changes made by the query).
DELAY
Sessions running a query that is queued waiting to run.

RESP
Sessions running a query that has completed and is sending (responding) spooled data back to the user.

IDLE
Sessions not currently running a query.

PARSE
Sessions running a query that is being parsed. It has not begun to execute.

OTHER
Sessions whose status is unknown and do not fall into any of the above categories.

QTDELAYED
Sessions delayed due to a queue table restriction.

SESDELAYED
Utility sessions that are on the workload delay queue.

About Filters and Sorting
Filters allow you to change displayed data by showing only rows that match your filter criteria. You can also use filters to set thresholds. When thresholds are exceeded, the values are highlighted in the table view. You can sort the information in the columns.

Filtering allows you to:
- Click in a filter box, start typing, and then press Enter. As you type, each matching value appears in bold in the column. After the view refreshes, only the information matching the value you entered is displayed.
- Narrow your search further by filtering on multiple columns in succession.

Sorting allows you to:
- Sort on a column by clicking the column heading. A second click sorts in descending order.
- Sort on two columns consecutively. Primary sort order is indicated by a dark blue column heading, and secondary sort order is indicated by a light blue column heading.
- Sort in ascending or descending order on all pages when there are multiple pages.

The filtering, sorting, and page number settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

Filter Symbols
Use a wildcard character or symbol in the filter to search for words that have spelling variations or contain a specific pattern of characters. Avoid using punctuation, such as quotation marks, in the filter.
## Wildcard or Symbol

<table>
<thead>
<tr>
<th>Wildcard or Symbol</th>
<th>Description</th>
<th>Example</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>Use this wildcard character to match alpha or numeric characters in the position it occupies. Type this wildcard character at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>cat?</td>
<td>cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>?cat</td>
<td>scat, Scatter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat?!</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat??</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p????er</td>
<td>packer, parser, proper</td>
</tr>
<tr>
<td>*</td>
<td>Use this wildcard character to match zero, one, or multiple alpha or numeric characters in the position it occupies. Type this symbol at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>*cat</td>
<td>cat, cats, catalog, scatter, wildcard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*l</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*</td>
<td>cat, cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>ews</em>er</td>
<td>newscaster, newspaper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*%</td>
<td>what’s 100%?</td>
</tr>
<tr>
<td>=</td>
<td>Use this symbol at the beginning of your search to match alpha or numeric characters literally. The search results are case-sensitive. This symbol can be used in conjunction with *, ?, and .</td>
<td>=CAT</td>
<td>CAT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat?</td>
<td>cats</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat*</td>
<td>Cat, Cats, Catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat_</td>
<td>Cat_</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat?</td>
<td>Cat?</td>
</tr>
<tr>
<td>\</td>
<td>Use this symbol in front of a wildcard character so the wildcard is interpreted as a regular character and not as a wildcard. This symbol can be used in conjunction with =, ?, &amp;, and *.</td>
<td>*?</td>
<td>what’s 100%?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat*</td>
<td>cat*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat?</td>
<td>cat?, Cat?</td>
</tr>
<tr>
<td>&gt;</td>
<td>Use this symbol to match any numeric value that is greater than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &gt; and the number.</td>
<td>&gt;60</td>
<td>61, 62, 70, 500, and so forth</td>
</tr>
<tr>
<td>&lt;</td>
<td>Use this symbol to match any numeric value that is less than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &lt; and the number.</td>
<td>&lt;60</td>
<td>59, 58, 50, 8, and so forth</td>
</tr>
</tbody>
</table>

### Clearing Filters

You can clear the filter boxes and the highlighted content from the table.

1. Do one of the following:
   - To clear individual filter boxes, click \.

---

196 Teradata Viewpoint User Guide
• To clear all filter boxes, mouse over ❌ and if the icon changes, click ✗.

The content is no longer highlighted in the table, and all content appears in the table.

### Configuring Columns to Display

Use the Columns dialog box to set thresholds and select, lock, and order columns. You can resize columns in the table.

1. In the table, click ✗.
2. In the Columns dialog box, select the check boxes of columns to display.
   Mouse over the name to see the complete name.
3. [Optional] Click next to the column name.
   The column remains stationary on the left when scrolling horizontally.
4. [Optional] Click Set, type a threshold value, and click OK.
   Values exceeding the threshold are highlighted and displayed in the table.

5. [Optional] Click and drag the row to reorder the column.
6. Click Apply to save changes and close the Columns dialog box.
7. [Optional] In the table, drag the column heading border ⬅️ in either direction to resize the column.
   The thresholds and column selection, order, and lock settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

### Symbol Reference

The following symbols appear in summary and details views:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>ABORTING</td>
<td>Query has been aborted, and changes are being rolled back.</td>
</tr>
<tr>
<td>🔄</td>
<td>ACTIVE</td>
<td>Query is running.</td>
</tr>
<tr>
<td>⟥</td>
<td>BLOCKED</td>
<td>Query is waiting for a lock held by another query.</td>
</tr>
<tr>
<td>⏳</td>
<td>DELAYED</td>
<td>Query is in a delay queue waiting to run.</td>
</tr>
<tr>
<td>⬡</td>
<td>IDLE</td>
<td>No query is running.</td>
</tr>
<tr>
<td>?</td>
<td>OTHER</td>
<td>Query is in an unknown state.</td>
</tr>
<tr>
<td>⏳️</td>
<td>PARSING</td>
<td>Query is being parsed before running.</td>
</tr>
<tr>
<td>⏳️️</td>
<td>QTDELAYED</td>
<td>Query is waiting for rows to be inserted into a queue table.</td>
</tr>
<tr>
<td>⬤️</td>
<td>RESPONSE</td>
<td>Query is returning results to the user.</td>
</tr>
</tbody>
</table>
## Summary View Metrics

Metrics appearing in the summary view can be selected using the **Columns** dialog box. Metrics available for monitoring and display are listed below.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCOUNT</td>
<td>Account from which a query was submitted</td>
<td>Character</td>
</tr>
<tr>
<td>BLOCKED TIME</td>
<td>How long the query has been blocked</td>
<td>Number</td>
</tr>
<tr>
<td>CPU SKEW</td>
<td>CPU skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU USE</td>
<td>Percent of the total amount of available CPU used by the query</td>
<td>Percent</td>
</tr>
<tr>
<td>Delta CPU</td>
<td>Total CPU usage time consumed, in seconds, since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>Delta I/O</td>
<td>I/O count since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>DURATION</td>
<td>How long the query has been running</td>
<td>Number</td>
</tr>
<tr>
<td>HOST</td>
<td>Number of host systems</td>
<td>Number</td>
</tr>
<tr>
<td>IMPACT CPU</td>
<td>CPU time in seconds of the highest CPU utilized AMP during the collection interval times the total number of AMPs participating for this session during the last session collection interval</td>
<td>Number</td>
</tr>
<tr>
<td>IN STATE</td>
<td>How long the query has been in the current state</td>
<td>Number</td>
</tr>
<tr>
<td>I/O SKEW</td>
<td>I/O skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td>PARTITION</td>
<td>Partition in which the query is running</td>
<td>Character</td>
</tr>
<tr>
<td>PJI</td>
<td>Ratio of the CPU milliseconds per I/O for the query, where a larger Product Join Index number indicates system performance degradation</td>
<td>Number</td>
</tr>
<tr>
<td>QUERY BAND</td>
<td>Entire query band string (query bands are a set of name-value pairs defined by the user to tag sessions or transactions with an ID through an SQL interface)</td>
<td>Character</td>
</tr>
<tr>
<td>REQ CPU</td>
<td>Number of CPU seconds needed to run the query</td>
<td>Number</td>
</tr>
<tr>
<td>REQ I/O</td>
<td>Number of disk I/Os performed to run the query</td>
<td>Number</td>
</tr>
<tr>
<td>SESSION ID</td>
<td>Unique session identifier</td>
<td>Number</td>
</tr>
<tr>
<td>SPOOL</td>
<td>Amount of spool space the query requires</td>
<td>Number</td>
</tr>
<tr>
<td>START</td>
<td>Time that the query started running on Teradata Database</td>
<td>Number</td>
</tr>
<tr>
<td>STATE ICON</td>
<td>Icon representing the current state of the query</td>
<td>Icon</td>
</tr>
<tr>
<td>STATE</td>
<td>Text describing the current state of the query</td>
<td>Character</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>Full name of the system running the query</td>
<td>Character</td>
</tr>
</tbody>
</table>
### User and Account String Metrics

Metrics appearing in the user or account string views can be selected using the **Columns** dialog box. Metrics available for monitoring and display are listed below.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCOUNT</td>
<td>Account from which a query was submitted</td>
<td>Character</td>
</tr>
<tr>
<td>USERNAME</td>
<td>Name of the user who submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total number of sessions for the user or account (total of Active, Aborting, Blocked, Idle, Parsing, Response, Delayed, and Unknown)</td>
<td>Number</td>
</tr>
<tr>
<td>ACTIVE COUNT</td>
<td>Number of queries that are running</td>
<td>Number</td>
</tr>
<tr>
<td>ABORTING</td>
<td>Queries that have been aborted and changes are being rolled back</td>
<td>Number</td>
</tr>
<tr>
<td>BLOCKED</td>
<td>Queries waiting for a lock held by another query.</td>
<td>Number</td>
</tr>
<tr>
<td>IDLE</td>
<td>Queries that are not running</td>
<td>Number</td>
</tr>
<tr>
<td>PARSING</td>
<td>Queries being parsed before running</td>
<td>Number</td>
</tr>
<tr>
<td>RESPONSE</td>
<td>Queries that are returning results to the user</td>
<td>Number</td>
</tr>
<tr>
<td>DELAYED</td>
<td>Queries in a delay queue waiting to run</td>
<td>Number</td>
</tr>
<tr>
<td>UNKNOWN COUNT</td>
<td>Number of queries in an unknown state</td>
<td>Number</td>
</tr>
<tr>
<td>CPU USE</td>
<td>Percent of the total amount of available CPU used by the query</td>
<td>Percent</td>
</tr>
<tr>
<td>DELTA I/O</td>
<td>I/O count since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>SPOOL</td>
<td>Current spool used by the current request across all AMPs, in bytes</td>
<td>Number</td>
</tr>
<tr>
<td>DELTA CPU</td>
<td>Total CPU usage time consumed, in seconds, since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>IMPACT CPU</td>
<td>Total CPU seconds consumed across all AMPs that are active for this session</td>
<td>Number</td>
</tr>
<tr>
<td>Delta REQUEST COUNT</td>
<td>Requests initiated by the session</td>
<td>Number</td>
</tr>
</tbody>
</table>
About the Utility View

The utility view displays utility names, states, and limits in the following columns:

Name
The type of utility. The name also includes the partition on which the utility is being run. Click a name to obtain details about an individual utility.

Note: TDWM Statistics reports many active utilities other than utility session, so if you select an active utility to obtain more information, you might receive a No Data message.

Active
The current number of utilities active on the partition.

Limit
The maximum number of utilities allowed to be active on the partition. The limit value can be either the system default value for the utility or a rule throttle value. You can override the default limits by changing the setting in the DBS control record.

About the Details View

The details view displays statistics and information about the selected session. This view can be accessed by clicking on a session row in the summary view.

When viewing a request, you can see detailed read-only information from the following tabs:

Overview
Key statistics for a session. Any value exceeding preset thresholds is highlighted.

SQL
SQL for the selected query.

Explain
Explain steps for the query, including step statistics and explain text.

Blocked By
Details about other queries that are blocking this query.

Query Band
Displays the query band name and value for the selected query.

Delay
Details about rules delaying this query.

Use the Tools menu to change the priority or workload, release a query, or abort a query or session for one query or session at a time.

Use the Next and Previous buttons to move through sessions without returning to the summary view.
### Details View Metrics

#### Query Information

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STATE</strong></td>
<td>Query state, such as ACTIVE, BLOCKED, TERMINATE</td>
<td>Character</td>
</tr>
<tr>
<td><strong>TIME IN STATE</strong></td>
<td>How long the query has been in the current state, displayed as HH:MM:SS</td>
<td>Number</td>
</tr>
<tr>
<td><strong>TOTAL DURATION</strong></td>
<td>How long the query has run, displayed as HH:MM:SS</td>
<td>Number</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Total CPU usage time, in seconds, consumed by the query</td>
<td>Number</td>
</tr>
<tr>
<td><strong>CPU delta</strong></td>
<td>Total CPU usage time consumed, in seconds, since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td><strong>I/O</strong></td>
<td>Number of I/O operations the query performed</td>
<td>Number</td>
</tr>
<tr>
<td><strong>I/O delta</strong></td>
<td>I/O count since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td><strong>UNNECESSARY I/O</strong></td>
<td>All AMP I/O divided by all AMP CPU, displayed in milliseconds, to reveal large amounts of I/O occurring over a short period of time</td>
<td>Number</td>
</tr>
<tr>
<td><strong>IMPACT CPU</strong></td>
<td>CPU time in seconds of the highest CPU utilized AMP during the collection interval times the total number of AMPs participating for this session during the last session collection interval</td>
<td>Number</td>
</tr>
<tr>
<td><strong>CPU SKEW</strong></td>
<td>CPU skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>I/O SKEW</strong></td>
<td>I/O skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>SPOOL</strong></td>
<td>Amount of spool space the query is using</td>
<td>Number</td>
</tr>
<tr>
<td><strong>TEMP SPACE</strong></td>
<td>Amount of temp space the query is using</td>
<td>Number</td>
</tr>
<tr>
<td><strong>WORKLOAD</strong></td>
<td>Workload where the query is actively running</td>
<td>Character</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>PJI</td>
<td>Ratio of the CPU milliseconds per I/O for the query, where a larger Product Join Index number indicates system performance degradation</td>
<td>Number</td>
</tr>
<tr>
<td>CPU USE</td>
<td>Percent of the total amount of available CPU used by the query</td>
<td>Percent</td>
</tr>
</tbody>
</table>

**Session Information**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER</td>
<td>Name of the user that submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>ACCOUNT</td>
<td>Account of the user that submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>SOURCE</td>
<td>Source details, such as application name, IP address, and host user name</td>
<td>Character</td>
</tr>
<tr>
<td>PARTITION</td>
<td>Partition in which the query is running</td>
<td>Character</td>
</tr>
<tr>
<td>REQUESTS</td>
<td>Number of queries submitted by the session</td>
<td>Number</td>
</tr>
</tbody>
</table>

**About the Details Overview Tab**

The Overview tab provides detailed information about key metrics for the selected session and its queries. The metric values displayed provide a snapshot of Teradata Database system status. Metrics that exceed preset thresholds are highlighted. Under SESSION INFO, you can click on a user or account to see all sessions for that user or account string.

**About the Details SQL Tab**

The SQL tab displays the SQL for the selected query. This information is read-only.

**About the Details Explain Tab**

The Explain tab displays an abbreviated version of the Step statistics and the Explain text that result from an Explain request in an SQL session. This information is read-only, and no actions are available from this tab. The Explain tab displays completed steps at the top of the list and future steps at the bottom. The tab periodically refreshes to display updated information. Each Explain step is uniquely identified with a number where the background of the number box indicates status:

- Completed steps are at the top of the list and indicated by a black number box.
- Active steps are indicated by a pulsating number box (flashes gray and white).
- Steps to run are at the bottom of the list and indicated by a white number box.

Each numbered step includes:

**EST. TIME**

Estimated execution time for the step.

**EST. I/O**

Estimated number of I/Os for the step.
ACTUAL TIME
Actual CPU time consumed by the step, or blank if the step has not run.

ACTUAL I/O
Actual number of I/Os for the step, or blank if the step has not run.

About the Details Blocked By Tab
The Blocked By tab displays details about other queries that are blocking this query. This information is read-only, and no actions are available from this tab. This tab is available when the selected query is blocked. The Blocked By tab displays:

USERNAME
Name of the user that is running the query that holds the lock.

HOST
Host ID that is logged on to the session.

SESSION ID
Session ID in which the blocking query was run.

LOCK TYPE
Type of lock.

STATUS
Lock status.

LOCKED
Name of the locked object.

About the Details Query Band Tab
The Query Band tab displays the query band name and value for the selected query. This information is read-only. For each query, the Query Band tab displays:

NAME
The name of the query band.

VALUE
The value of the query band.

About the Details Delay Tab
The Delay tab displays details about rules that are delaying this query. The Delay tab is available if the system being monitored is a Teradata Database 13.10 system or newer. The information on the Delay tab is read-only, and no actions are available from this tab. This tab is available when the selected query is delayed. The Delay tab displays all rules that apply to the query and a scroll bar appears if there are more than two rules. The Delay tab displays:
<table>
<thead>
<tr>
<th><strong>Blocking Count</strong></th>
<th>Number of consecutive times this session has blocked at least one other session.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Utility Throttle Delay Time</strong></td>
<td>Amount of time request has been delayed by a utility throttle rule.</td>
</tr>
<tr>
<td><strong>System Throttle Delay Time</strong></td>
<td>Amount of time request has been delayed by a system throttle rule.</td>
</tr>
<tr>
<td><strong>Workload Throttle Delay Time</strong></td>
<td>Amount of time request has been delayed by a workload throttle rule.</td>
</tr>
<tr>
<td><strong>Rule Name</strong></td>
<td>Name of rule causing request delay.</td>
</tr>
<tr>
<td><strong>Rule Type</strong></td>
<td>TASM type of rule causing request delay.</td>
</tr>
<tr>
<td><strong>Overridable</strong></td>
<td>Indicates if the Teradata Database Administrator can abort or release the request.</td>
</tr>
</tbody>
</table>

### About the Tools Menu

The **Tools** menu allows you to manage queries and sessions. Use the **Tools** menu to balance system resources:

- **Abort**
  - Abort the selected query or session.
- **Change Priority**
  - Change the priority of the selected query or session.
- **Change Workload**
  - Change the workload of the selected query or session.
- **Release Query**
  - Release the selected query from a delay queue.

Access the **Tools** menu from the summary view to take actions for one or more queries or sessions at a time. Access the **Tools** menu from the details view to take actions for a single query or session at a time.

You must log in with a user ID that has permission to abort, change priorities or workloads, or release queries. If you log out, close a portlet, or open a new portlet instance, you must log in again.

**Note:** If Teradata Active System Management (TASM) is enabled, **Change Workload** is available from the **Tools** menu. If TASM is disabled, **Change Priority** is available from the menu. If you do not see **Change Workload** or **Change Priority** in the menu, the system you...
are monitoring does not support these features or you do not have permission to use them. If the query you are monitoring is delayed, only Release Query is available.

**Aborting a Query or a Session**
You can abort a query or a session of queries that is blocking other queries or consuming too many resources.

1. From the summary view, click the row of the query you want to abort.
2. Click **Tools > Abort**.
3. [Optional] Log in.
4. Click **Next**.
5. Select one of the following:
   - **Abort Query** to abort the selected query.
   - **Abort Session** to abort the selected query and log off the session.
6. Click **Next**.
7. Click **Next** to confirm your selection.

**Changing the Priority of a Query or Session**
You can change the priority of a query or session to allow higher priority queries to run or to balance session resources.

This menu item is only available when workloads are not enabled and the system being monitored supports this feature.

1. From the summary view, click the row of the query with a priority that needs to change.
2. Click **Tools > Change Priority**.
3. [Optional] Log in.
4. Click **Next**.
5. From the list of accounts that have been assigned to the user, select an account to copy the account name to the **Edit new account string** box.
6. [Optional] Edit the account string or enter a new account string.
7. Click **Next**.
8. Select one of the following:
   - **Move just this query** to change the priority of the selected query.
   - **Move this query and all future queries associated with this session** to change the priority of the selected query and all subsequent queries in the current session.
9. Click **Next**.
10. Click **Next** to confirm your selection.

**Changing the Workload of a Query or Session**
You can change the workload of a query or session to either allow higher priority workloads to run or to balance workload resources.
This menu item is only available when workloads are enabled and the system being monitored supports this feature.

1. From the summary view, click the row of the query with the workload that needs to change.
2. Click Tools > Change Workload.
3. [Optional] Log in.
4. Click Next.
5. [Optional] Select a different workload from the list.
6. Click Next to confirm your selection.
7. Select one of the following:
   - Move just this query to change the workload of the selected query.
   - Move this query and all future queries associated with this session to change the workload of the selected query and all subsequent queries in the same session.
8. Click Next.
9. Click Next to confirm your selection.

**Releasing a Query**

You can release a query that is queued and waiting to run.

1. From the summary view, click the row of the query you want to release.
2. Click Tools > Release Query.
3. [Optional] Log in.
4. Click Next.
5. Click Next to confirm your selection.

**Changing Multiple Sessions**

You can change system resources for multiple sessions, users, or account strings in the following locations:

- All sessions table from the summary view
- My Criteria sessions table from the summary view
- User sessions table from the details view
- Account strings table from the details view

1. Select By Session in the selection menu and one of the following choices:
   - All
   - My Criteria
2. [Optional] Access user or account string tables from the details view.
   a. Click on a session.
   b. Click the USER or ACCOUNT link under SESSION INFO.
3 Select an action from the **Tools** menu. Check boxes appear next to the sessions.

4 Do one of the following:
   - Select the check box in the column heading to select all sessions.
   - Select the check boxes for specific sessions.

5 Select **Submit**.

6 [Optional] Log in.

7 Follow the instructions on subsequent screens.

### About the Preferences View

The **PREFERENCES** view allows you to customize the way query and session information is displayed in the portlet views.

From the portlet frame, click ![access preferences view] to access the **PREFERENCES** view and the following tabs:

**Display**

Choose formatted or unformatted SQL to display in the SQL tab. Display or hide the bar graph in the portlet.

**Criteria**

Set the criteria values used to display sessions in the **My Criteria** view. After setting the criteria value and enabling a metric, any query exceeding the criteria value appears in the sessions table in the **My Criteria** view.

### Selecting Display Options

Use the **Display** tab in the **PREFERENCES** view to select a format for the SQL and to display or hide the Top Sessions graph.

1 From the portlet frame, click ![access preferences view] to access the **PREFERENCES** view.

2 Click the **Display** tab.
3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Do one of the following:
   - Select the **Format SQL** check box to use formatted SQL.
   - Clear the **Format SQL** check box to use unformatted SQL.

5 Do one of the following:
   - Select the **Display Top Sessions graph** check box to display the Top Sessions bar graph in the portlet. remove the top sessions graph from the portlet.
   - Clear the **Display Top Sessions graph** check box to remove the Top Sessions bar graph from the portlet.

6 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

7 Click **OK**.

**Selecting Threshold Criteria**

Use the **Criteria** tab in the **PREFERENCES** view to set the criteria values used to display sessions in the **My Criteria** view. For each metric selected (enabled), you can set a criteria value. If an enabled metric exceeds the value, the session is displayed in the **My Criteria** view.

If any enabled metric is greater than the set threshold, that session displays in the **My Criteria** view.

1 From the portlet frame, click to access the **PREFERENCES** view.

2 Click the **Criteria** tab.
3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Enter specific values for each metric you want tested.

5 Select the metrics you want enabled.

6 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

7 Click **OK**.
Remote Console

The Remote Console portlet allows you to run many of the Teradata Database console utilities remotely from within the Teradata Viewpoint portal.

Using this portlet, you can:

- Select or search for a system.
- Select or search for a utility.
- Enter console utility commands.
- Display responses from the commands.

Teradata field engineers, Teradata Database operators, System Administrators, and System Programmers use Teradata Database utilities to administer, configure, monitor, and diagnose issues with Teradata Database.

About the Remote Console View

The REMOTE CONSOLE view allows you to select and run Teradata Database console utilities. You can run only one utility at a time for each portlet instance. Permission to use each console utility is granted to individual users based on their role and portlet access. If a message appears in the console denying access to a utility, you are not authorized to use that utility.

The following list describes the features in this view:

**Selection Menus**
- Select a system and utility.

**Clear Console**
- Clear the content from the console.

**Disconnect**
- Disconnect the utility from Teradata Database.

**Console**
- Display responses from the commands.

**Input Line**
- Enter commands.
Submit Command

Click to submit the command.

Running a Utility

You can select a different system and utility, enter commands, and use the keyboard up and down arrow keys to access previous commands.

Use this procedure only if you are already logged into a system and utility, and want to select a different system or utility.

1 In the selection menu, click the currently selected system name to display a list of available systems.

2 Select a system from the menu.

3 Click Next.

4 Select a utility from the menu

5 Click Next.

The name of the utility appears in the console.

6 Enter a command in the input line.

7 Click to submit the command.

The command results appear in the console.
8  [Optional] From the input line, use your keyboard up and down arrows to access previous commands.
   These commands are temporarily saved and are available as long as you are running the utility. After disconnecting from the utility, these commands are cleared.

   Note: After approximately 30 minutes of inactivity in the portlet, the Teradata Database connection times out, and you must reconnect to the utility and Teradata Database.

About the Remote Console Menus and Toolbar

   The menus and toolbar allow you to specify the display attributes of the REMOTE CONSOLE view.

   Use the selection menus to:
   • Select or search for a system.
   • Select or search for a utility.

   Use Clear Console to clear the content from the console.

   Use Disconnect to disconnect from the utility and Teradata Database.

Selecting a System and Utility

   You can use selection menus above the toolbar to choose a system and utility to monitor in the portlet, starting with the highest level menu on the far left. You must select a system and utility before you can submit commands and see the output in the console.

1  In the selection menu, click the currently selected system name to display a list of available systems.

2  Enter the name of the system in the Search box or select a system from the menu. The Search box is not case sensitive. If you cannot find the correct system, press the Backspace key on your keyboard until you find the system you want in the list.
As you type, the list shows the systems that match your filter criteria.

3 Click Next.

4 Enter the name of the utility in the Search box or select a utility from the menu.
The Search box is not case sensitive. If you cannot find the correct utility, press the Backspace key on your keyboard until you find the utility you want in the list.

As you type, the list shows the utilities that match your filter criteria.

5 Click Next.

Clearing the Console

1 From the summary view, click Clear Console.
The contents of the console no longer appear.

Disconnecting from a Utility

You can disconnect from a utility and database.

1 From the summary view, click Disconnect.
The input line no longer accepts input and the portlet no longer responds to commands.
The Teradata Database connection closes when you remove the portlet from the portal page or click Disconnect. If you close the browser without clicking Disconnect, the Teradata Database connection times out in approximately 30 minutes.

About Console Utilities

Teradata field engineers, Teradata Database operators, System Administrators, and System Programmers use Teradata Database utilities to administer, configure, monitor, and diagnose issues with Teradata Database.

Console Utilities

Information about available console utilities is provided in the following table. You can access only the following subset of Teradata Database utilities.

<table>
<thead>
<tr>
<th>Utility</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abort Host</td>
<td>Cancel all outstanding transactions running on a failed host until the system restarts the host.</td>
</tr>
<tr>
<td>Check Table</td>
<td>Check for inconsistencies between internal data structures, such as table headers, row identifiers, and secondary indexes.</td>
</tr>
<tr>
<td>Configure</td>
<td>Define AMPs, PEs, and hosts, and describe their interrelationships for Teradata Database.</td>
</tr>
<tr>
<td>DBS Control</td>
<td>Display and modify the DBS Control Record fields.</td>
</tr>
<tr>
<td>Utility</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ferret</td>
<td>Define the scope of an action, such as a range of tables or selected vprocs, display the parameters and scope of the action, and perform the action. The action is to either move data to reconfigure data blocks and cylinders, or display disk space and cylinder free space percent in use.</td>
</tr>
<tr>
<td>Gateway Global</td>
<td>Monitor and control the sessions of Teradata Database LAN-connected users.</td>
</tr>
<tr>
<td>Lock Display</td>
<td>Display a snapshot capture of all real-time database locks and their associated currently running sessions.</td>
</tr>
<tr>
<td>Operator Console</td>
<td>Run supervisor commands to manage the programs that perform Teradata Database operations.</td>
</tr>
<tr>
<td>Priority Scheduler</td>
<td>Create, modify, and monitor Teradata Database process prioritization parameters. All processes have an assigned priority based on their Teradata Database session. Priority Scheduler allocates CPU and I/O resources based on the priority.</td>
</tr>
<tr>
<td>Query Configuration</td>
<td>Display the current Teradata Database configuration, including the node, AMP, and PE identification and status.</td>
</tr>
<tr>
<td>Query Session</td>
<td>Monitor the state of selected Teradata Database sessions on selected logical host IDs.</td>
</tr>
<tr>
<td>Recovery Manager</td>
<td>Display information used to monitor progress of a Teradata Database recovery.</td>
</tr>
<tr>
<td>Show Locks</td>
<td>Display locks placed by archive and recovery, and by table rebuild operations on databases and tables.</td>
</tr>
<tr>
<td>Teradata DWM Dump</td>
<td>Display information about active Teradata Dynamic Workload Manager (Teradata DWM) rules on a Teradata Database system.</td>
</tr>
<tr>
<td>Vproc Manager</td>
<td>Manage the vprocs including obtaining the status of specified vprocs, initializing vprocs, forcing a vproc to restart, and forcing a Teradata Database restart.</td>
</tr>
</tbody>
</table>

Information on how to use the majority of these utilities is located in *Utilities*. Information on how to use Teradata DWM Dump is in *Teradata Dynamic Workload Manager User Guide*. Information on how to use Operator Console is in *Graphical User Interfaces: Database Window and Teradata MultiTool*. Experienced utilities users can refer to the simplified command descriptions in *Utilities Quick Reference* which provides the syntax diagrams for each Teradata Database utility.

You can access these documents from Teradata Information Products at: [http://www.info.teradata.com](http://www.info.teradata.com).

**About the Preferences View**

The PREFERENCES view allows you to change the console text and background colors. From the portlet frame, click ![Preferences](image) to access the PREFERENCES view.

**Setting the Display Background**

Use the Display tab in the PREFERENCES view to change the console text and the display background to light or dark.
1. From the portlet frame, click to access the PREFERENCES view.

2. Click the Display tab.

3. [Optional] Click Clear Defaults to clear all default settings for this portlet.

4. Change the color of the text and background by selecting one of the following options:
   - Light text on dark background
   - Dark text on light background

5. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6. Click OK.
Space Usage

The **Space Usage** portlet allows you to monitor Teradata Database disk space usage and reallocate permanent disk space from one database to another. Select a system and one of the following reports:

**Database: By most space**
Displays the total, currently in use, and greatest amount in use of permanent disk space for a database.

**Vproc: By space**
Displays the permanent disk space by processor.

The summary view allows you to monitor the database perm space, temp space, and spool space. The details view allows you to view perm space usage over time. You can reallocate permanent disk space from either of these views.

The **PREFERENCES** view allows you to customize the way information is displayed in the summary and details view and set thresholds for filters.

About the Space Usage View

The **SPACE USAGE** view displays a summary of perm, spool, and temp space for the Teradata Databases running on the selected system. Use this information to see if you need to reallocate disk space to maximize space usage.

The following list describes the features in this view:

**Selection Menus**
Shows the system and space usage report. You can choose a different system and report.

**Toolbar**
Shows the number of databases that exceed a set threshold of perm space, and the number of users that exceed a set percentage threshold of spool or temp space.

Click any space usage threshold button to filter for the selected category. Set the thresholds in the **PREFERENCES** view.

**Filters**
Changes the displayed data to only show rows that match your filter criteria.
Add Space
Reallocation permanent disk space from one database to another.

Report
Shows space usage information.

About the Space Usage Menus and Toolbar
The selection menus and toolbar allow you to specify the display attributes of the SPACE USAGE view.

Use the selection menus to select a system and report. You can save these selections for subsequent sessions by selecting the Use these settings as defaults check box in the PREFERENCES view. If you have not selected this check box, you see the first system you have permission to view in the Database: By most space report.

The toolbar displays the number of databases over a set threshold. View how many users are over a set percentage threshold of spool or temp space. Click any space usage threshold button to filter for the selected category. Define the thresholds in the PREFERENCES view.
Selecting a System and Report

You can use selection menus above the toolbar to choose a system and report, starting with the highest level menu on the far left.

1. In the selection menu, click the currently selected system name to display a list of available systems.
2. Select a system from the menu.
3. Click Next.
4. Select a report from the SELECT REPORT dialog box.
5. Click Next.

The report appears in the summary view.

Searching for Available Disk Space

Search for available disk space to determine which databases have the least amount of disk space so you can reallocate space if necessary.

1. From the selection menus, select Database: By most space.
2. Click Next.

The report appears in the summary view.

3. Sort on a column by clicking the column heading.

Adding Space

You can reallocate permanent disk space from one database to another. Permission to reallocate disk space is granted to individual users based on their role and portlet access.

1. To reallocate space, do one of the following:
   - From the summary view, click located next to the database name, and then select Add Space from the menu that appears.
• From the details view, click **Add Space**.

2 Log in with a user ID that has permission to add space.

3 Click **Next**.

4 In the **Add** text box, enter how much space you want to reallocate.

5 In the **from** text box, select the source database from where the perm space is being taken.

6 Click **Submit**.

   A confirmation message appears.

7 Click **OK**.

   The space is reallocated to the database.

**About Filters and Sorting**

Filters allow you to change displayed data by showing only rows that match your filter criteria. You can also use filters to set thresholds. When thresholds are exceeded, the values are highlighted in the table view. You can sort the information in the columns.

Filtering allows you to:

- Click in a filter box, start typing, and then press **Enter**. As you type, each matching value appears in bold in the column. After the view refreshes, only the information matching the value you entered is displayed.
- Narrow your search further by filtering on multiple columns in succession.

Sorting allows you to:

- Sort on a column by clicking the column heading. A second click sorts in descending order.
- Sort on two columns consecutively. Primary sort order is indicated by a dark blue column heading, and secondary sort order is indicated by a light blue column heading.
- Sort in ascending or descending order on all pages when there are multiple pages.

The filtering, sorting, and page number settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

**Filter Symbols**

Use a wildcard character or symbol in the filter to search for words that have spelling variations or contain a specific pattern of characters. Avoid using punctuation, such as quotation marks, in the filter.
<table>
<thead>
<tr>
<th>Wildcard or Symbol</th>
<th>Description</th>
<th>Example</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>Use this wildcard character to match alpha or numeric characters in the position it occupies. Type this wildcard character at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>cat?</td>
<td>cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>?cat</td>
<td>scat, Scatter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat?l</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat???</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p???er</td>
<td>packer, parser, proper</td>
</tr>
<tr>
<td></td>
<td>Use this wildcard character to match zero, one, or multiple alpha or numeric characters in the position it occupies. Type this symbol at the beginning, middle, or end of your search. This wildcard character can be used one or more times in the same search. This wildcard character can be used in conjunction with any other symbol.</td>
<td>*cat</td>
<td>cat, cats, catalog, scatter, wildcat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*l</td>
<td>catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cat*</td>
<td>cat, cats, catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>ews</em>er</td>
<td>newscaster, newspaper</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*%</td>
<td>what's 100%?</td>
</tr>
<tr>
<td></td>
<td>Use this symbol at the beginning of your search to match alpha or numeric characters literally. The search results are case-sensitive. This symbol can be used in conjunction with *, ?, and .</td>
<td>=CAT</td>
<td>CAT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat?</td>
<td>cats</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat*</td>
<td>Cat, Cats, Catalog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat_</td>
<td>Cat_</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=Cat?</td>
<td>Cat?</td>
</tr>
<tr>
<td>\</td>
<td>Use this symbol in front of a wildcard character so the wildcard is interpreted as a regular character and not as a wildcard. This symbol can be used in conjunction with =, ?, &amp;, and *.</td>
<td>*?</td>
<td>what's 100%?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat*</td>
<td>cat*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>=cat?</td>
<td>cat?, Cat?</td>
</tr>
<tr>
<td>&gt;</td>
<td>Use this symbol to match any numeric value that is greater than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &gt; and the number.</td>
<td>&gt;60</td>
<td>61, 62, 70, 500, and so forth</td>
</tr>
<tr>
<td>&lt;</td>
<td>Use this symbol to match any numeric value that is less than the specified value. This symbol is only used to perform mathematical comparisons. For columns containing percentages, avoid using % in the filter. Type only &lt; and the number.</td>
<td>&lt;60</td>
<td>59, 58, 50, 8, and so forth</td>
</tr>
</tbody>
</table>

**Clearing Filters**

You can clear the filter boxes and the highlighted content from the table.

1. Do one of the following:
   - To clear individual filter boxes, click ✗.
• To clear all filter boxes, mouse over ✗, and if the icon changes, click ✗.

The content is no longer highlighted in the table, and all content appears in the table.

**Configuring Columns to Display**

Use the Columns dialog box to set thresholds and select, lock, and order columns. You can resize columns in the table.

1 In the table, click 📅.

2 In the Columns dialog box, select the check boxes of columns to display. Mouse over the name to see the complete name.

3 [Optional] Click 📅 next to the column name. The column remains stationary on the left when scrolling horizontally.

4 [Optional] Click Set, type a threshold value, and click OK. Values exceeding the threshold are highlighted and displayed in the table.

5 [Optional] Click ▼ and drag the row to reorder the column.

6 Click Apply to save changes and close the Columns dialog box.

7 [Optional] In the table, drag the column heading border ↑↓ in either direction to resize the column. The thresholds and column selection, order, and lock settings that you choose for the default or minimized view are not saved when you switch to the maximized view.

**Space-Reporting Metrics**

The metrics (reports) displayed in the summary view are selected using the selection menus. Descriptions for the metrics available for monitoring and display are listed according to their report name:

- Database: By most space
- Vproc: By space

**Database: By most space**

This report shows the total, currently in use, and greatest amount in use of permanent disk space for the database.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Database name</td>
<td>Alpha</td>
</tr>
<tr>
<td>Max Perm</td>
<td>Total amount of permanent disk space available for the database</td>
<td>Number</td>
</tr>
<tr>
<td>Current Perm</td>
<td>Amount of total permanent disk space the database is currently using</td>
<td>Number</td>
</tr>
<tr>
<td>Column</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Current Perm %</td>
<td>Percentage of the total permanent disk space the database is currently using (Current Perm divided by Max Perm)</td>
<td>Percent</td>
</tr>
<tr>
<td>Peak Perm</td>
<td>Greatest amount of permanent disk space the database has used</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Perm %</td>
<td>Highest percentage of the total permanent disk space the database has used (Peak Perm divided by Max Perm)</td>
<td>Percent</td>
</tr>
<tr>
<td>Unused Perm %</td>
<td>Percentage of the total permanent disk space currently not being used (100% minus Current Perm %)</td>
<td>Percent</td>
</tr>
<tr>
<td>Current Perm Skew %</td>
<td>A measure of perm space data distributed across the AMPs for the selected database</td>
<td>Percent</td>
</tr>
<tr>
<td>Max Spool</td>
<td>Total amount of temporary spool space available for the database</td>
<td>Number</td>
</tr>
<tr>
<td>Current Spool</td>
<td>Amount of total temporary spool space the database is currently using</td>
<td>Number</td>
</tr>
<tr>
<td>Current Spool %</td>
<td>Percentage of the total temporary spool space the database is currently using (Current Spool divided by Max Spool)</td>
<td>Percent</td>
</tr>
<tr>
<td>Peak Spool</td>
<td>Greatest amount of temporary spool space the database has used</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Spool %</td>
<td>Highest percentage of the total temporary spool space the database has used (Peak Spool divided by Max Spool)</td>
<td>Percent</td>
</tr>
<tr>
<td>Max Temp</td>
<td>Total amount of temporary space available for the database</td>
<td>Number</td>
</tr>
<tr>
<td>Current Temp</td>
<td>Amount of total temporary space the database is currently using</td>
<td>Number</td>
</tr>
<tr>
<td>Current Temp %</td>
<td>Percentage of the total temporary space the database is currently using (Current Spool divided by Max Spool)</td>
<td>Percent</td>
</tr>
<tr>
<td>Peak Temp</td>
<td>Greatest amount of temporary space the database has used</td>
<td>Number</td>
</tr>
<tr>
<td>Peak Temp %</td>
<td>Highest percentage of the total temporary space the database has used (Peak Temp divided by Max Temp)</td>
<td>Percent</td>
</tr>
<tr>
<td>Parent Database</td>
<td>Parent database name</td>
<td>Alpha</td>
</tr>
</tbody>
</table>

**Vproc: By space**

This report shows the permanent disk space, by processor.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vproc ID</td>
<td>AMP number</td>
<td>Number</td>
</tr>
<tr>
<td>Max Perm</td>
<td>Total amount of permanent disk space available for the database, by processor</td>
<td>Number</td>
</tr>
<tr>
<td>Current Perm</td>
<td>Amount of total permanent disk space the database is currently using, by processor</td>
<td>Number</td>
</tr>
<tr>
<td>% in Use</td>
<td>Percentage of the total permanent disk space the database is currently using, by processor (Current Perm divided by Max Perm)</td>
<td>Percent</td>
</tr>
</tbody>
</table>
### About the Space Usage Details View

The details view displays perm space usage information for tables. Click the database name in the summary view to access the details view.

Use the sparkline to determine if the perm space usage has increased or decreased over time.

The following list describes the features in this view:

- **Add Space**
  - Reallocate permanent disk space from one database to another.

- **Sparkline**
  - See the perm space usage over the last 3 months in the sparkline, where each data point shown on the sparkline is the amount of perm space usage recorded during a single day. Mouse over the sparkline to display detailed information about the perm space usage in an information balloon.
  - View the peak and max perm space usage listed to the right of the sparkline.

- **Filters**
  - Change displayed data by removing rows that do not match your filter criteria.

- **Report**
  - View perm space usage information for tables.

- **Sorting**
  - Sort on a column by clicking the column heading.

- **Columns**
  - Select and organize the displayed columns by clicking 📌.
About the Preferences View

From the portlet frame, click to access the PREFERENCES view. Set the threshold values for the perm, spool, and temp space buttons in the toolbar for the Database: By most space report. Customize the way information is displayed in the summary and details views.

Setting Filter Thresholds and Display Options

1. From the portlet frame, click to access the PREFERENCES view.

2. Click the General tab.

3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4 Enter specific threshold values for buttons in the summary view toolbar for the Database: By most space report.

5 Select the Define KB, MB and GB as multiples of 1,000 instead of 1,024 check box to change the display in the summary and details views.

6 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

7 Click OK.
SQL Scratchpad

The SQL Scratchpad portlet allows you to enter queries and retrieve data from a Teradata Database system. Select a system to run your query, enter a single or multi-statement query, and then view the results.

After the Teradata Database system retrieves the data, the RESULTS section expands to display four tabs. Use the Results tab to see the results of your query. Use the SQL tab to display the SQL statements used to create the query. Use the Explain tab to see steps listed in chronological order. The steps are refreshed every 30 seconds so you can see how longer running queries are progressing. If there are delays in processing your query, you can cancel the query. If running a query takes longer than you expected, it might be blocked. Use the Blocked By tab to see information about queries that are blocking the currently running query.

Use the OBJECT BROWSER to view a list of objects in the database. Also use the OBJECT BROWSER to insert an object into a query to reduce the time required to build a query and help reduce errors in object names.

The SQL Scratchpad portlet also allows you to save queries or export results to a file where you can sort and analyze the information. You can pin query results (pinning allows you to temporarily save the query results). Saving the query allows you to use the query in the current session or in future sessions. Use the History tab to access previously run queries from your current session.

The SQL Scratchpad portlet frame displays the system name on which the query is running.

Use the PREFERENCES view to log on to a system, limit the rows returned to prevent runaway queries, or change the OBJECT BROWSER placement in the maximized view.

About the SQL Scratchpad View

The SQL SCRATCHPAD view allows you to do the following:

- Connect to or disconnect from a system
- Run or save queries
- Pin or export query results
- View and sort results
- View SQL statements
- View the Explain steps for the query
- View blocked query information

Before running a query, the SQL Scratchpad portlet includes the following buttons and boxes:
### Button or Box | Description
---|---
**Previous Queries** | View and load previously run queries. Access the **History** tab and **Saved** tab from **Previous Queries**.

**Connect/Disconnect** | Toggle between these buttons to connect to or disconnect from a Teradata Database system.

Teradata Database systems appear for those systems you are authorized to access.

**YOUR QUERY** | Edit and execute queries in this box.

**Run** | Run a query.

**Save** | Save a previously run query so you can use it in the current session or in future sessions.

**Object Browser** | View a list of objects in a Teradata Database system. Insert an object into a query to reduce the time required to build a query and help reduce errors in object names.

---

After running a query, the **SQL SCRATCHPAD** view expands to include a **RESULTS** section where you can view the results of your query. Results for each statement are shown.
on separately numbered **Query** tabs. The **RESULTS** section includes the following buttons and tabs:

<table>
<thead>
<tr>
<th>Button or Tab</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Query</strong> tab</td>
<td>View the submitted statement. For multi-statement queries, each query result is shown on a separate numbered <strong>Query</strong> tab. Pin or export the query results from this tab. View information about the statement and query from the <strong>Results</strong>, <strong>SQL</strong>, <strong>Explain</strong>, and <strong>Blocked By</strong> tabs.</td>
</tr>
<tr>
<td><strong>Console</strong> tab</td>
<td>View information about your query as well as Teradata Database or SQL error messages.</td>
</tr>
<tr>
<td>Pin</td>
<td>Temporarily save the query results during your current session.</td>
</tr>
<tr>
<td>Export</td>
<td>Export your results to a comma-separated values (CSV) file.</td>
</tr>
<tr>
<td><strong>Results</strong> tab</td>
<td>View the results of your query (selected by default). For multi-statement queries, each result is shown on a separately numbered <strong>Query</strong> tab. The results are shown in tabular format and can be sorted in ascending or descending order.</td>
</tr>
<tr>
<td><strong>SQL</strong> tab</td>
<td>View the SQL for your query.</td>
</tr>
<tr>
<td><strong>Explain</strong> tab</td>
<td>View the Explain steps for the query, including step statistics and Explain text. Information only displays while your query is running.</td>
</tr>
<tr>
<td><strong>Block By</strong> tab</td>
<td>View details about other queries that are blocking the query. Information appears only while your query is running. The contents of this tab varies, depending on your permission level.</td>
</tr>
</tbody>
</table>

Permission to access the **Explain** and **Blocked By** tabs is granted to individual users based on their role. Unavailable or dimmed tabs indicate that either no information is available, or you are not authorized to view the information.

**Connecting to a System**

You can connect to a Teradata Database system.

1. Click **Connect**.
   
   The **CONNECT TO SYSTEM** dialog box appears.

2. Select a system from the list.
   
   Teradata Database systems appear for those systems you are authorized to access.

3. Enter the following information in the appropriate fields:
   
   - **User Name**
   - **Password**
   - [Optional] **Account String**

4. [Optional] Select a character set from the list.
   
   UTF8 is the default character set.

5. Click **Connect**.
**Disconnecting from a System**

You can disconnect from a Teradata Database system.

Use this procedure only if you are currently connected to a system.

1. From the **SQL SCRATCHPAD** view, click **Disconnect**.
   
The system name disappears from the portlet frame.

**Saving a Query**

You can save a query. Typically, you save queries to run them in future sessions. Queries can also be saved and run in the current session.

Use this procedure only if there is a query in the **YOUR QUERY** box.

1. From the **SQL SCRATCHPAD** view, click **Save**.
2. In the **Name** box, enter a name.
3. Click **Save**.
4. [Optional] To view your saved query:
   
   a. Click **Previous Queries**.

   b. Click the **Saved** tab.

**Aborting All Queries**

If you want to stop all queries in the queue, use **Abort**. To stop a single, long-running query, use **Cancel**.

1. After a query is submitted, click **Abort**.

   All queries set to run are stopped.

**Pinning Query Results**

You can pin query results so the results are not lost when you run a new query. Pinning query results temporarily saves them for the current session.

Use this procedure only if you have run a query.
1 From the SQL SCRATCHPAD view, click the Query tab (located under RESULTS) that contains the query you want to pin.

2 Click Pin.

3 [Optional] To unpin your query, click Unpin.

Exporting the Results to a File

You can export your query results to a comma-separated values (CSV) file where you can sort and analyze the information. In a CSV file, the comma character (,) usually separates each field of text.

You can only export the rows that are visible in the Results tab, up to 500 rows.

Use this procedure only if you have run a query.

1 From the SQL SCRATCHPAD view, click the Query tab located under RESULTS that contains the results you want to export.

2 Click Export.

A dialog box appears enabling you to save or open the file.

3 [Optional] To save, do the following:
   a Click Save.
   b Choose a directory.

The results are saved as a CSV file.

4 [Optional] Click Open.

The results appear in the application you have associated with CSV files where you can sort and analyze the information. You can also open the file using an application such as Microsoft Excel.

About the Results Tab

The Results tab displays the results of your query in tabular format. Sort on a column by clicking the column heading.
View results for single-statement queries in the **Query 1** tab. View results for multi-statement queries in two or more Query tabs. The tabs are numbered sequentially in the order you submitted them. For example, if three statements are submitted, the results from your first statement appear in the **Query 1** tab, the results from your second statement appear in the **Query 2** tab, and the results from your third statement appear in the **Query 3** tab.

To view more rows in your results, use the slider located at the bottom of the portlet. Information in the **Results** tab is read-only.

**About the SQL Tab**

The SQL tab displays the SQL statements used to create the query. This information is read-only.

View the SQL for single-statement queries in the **Query 1** tab. View the SQL for multi-statement queries in two or more Query tabs. The tabs are numbered sequentially in the order you submitted them. For example, if three statements are submitted, the SQL for the
first statement appears in the **Query 1** tab, the SQL for the second statement appears in the **Query 2** tab, and the SQL for the third statement appears in the **Query 3** tab.

### About the Explain Tab

The **Explain** tab displays step statistics and the Explain text for the query. No information displays in this tab after a query has stopped running. This information is read-only and no actions are available from this tab. The **Explain** tab lists steps in order, with completed steps at the top of the list and future steps at the bottom.

Information in this tab is refreshed every 30 seconds so you can see how longer-running queries are progressing. If there are delays in processing your query, you can cancel the query. When longer-running queries have multiple statements, each statement has its own **Explain** tab, located within each **Query** tab.

Each Explain step is uniquely identified with a number where the background of the number box indicates status.

- Completed steps are at the top of the list and indicated by a black number box.
- Active steps are indicated by a pulsating number box (flashes gray and white).
- Steps to run are at the bottom of the list and indicated by a white number box.

Each numbered step includes:

**EST. TIME**

Estimated execution time for the step.

**EST. I/O**

Estimated number of I/Os for the step.

**ACTUAL TIME**

Actual CPU time consumed by the step, or blank if the step has not run.

**ACTUAL I/O**

Actual number of I/Os for the step, or blank if the step has not run.
About the Blocked By Tab

The Blocked By tab displays details about other queries that are blocking this query. This information is read-only and no actions are available from this tab. If this tab is unavailable, the selected query is not blocked.

The Blocked By tab displays:

USERNAME
Name of the user that is running the query that holds the lock.

HOST
Host ID that is logged on to the session.

SESSION ID
Session ID in which the blocking query was run.

LOCK TYPE
Type of lock.

STATUS
Lock status.

LOCKED
Name of the locked object.

---

About Running a Query

This topic describes usage of DML and DDL statements and information about running queries.

Use any SQL, Data Manipulation Language (DML), or Data Definition Language (DDL) statement. DML refers to INSERT, UPDATE, or DELETE statements. DDL refers to CREATE, MODIFY, DROP, GRANT, REVOKE, GIVE, ALERT, SHOW, and HELP statements.

Submit single or multi-statement queries. A semicolon is not required when entering one statement. However, a semicolon between the statements is required for two or more statements. Each statement in the query is submitted separately to the database. Results appear in the Query 1 tab for single-statement queries. Results appear in two or more tabs.
for multi-statement queries. For example, if three statements are submitted, the results appear in the Query 1, Query 2, and Query 3 tabs.

Running a Query

You can enter and send queries to a Teradata Database.

The portlet frame includes the system name on which the query is running.

1. From the SQL SCRATCHPAD view, enter a query into the YOUR QUERY box.
2. Click Run.
   An icon appears showing the query is being processed.

Cancelling Longer-Running Queries

If you want to stop a single, long-running query use Cancel. To stop all queries in the queue, use Abort.

1. After a query is submitted, click Cancel.

The currently running query is stopped.

Viewing Query Results

You can view results and information about a query you ran. The PREFERENCES view allows you to change the number of rows returned in the results.

1. From the RESULTS section, view the results of your query in the Query tab.
2. [Optional] Sort on a column by clicking the column heading.
3. [Optional] Click the Console tab to see the following information about your query:
   - Date and time the query was run
   - Amount of time it took for the query to run
   - SQL statement that was run
   - Status, including whether the query ran successfully
• Number of SQL statements that were run
• Teradata Database or SQL error messages

About the Object Browser

The **OBJECT BROWSER** allows you to view a list of objects in a Teradata Database system and insert an object into a query. Use the **OBJECT BROWSER** to reduce the time required to build a query and help reduce errors in object names. Use filtering to search for objects in the **OBJECT BROWSER**.

The **OBJECT BROWSER** employs a directory tree that is organized in a hierarchical structure, displaying a list of databases and users on the connected system.

Click 📊 or the database or user name to expand the tree. Five object types appear for each database or user. The object types are:

- Tables
- Views
- Macros
- Functions
- Procedures

After clicking 🌳 or the object type name, the tree expands and the objects load. The number of existing objects appears after the name of the object type. If no objects exist, **0 items** displays. When you click to highlight the object and then click **Insert**, the name of the object automatically appears in the **YOUR QUERY** box.

The objects shown in the **OBJECT BROWSER** can be refreshed by clicking the Teradata Database name at the top of the directory tree to collapse the tree and then clicking the Teradata Database name again to expand the tree.

Use the **PREFERENCES** view to position the **OBJECT BROWSER** to the left or right of the **YOUR QUERY** box when using the maximized view.

In normal view, the **OBJECT BROWSER** is located below the **YOUR QUERY** box. You cannot change the location of the **OBJECT BROWSER** in the normal view.
About Filtering Objects

Use filtering to search for objects in the OBJECT BROWSER.

Filter boxes are located at each level in the directory tree. Select a filter box above (parent) or below (child) the current level in the directory tree. At the parent level, filtering finds databases or users matching your search criteria. For example, if you enter `dbc`, databases and users containing `DBC` appear, as shown below.

Object types are located at the child level in the directory tree. The object types are tables, views, macros, functions, and procedures. Expand each object type and use the filter box to find objects matching your search criteria. For example, if you enter `clear` in the filter box located under Macros, macros containing `Clear` appear, as shown below.

After entering your search criteria, the OBJECT BROWSER automatically displays the matching results. The search criteria you put in the filter box is not case sensitive.

Perform a new search by using the Backspace key on your keyboard to delete the contents of the filter box and enter new search criteria.

The state of the OBJECT BROWSER (which level you last filtered) is saved until you disconnect from the Teradata Database system. Disconnecting resets the state of the OBJECT BROWSER.

The displayed results are limited to 500 objects.

Inserting an Object into a Query

You can insert an object into a query using the OBJECT BROWSER. Filtering can be used to search for objects in the directory tree.

Teradata Viewpoint User Guide
From the SQL SCRATCHPAD view, click in the YOUR QUERY box where you want to insert the object.

2 Click Object Browser.

The OBJECT BROWSER opens, displaying the name of the connected Teradata Database system.

3 Click or the Teradata Database system name to expand the directory tree.

A list of databases and users on the connected system appears, along with the number of databases and users.

4 [Optional] At the parent level, use the filter box to search for databases or users.

5 Click or the database or user name to expand the directory tree.

The object types appear, along with the number of object types.

6 Click or the object type name (Tables, Views, Macros, Functions, or Procedures) to expand the directory tree.

For example, click or Macros to expand the directory tree to view the available macros.

7 [Optional] At the child level, use the filter box to search for objects, as shown below.

8 Click to highlight the object name, and then click Insert.

The object name automatically appears in the YOUR QUERY box.

9 [Optional] To refresh the objects shown in the OBJECT BROWSER, click the Teradata Database system name at the top of the directory tree to collapse the tree, then click it again to expand the directory tree.

10 Click Close to close the OBJECT BROWSER.
About the History Tab

Use the History tab to view the following for previously run queries from your current session:

- Date and time the query was run
- Amount of time it took for the query to run
- Number of records returned
- Complete SQL statement that was run

Use Load to automatically load the query in the YOUR QUERY box and run it again.

Viewing Previously Run Queries

You can view previously run queries from your current session.

Use this procedure only after you have run a query in your current session.

1. From the SQL SCRATCHPAD view, click Previous Queries.

   The following information is displayed in the History tab for each query:

   - Date and time the query was run
   - Amount of time it took for the query to run
   - Number of records returned
   - Complete SQL statement that was run

2. Click Close.

Loading a Previously Run Query

You can load a previously run query from your current session to run it again or edit it before running it again.

Use this procedure only after you have run a query in your current session.
1 From the SQL SCRATCHPAD view, click Previous Queries.
2 View the list to locate the query you want to run.
3 Click Load.
   The query loads in the YOUR QUERY box, and the History tab closes.
4 [Optional] Edit the query before running it.

About the Saved Tab

Use the Saved tab to view and load previously saved queries, and delete saved queries. Typically, you save queries to run them in future sessions. Queries can also be saved and run in the current session.

Use Load to automatically load the query in the YOUR QUERY box, then run the query again or edit the query before running it.

Use Delete to delete a saved query.

Viewing Saved Queries

You can view saved queries. Typically, you save queries to run them in future sessions. Queries can also be saved and run in the current session.

Use this procedure only after you have saved a query.

1 From the SQL SCRATCHPAD view, click Previous Queries.
2 Click the Saved tab.
   The query name and the SQL statement appears.
3 Click Close.
Loading a Saved Query

You can load a saved query to run it again or edit it before running it again. Use this procedure only if you have previously saved a query.

1. From the SQL SCRATCHPAD view, click Previous Queries.
2. Click the Saved tab.
3. View the list to locate the query you want to run.
4. Click Load.
   
   The query loads in the YOUR QUERY box, and the Saved tab closes.
5. [Optional] Edit the query before running it.

Deleting a Saved Query

This topic describes how delete a saved query. Use this procedure only if you have previously saved a query.

1. From the SQL SCRATCHPAD view, click Previous Queries.
2. Click the Saved tab.
3. View the list to locate the query you want to delete
4. Click Delete.
   
   The button is located next to the Query number in parentheses.

   A confirmation message appears.
5. Click OK.

About the Console

After running a query, results appear. Clicking Console allows you to view detailed query information.

Information listed includes:

- Date and time the query was run
- Amount of time it took the query to run
- SQL statement that was run
• Status including whether the query was run successfully
• Number of SQL statements that were run
• Teradata Database error messages
• SQL error messages

About the Preferences View

The PREFERENCES view allows you change default connection settings, limit rows returned in the results, and place the OBJECT BROWSER.

From the portlet frame, click to access the PREFERENCES view and the following tabs:

Connection

Change the default connection settings for the Teradata Database system, account string, and character set. Only one Teradata Database system can be selected for each portlet instance. Teradata Database systems appear for those systems you are authorized to access.

Settings

Set a limit on the number of rows returned in the results to prevent runaway queries.

Object Browser

Change the OBJECT BROWSER placement to display to the left or right of the YOUR QUERY box (only in maximized view). You cannot change the OBJECT BROWSER location in the normal view.

Changing Default Connection Settings

Use the Connection tab in the PREFERENCES view to change default connection settings.

1. From the portlet frame, click to access the PREFERENCES view.

2. Click the Connection tab.

3. [Optional] Click Clear Defaults to clear all default settings for this portlet.

4. Select a system from the list.

5. [Optional] Enter the Account String.

6. [Optional] Select a character set from the list.
7 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

8 Click **OK**.

### Limiting Rows Returned

Use the **Settings** tab in the **PREFERENCES** view to limit the rows returned to prevent runaway queries. Specify 1 to 500 rows. The number of rows returned in the results cannot exceed the specified amount. The default is 500 rows. Increasing the number of rows might reduce the portlet response time and take your queries longer to run.

1 From the portlet frame, click to access the **PREFERENCES** view.

2 Click the **Settings** tab.

3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 In the **Limit Rows** box, enter the maximum number of rows to return in the results.

5 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click **OK**.

### Placing the Object Browser

Use the **Object Browser** tab in the **PREFERENCES** view to change the **OBJECT BROWSER** placement in the maximized view.

1 From the portlet frame, click to access the **PREFERENCES** view.

2 Click the **Object Browser** tab.

3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Do one of the following:
- Select **On the right** to position the **OBJECT BROWSER** to the right of the **YOUR QUERY** box in the **SQL SCRATCHPAD** view.

- Select **On the left** to position the **OBJECT BROWSER** to the left of the **YOUR QUERY** box in the **SQL SCRATCHPAD** view.

5  [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6  Click **OK**.
System Health

The **System Health** portlet monitors and displays the status of the selected Teradata Database systems using a predefined set of metrics and thresholds. This portlet reports status as one of five states: healthy, warning, critical, down, or unknown, and allows you to investigate metrics exceeding healthy thresholds. This portlet has two main views:

**SYSTEM HEALTH**

Provides status at a glance using color-coded text and icons to indicate overall health of monitored systems. Typically, metrics and thresholds are carefully selected to highlight when there is an unusual load on the system that has the potential to impact overall performance.

**SYSTEM HEALTH DETAILS**

Provides details and information about the metrics used to evaluate overall system health. For less-than-healthy systems, metrics exceeding thresholds are highlighted in the exception color to indicate their status.

Customize these views from the **PREFERENCES** view. From the **PREFERENCES** tabs, you can select systems to monitor and choose an icon style to represent monitored systems. The Teradata Viewpoint Administrator selects the metrics that appear in the **SYSTEM HEALTH DETAILS** view and sets warning and critical thresholds.

Only the Teradata Viewpoint Administrator can enable **System Health** metrics and configure the warning and critical thresholds.

**About the System Health View**

The **SYSTEM HEALTH** view displays a summary of overall system status, using colored text and icons. The summary shows status for one or more Teradata Database systems.
The icons describe Teradata Database system status as healthy, warning, critical, down, or unknown.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Text Color</th>
<th>Status</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Blue</td>
<td>Healthy</td>
<td>All metrics are within healthy ranges.</td>
</tr>
<tr>
<td>Orange</td>
<td>Orange</td>
<td>Warning</td>
<td>At least one metric exceeded the warning threshold.</td>
</tr>
<tr>
<td>Red</td>
<td>Red</td>
<td>Critical</td>
<td>At least one metric exceeded the critical threshold.</td>
</tr>
<tr>
<td>Black</td>
<td>Black</td>
<td>Down</td>
<td>The selected system is down.</td>
</tr>
<tr>
<td>Black (with Question Mark)</td>
<td>Black (with Question Mark)</td>
<td>Unknown</td>
<td>Status of the selected system is unknown.</td>
</tr>
</tbody>
</table>

Customize the icons shown using the PREFERENCES view, Icons tab. Click to access the PREFERENCES view, and then select the Icons tab to access these icons.

From the SYSTEM HEALTH summary view, click anywhere on a status icon or text to access the selected SYSTEM HEALTH DETAILS view.

## About the System Health Details View

The SYSTEM HEALTH DETAILS view displays detailed statistics and information about each metric used to evaluate the overall health of a Teradata Database system.

This view presents detailed metric information in several different ways:

**METRIC**

Lists the color-coded names of the monitored metrics. Metric names are color-coded to indicate health status.

**VALUE VS THRESHOLD**

Shows the current value in the context of healthy, warning, and critical ranges. Warning and critical thresholds are indicated by gaps in the bar; current value is represented by the end of the colored bar.
The + at the end of some bar graphs indicates an unbounded metric. Unbounded metrics are defined by numerical values with no upper limit. The + appears (colored red) if the unbounded metric’s current value exceeds 1.2 times the critical threshold.

**LAST nn MIN**

Displays a sparkline (trend line) showing the values of the metric over a user-selected duration of 15, 30, or 60 minutes. For warning or critical metrics, the sparkline shows the trend in the metric value over time, suggesting whether the system is expected to degrade or improve in the future.

Select a 15-minute, 30-minute, or 60-minute interval using the PREFERENCES view.

**VALUE**

Shows the value of the metric at the last sampling of the Teradata Database system. This value is also color-coded to indicate metric health.

### System Health Details View Metrics

Metrics appearing in your SYSTEM HEALTH details view are selected for you by the Teradata Viewpoint Administrator. Metrics available for selection and display are listed below.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU UTILIZATION</td>
<td>Average node CPU use for User, System, and Wait IO</td>
<td>Percent</td>
</tr>
<tr>
<td>(CPU) USER</td>
<td>Average percentage of CPU time spent in user mode</td>
<td>Percent</td>
</tr>
<tr>
<td>(CPU) SYSTEM</td>
<td>Average percentage of CPU time spent in system (kernel) mode</td>
<td>Percent</td>
</tr>
<tr>
<td>(CPU) WAIT IO</td>
<td>Average percentage of CPU time spent waiting for I/O</td>
<td>Percent</td>
</tr>
<tr>
<td>NODE CPU SKEW</td>
<td>Comparison of CPU use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>NODE IO SKEW</td>
<td>Comparison of disk use on the busiest node to the average node</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP CPU SKEW</td>
<td>Comparison of CPU use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP IO SKEW</td>
<td>Comparison of disk use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AMP WORKER TASKS</td>
<td>Average number of AMP worker tasks in use on each AMP</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>TOTAL DISK SPACE</td>
<td>Percentage of total disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>MAX DISK SPACE BY AMP</td>
<td>Available disk space currently in use</td>
<td>Percent</td>
</tr>
<tr>
<td>COMPONENT DOWN</td>
<td>Number of components, such as BYNETs or AMPs that are down</td>
<td>Number</td>
</tr>
<tr>
<td>MEMORY USED</td>
<td>Average amount of memory currently in use on each node (KB)</td>
<td>Number</td>
</tr>
<tr>
<td>MAX SPOOL BY AMP</td>
<td>Available spool space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>MEMORY FAILURES</td>
<td>Memory failures across all nodes</td>
<td>Number</td>
</tr>
<tr>
<td>DBC DISK SPACE</td>
<td>Available DBC disk space in use</td>
<td>Percent</td>
</tr>
<tr>
<td>ACTIVE SESSIONS</td>
<td>Number of sessions with active queries</td>
<td>Number</td>
</tr>
<tr>
<td>SYSTEM HEARTBEAT</td>
<td>Response time of the most recent system heartbeat query (ms)</td>
<td>Number</td>
</tr>
<tr>
<td>Additional Canaries</td>
<td>Additional canary queries that are defined for the system and used as part of the monitoring of system health</td>
<td>Number</td>
</tr>
</tbody>
</table>

### About the Preferences View

The **PREFERENCES** view allows you to customize the portlet to display information that is most useful to you.

From the portlet frame, click to access the **PREFERENCES** view and the following tabs:

**Systems**

Select Teradata Database systems to monitor in the **SYSTEM HEALTH** and **SYSTEM HEALTH DETAILS** views.

**Icons**

Select an icon style to use in the **SYSTEM HEALTH** view.

**Trend Interval**

Select the interval for the **SYSTEM HEALTH** trend line. Choose from among 15, 30, or 60 minutes of historical data.

**Selecting Systems to Monitor**

Use the **Systems** tab in the **PREFERENCES** view to select Teradata Database systems to monitor in the summary and details views.

1. From the portlet frame, click to access the **PREFERENCES** view.
2. Click the **Systems** tab.
3 [Optional] Click Clear Defaults to clear all default settings for this portlet.

4 Select the check boxes of systems to display.

5 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.

**Selecting the System Health Icon Style**

Use the Icons tab in the PREFERENCES view to select the icon style to display in the SYSTEM HEALTH view.

1 From the portlet frame, click to access the PREFERENCES view.

2 Click the Icons tab.

3 [Optional] Click Clear Defaults to clear all default settings for this portlet.

4 Select the icon style to use in the SYSTEM HEALTH view.

5 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.
Setting the System Health Trend Interval

Use the Trend Interval tab in the PREFERENCES view to set the length of time used to plot the sparklines in the SYSTEM HEALTH DETAILS view. This interval applies to all metrics selected for this view.

The Example pane provides a sample of how the SYSTEM HEALTH view might look after the change.

1. From the portlet frame, click to access the PREFERENCES view.
2. Click the Trend Interval tab.

3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. From the Interval list, select an interval.
5. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
6. Click OK.
Today's Statistics

The **Today's Statistics** portlet allows you to monitor current resource-use statistics and compare them to statistics collected during the same period one or more weeks in the past. Additionally, you can monitor and compare the performance of multiple Teradata Database systems by adding a **Today's Statistics** portlet to the portal page for each monitored system.

The Teradata Viewpoint Administrator typically uses the **Today's Statistics** portlet to determine if users are getting value from their Teradata Database system. Data is presented in a table, allowing you to compare metric values collected recently (today and as far in the past as yesterday) to values collected during the same time period up to 999 weeks in the past. This view is refreshed once every 2 minutes with displayed values updated for each user-selected metric.

### About the Today's Statistics View

The **TODAYS STATISTICS** view displays a statistical analysis of system-resource use over a user-defined time period. A table lists the monitored metrics and compares current statistics to statistics from the same time period 1 or more weeks in the past. Metrics are grouped into categories so that metric data collected at the same frequency is displayed together in the view. The view is refreshed every 2 minutes.

<table>
<thead>
<tr>
<th>STATISTIC</th>
<th>LAST HOUR</th>
<th>SAME PERIOD 1 WEEK AGO</th>
<th>SAME PERIOD 1 WEEK AGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Sessions</td>
<td>2.67</td>
<td>19.67</td>
<td>6.11</td>
</tr>
<tr>
<td>AMP CPU Skew</td>
<td>50.18%</td>
<td>39.51%</td>
<td>31.67%</td>
</tr>
<tr>
<td>AMP I/O Skew</td>
<td>38.02%</td>
<td>22.7%</td>
<td>32.19%</td>
</tr>
<tr>
<td>AWT</td>
<td>5.5</td>
<td>6.03</td>
<td>6.06</td>
</tr>
<tr>
<td>CPU</td>
<td>54.56%</td>
<td>36.73%</td>
<td>45.37%</td>
</tr>
<tr>
<td>System CPU</td>
<td>11.92%</td>
<td>16.90%</td>
<td>13.22%</td>
</tr>
<tr>
<td>Total Disk Space</td>
<td>55.34%</td>
<td>49.71%</td>
<td>53.38%</td>
</tr>
<tr>
<td>User CPU</td>
<td>17.14%</td>
<td>21.08%</td>
<td>21.16%</td>
</tr>
<tr>
<td>Wait I/O CPU</td>
<td>16.99%</td>
<td>20.32%</td>
<td>20.26%</td>
</tr>
</tbody>
</table>

Use the **PREFERENCES** view to select the system and metrics category to monitor, set metrics thresholds, and set the sampling interval. The heading for the second column depends on the selections made in the **PREFERENCES** view and how frequently data for each metric is collected. For example, the heading **LAST 2 HOURS** appears when the sampling interval is 2 hours and data for the previous 2 hours is available. The same heading
could appear as SINCE AUG 20, 2:10 AM if the sampling interval is set to 2 hours and the data was last collected more than 2 hours ago.

Table columns provide the following information:

**STATISTIC**
- The name of the monitored metric. This column can be sorted.

**SINCE DATE, X AM/PM**
- The value of the metric at the date and time the data was last collected.
- This column heading is used for metrics in the query category.

**LAST X HOUR(S)**
- The value of the metric from a user-specified number of hours ago, up to 999 hours in the past, until the current time.

**SAME PERIOD X WEEK(S) AGO**
- The value of the metric over the same time period as LAST X HOUR(S), up to 999 weeks in the past.

**SINCE X AM/PM TODAY/YESTERDAY**
- The value of the metric calculated from a user-specified hour of the day, either today or as far in the past as yesterday, until the current time.

**SAME PERIOD X WEEK(S) AGO**
- The value of the metric over the same time period as SINCE X AM/PM TODAY/YESTERDAY, up to 999 weeks in the past.

The Teradata Viewpoint Administrator must enable the appropriate collectors to display statistics in the **TODAYS STATISTICS** view. The Teradata Viewpoint Administrator also specifies the data-collection rate for each collector.

**Today's Statistics View Metrics**

Information about available metrics is provided in the tables. Use the **Metrics** tab in the **PREFERENCES** view to select metrics for display in the **TODAYS STATISTICS** view.

The Teradata Viewpoint Administrator must enable the appropriate collectors to calculate and display statistical data in the **TODAYS STATISTICS** view. When the Canary Queries Collector is the source for a metric, the data displayed is always the heartbeat query for the selected system.

**System Metrics**

The System Statistics collector gathers system metrics. System metrics are calculated as an average.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Sessions</td>
<td>Number of sessions with active queries</td>
<td>Number</td>
</tr>
<tr>
<td>AMP CPU Skew</td>
<td>Comparison of CPU use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>AMP I/O Skew</td>
<td>Comparison of disk use on the busiest AMP to the average AMP</td>
<td>Percent</td>
</tr>
<tr>
<td>AWT</td>
<td>Average number of AMP worker tasks (AWTs) in use on each AMP</td>
<td>Number</td>
</tr>
<tr>
<td>CPU</td>
<td>Average node CPU use. CPU is calculated as the sum of the user CPU, system CPU, and wait I/O CPU usage percentages.</td>
<td>Percent</td>
</tr>
<tr>
<td>System CPU</td>
<td>Average CPU time spent in system mode</td>
<td>Percent</td>
</tr>
<tr>
<td>Total Disk Space</td>
<td>Total disk space currently in use</td>
<td>Number</td>
</tr>
<tr>
<td>User CPU</td>
<td>Average CPU time spent in user mode</td>
<td>Percent</td>
</tr>
<tr>
<td>Wait I/O CPU</td>
<td>Average CPU time spent waiting for I/O</td>
<td>Percent</td>
</tr>
</tbody>
</table>

**Query Metrics**

The Query Count collector gathers query metrics.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrency</td>
<td>Average number of queries executing simultaneously during the hour</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Avg</td>
<td>Average time (milliseconds) it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Max</td>
<td>Maximum time (milliseconds) it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Min</td>
<td>Minimum time (milliseconds) it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>First Response Time Stddev</td>
<td>Standard deviation time (milliseconds) it takes to receive the first response</td>
<td>Number</td>
</tr>
<tr>
<td>Query Count</td>
<td>Queries logged in dbc.QryLog, or the sum of Querycount from dbc.QryLogsummary during the sample period</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Avg</td>
<td>Average amount of spool (bytes) the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Max</td>
<td>Maximum amount of spool (bytes) the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Min</td>
<td>Minimum amount of spool (bytes) the query used</td>
<td>Number</td>
</tr>
<tr>
<td>Spool Usage Stddev</td>
<td>Standard deviation of amount of spool (bytes) the query used</td>
<td>Number</td>
</tr>
</tbody>
</table>

**Performance Metrics**

The Canary Queries collector gathers performance metrics. Performance metrics are calculated as an average.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Time</td>
<td>Average response time (milliseconds) of the selected canary query</td>
<td>Number</td>
</tr>
<tr>
<td>Rows Returned</td>
<td>Average number of rows returned by the selected canary query</td>
<td>Number</td>
</tr>
</tbody>
</table>
About the Preferences View

The **PREFERENCES** view allows you to customize the portlet to monitor key metric trends to determine if you are getting value from your Teradata Database system. Only one system can be selected for each portlet instance.

From the portlet frame, click 🔄 to access the **PREFERENCES** view and the following tabs:

**System**
Select a Teradata Database system to monitor.

**Metrics**
Select appropriate metrics, by category, for display in the view, and set values for highlighting metrics beyond a specified threshold. Metric values that exceed the threshold are displayed in the exception color.

**Sampling Interval**
Specify the time periods from which statistics are displayed. Set the number of hours (up to 999) prior to the current time, and define a comparison period up to 999 weeks in the past.

Selecting a System to Monitor
Use the **System** tab in the **PREFERENCES** view to select a Teradata Database system to monitor. Only one system can be selected for each portlet instance.

1. From the portlet frame, click 🔄 to access the **PREFERENCES** view.
2. Click the **System** tab.
3. [Optional] Click **Clear Defaults** to clear all default settings for this portlet.
4. Select a system from the list.
5. [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.
6. Click **OK**.

Setting Metric Thresholds
Use the **Metrics** tab in the **PREFERENCES** view to select a metrics category to monitor and to set thresholds to trigger the highlighting of values that exceed the thresholds.

To display statistical data in the **TODAY'S STATISTICS** view, the Teradata Viewpoint Administrator must first enable the appropriate Teradata Viewpoint collectors, including
Query count, System statistics, and Canary queries. Factors external to Teradata Viewpoint can also affect the collection and display of statistical data:

- **Query Logging.** The Teradata System Administrator must enable query logging on the Teradata Database system.
- **Data Collection.** Query data must have been collected during all time periods selected on the Sampling Interval tab. Teradata Viewpoint collectors and query logging must have been enabled during all selected time periods in order for TODAY'S STATISTICS data to display correctly.

1. From the portlet frame, click 🕒 to access the PREFERENCES view.
2. Click the Metrics tab.

![Screenshot of the PREFERENCES: TODAY'S STATISTICS view](image)

3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. Select a metrics category.
   When the Canary Queries Collector is the source for a metric, the data displayed is always the heartbeat query for the selected system.
5. In the Metric column, select check boxes for the metrics you want to monitor in the view.
6. [Optional] For each metric selected, enter a Threshold value.
   Values exceeding the threshold are highlighted in the view using the exception color.
7. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
8. Click OK.
Setting the Sampling Interval

Use the Sampling Interval tab in the PREFERENCES view to set the length of time used to calculate the statistics shown in the TODAYS STATISTICS view. The Sampling Interval applies to all metrics selected for display.

1. From the portlet frame, click to access the PREFERENCES view.
2. Click the Sampling Interval tab.

3. [Optional] Click Clear Defaults to clear all default settings for this portlet.

4. Enter the number of hours (up to 999) in the Statistics will be sampled during the last $X$ hour(s) field.
   The value you enter determines the sampling interval for columns 2 and 3 of the TODAYS STATISTICS view.

5. Enter the since sampling interval as follows:
   a. Select the time of day that begins the interval.
   b. Select Today or Yesterday from the list.
   This value pair defines a start time up to 48 hours in the past for calculating column 4 of the TODAYS STATISTICS view.

6. Enter a value for the comparison period, up to 999 weeks in the past.
   The value you enter defines the number of weeks in the past for calculating column 5 of the TODAYS STATISTICS view.

7. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

8. Click OK.
Viewpoint Monitoring

The Viewpoint Monitoring portlet allows you to analyze resource usage trends on one or more Teradata Viewpoint servers or other managed servers. Trends are graphed according to metrics such as CPU, memory, and throughput within a specified time range.

The VIEWPOINT MONITORING view displays a graph with time on the horizontal axis, metric values on the vertical axis, and a different color for each metric sparkline. Sparklines show the average metric values as a line and have enhanced interactive features such as performance envelopes and information balloons that show the actual, minimum, and maximum metric values. Time-range buttons allow you to monitor current usage within the last hour or view usage trends over the last day, week, month, 3 months, or 6 months.

The PREFERENCES view allows you to select and organize metrics to display, set thresholds, and adjust the vertical axis range for each metric.

About the Viewpoint Monitoring View

The VIEWPOINT MONITORING view displays a graph that shows Teradata Viewpoint server resource usage. One or more Teradata Viewpoint servers can be monitored in the time range using the same or different metrics. Up to 10 metrics can be selected with different thresholds and vertical axis ranges. Each sparkline is assigned a color for every metric plotted in the graph.

The following list describes the features in this view:

**Toolbar**

Contains the time-range buttons. Select a time-range button to change the graph.

**Graph**

Plots the time range on the horizontal axis and the metric values on the vertical axis. The sparkline is a colored line that represents the average metric values. Click a sparkline to see the highlighted sparkline and performance envelope. The performance envelope appears in a lighter shade of the sparkline color and represents the upper and lower metric values.

**Time Range**

Shows the range of time selected with the time-range button on the Toolbar. For example, if one hour is selected, times from the previous hour appear across the bottom of the graph.
Metrics

Lists the metrics that are defined in the **PREFERENCES** view. Each metric has a color and a checkbox. The metric name appears along with the name of the system being monitored if there is more than one system enabled. Select a metric name to see the sparkline highlighted and surrounded by the performance envelope in the graph.

**About Metric Thresholds**

Set thresholds to highlight metric values that are outside normal operating ranges. Set maximum vertical-axis ranges to limit the range of values displayed for selected metrics. After a metric threshold is set in the **PREFERENCES** view, the threshold line is displayed across the graph with the threshold value to the right of the graph when you select a metric sparkline. As you mouse over the selected sparkline, information balloons display the data point value and the minimum and maximum performance envelope values. The sparkline and information balloons change to red when the threshold is exceeded during the time range. Threshold settings are optional and can be set any time after the metric has been configured.
Setting the Time Range

You can set the time range that is used to plot the graph.

1 In the toolbar, click a time-range button.

The portlet refreshes, and the graph is redrawn.

Removing Metrics from the Graph

You can disable metric sparklines.

1 Clear the color-coded checkbox on the metric line.

The metric sparkline disappears from the graph, but not from the list below the graph.

About the Toolbar

The toolbar allows you to choose the time range to display in the graph. The graph displays oldest data on the left and the most recent data on the right. For each metric, data is collected every 15 seconds and averaged according to the time range chosen.
<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hour</td>
<td>Displays the metric values for the last hour, plotted by minute.</td>
</tr>
<tr>
<td>1 day</td>
<td>Displays the metric values for the last 24 hours, plotted by 15-minute periods.</td>
</tr>
<tr>
<td>1 week</td>
<td>Displays the metric values for the last week, plotted by hour.</td>
</tr>
<tr>
<td>1 mo</td>
<td>Displays the metric values for the last month, plotted by 4-hour periods.</td>
</tr>
<tr>
<td>3 mo</td>
<td>Displays the metric values for the last 3 months, plotted by 12-hour periods.</td>
</tr>
<tr>
<td>6 mo</td>
<td>Displays the metric values for the last 6 months, plotted by day.</td>
</tr>
</tbody>
</table>

Clicking a different time-range button causes the portlet to immediately recalculate and update the graph based on the data points collected for the metrics.

**Viewpoint Monitoring Metrics**

The following metrics are available to analyze resource usage.

**CPU Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU IDLE</td>
<td>Percent of total CPU time spent idle.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU INVOLUNTARY WAIT</td>
<td>Percent of total CPU time spent waiting involuntarily.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU I/O WAIT</td>
<td>Percent of total CPU time spent waiting for I/O.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU SYSTEM</td>
<td>Percent of total CPU time used by system processes.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU USER</td>
<td>Percent of total CPU time used by user processes.</td>
<td>Percent</td>
</tr>
<tr>
<td>CPU USAGE</td>
<td>Percent of CPU time used by user and system processes.</td>
<td>Percent</td>
</tr>
</tbody>
</table>

**Memory Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMORY BUFFERS</td>
<td>Amount of memory currently used as a disk buffer cache.</td>
<td>KB</td>
</tr>
<tr>
<td>MEMORY CACHE</td>
<td>Amount of cache memory.</td>
<td>KB</td>
</tr>
<tr>
<td>MEMORY FREE</td>
<td>Amount of idle memory.</td>
<td>KB</td>
</tr>
<tr>
<td>MEMORY TOTAL</td>
<td>Total amount of physical memory in the system.</td>
<td>KB</td>
</tr>
<tr>
<td>MEMORY TOTAL SWAP</td>
<td>Amount of memory used for swap space.</td>
<td>KB</td>
</tr>
<tr>
<td>MEMORY USAGE</td>
<td>Total amount of memory used by the system, calculated as the total memory minus the amount of free memory.</td>
<td>KB</td>
</tr>
<tr>
<td>MEMORY VIRTUAL</td>
<td>Amount of virtual memory used.</td>
<td>KB</td>
</tr>
<tr>
<td>PROCES SLEEPING</td>
<td>Number of processes in uninterruptible sleep.</td>
<td>Number</td>
</tr>
<tr>
<td>PROCES WAITING</td>
<td>Number of processes waiting for run time.</td>
<td>Number</td>
</tr>
<tr>
<td>SWAP IN</td>
<td>Amount of memory swapped in from disk per second.</td>
<td>KB/sec</td>
</tr>
</tbody>
</table>
### Throughput Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWAP OUT</td>
<td>Amount of memory swapped to disk per second.</td>
<td>KB/sec</td>
</tr>
</tbody>
</table>

### Metric Colors

A fixed set of 10 colors is used for the sparkline, performance envelope, and information balloon. Each metric you select is listed below the graph, and its color is determined by the position selected in the PREFERENCES view.

<table>
<thead>
<tr>
<th>Metric Position</th>
<th>Color Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Gold</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Aqua</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pink</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Gray</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Lime</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Teal</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Purple</td>
<td></td>
</tr>
</tbody>
</table>

### About the Preferences View

The PREFERENCES view allows you to customize the appearance of the graph.
In this view, you can:

- Add metrics to monitor and display.
- Delete metrics that you do not want to monitor or display.
- Select the **ENABLE** check box to plot the metric in the graph.
- Clear the **ENABLE** check box to remove the metric from the graph, but still list it below the graph.
- Reorder metrics to change their position and color.
- Select systems to monitor and display.
- Set a threshold that helps you track the performance of each metric.
- Set a vertical axis range to limit the maximum value to display.

From the portlet frame, click 🔗 to access the **PREFERENCES** view.

### Adding Metrics

You can add metrics that are plotted in the graph.

1. From the portlet frame, click 🔗 to access the **PREFERENCES** view.
2. Click the **Metrics** tab.

3. [Optional] Click **Clear Defaults** to clear all default settings for this portlet.
4. Click 🔗 to add a metric.
   
   Up to 10 metrics can be listed.
5. Select a metric from the **METRIC** list.
6. [Optional] Select a system from the **SYSTEM** list.
   
   The **SYSTEM** list is available when more than one Teradata Viewpoint server is enabled for the Data Collection Service.
7. [Optional] Enter a **THRESHOLD** value.
   
   You can change the **THRESHOLD** settings for the metric at any time.
8. [Optional] Enter a **VERTICAL AXIS RANGE** value.
   
   You can change the **VERTICAL AXIS RANGE** settings for the metric at any time.
9. [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.
10. Click **OK**.
Changing the Metrics Display Order

You can change the order of the metrics that are listed below the graph. Reordering the metric list affects which color is assigned to the metric.

1. From the portlet frame, click \( \text{Edit} \) to access the PREFERENCES view.
2. Click the Metrics tab.
3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. On the metric row, click \( \text{Edit} \) and drag the row to its new location.
5. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
6. Click OK.

Enabling and Disabling Metrics

You can enable and disable metrics from the graph. When a metric is disabled, the metric sparkline is not plotted in the graph; however, data points are still being collected, so the metric is included in the list under the graph and can be reactivated at a later time.

1. From the portlet frame, click \( \text{Edit} \) to access the PREFERENCES view.
2. Select the Metrics tab.
3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. Do one of the following:
   - Clear ENABLE on the metric line to disable the metric.
   - Select ENABLE on the metric line to enable the metric.
5. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
6. Click OK.
Deleting Metrics

You can delete metrics from the graph. When a metric is deleted in the PREFERENCES view, the metric sparkline is not plotted in the graph, and the metric is not included in the list under the graph.

1. From the portlet frame, click to access the PREFERENCES view.
2. Select the Metrics tab.
3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. Click on the metric row of the metric you want to delete.

The metric row disappears.

5. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
6. Click OK.
Workload Designer

The **Workload Designer** portlet allows you to define, control, balance, and refine rules for managing workloads. Use the following features to manage workloads:

- Rulesets which are collections of related filters, throttles, events, states, and workload rules
- States which cause actions when a specific combination of planned environment and health condition occur
- Sessions limits, including query sessions limits, utility sessions limits, and utility limits
- Filters which reject queries
- Throttles which limit queries
- Exceptions which cause actions when one or more specific events occur
- Classification criteria which determine which queries use which rules

The **Workload Designer** portlet is a full-width portlet that cannot be minimized.

The **WORKLOAD DESIGNER** view provides controls to select a system and create, edit, view, and perform other actions on rulesets on that system.

The Workload Designer Ruleset views provide controls that allow you to refine settings for a system, states, sessions, filters, throttles, workloads, and exceptions.

About the Workload Designer View

The **WORKLOAD DESIGNER** view shows summary information about rulesets. Items in the options list depend on whether you are the ruleset owner. If a ruleset is locked by someone else, you have fewer options than if you are the ruleset owner. The **Working**, **Ready**, and **Active** sections contain the following options:

**Working**

Names and descriptions of rulesets that are being edited. In **Working**, you can create and import rulesets. Rulesets in **Ready** can be copied to **Working** for editing. Rulesets in **Working** can also appear in **Ready** and **Active**.

**Ready**

Rulesets that have been saved to the production system, but are not active. A ruleset must be in **Ready** before it is copied to **Active**. The **Active** ruleset cannot be deleted from **Ready**.
_active_

Active ruleset on the production system. The only option available in the options list, if you have permissions, is to deactivate the ruleset.

Ruleset background color indicates synchronization between the **Working** and **Ready** sections. Gray in both sections indicates that the same version of the ruleset is in both sections. Blue indicates that the ruleset has been modified in the **Working** section since it was last saved to the **Ready** section.

**About Ruleset Options**

The WORKLOAD DESIGNER view shows individual rulesets and specific options for each ruleset based on the permissions assigned to your role and the section in which the ruleset is located.

**Working**

The **Working** section contains rulesets that are being edited. Any ruleset listed in **Working** can also be listed in **Ready** and **Active**. Available options are:

- **Make Ready.** Copies the ruleset to the production server and to the **Ready** section.
- **Make Active.** Makes the ruleset the active ruleset on the production server. Copies the ruleset to the **Ready** and **Active** sections.
- **View.** Opens the ruleset for viewing.
- **Edit.** Opens the ruleset for editing.
- **Show All.** Lists all ruleset attributes on one page.
- **Lock.** Locks the ruleset so only the lock creator can edit the ruleset.
- **Unlock.** Unlocks the ruleset so others can edit the ruleset.
- **Clone.** Creates a copy of the ruleset. This option is useful if you want to use an existing ruleset as a base or template to create a ruleset.
- **Export.** Exports the ruleset XML file so you can view the file in a browser or save the file to a location you specify. Use with the **Import** button to copy a ruleset from one system to another.
- **Delete.** Removes the ruleset from the **Working** section.

**Ready**

The **Ready** section lists rulesets saved to the production server. Someone else can create a ruleset and add it to the **Ready** section. Then, from the **Ready** section, you can select **Copy to Working Rulesets** and edit the ruleset. Available options are:

- **Activate.** Makes the ruleset the active ruleset on the production server.
- **Copy to Working Rulesets.** Copies the ruleset to the **Working** section.
- **Delete.** Removes the ruleset from the production server.

**Active**

The **Active** section contains the active ruleset on the production server. If you have permission, the only available option is to **Deactivate** the current ruleset.
Creating a Ruleset

A ruleset is a complete collection of related filters, throttles, events, states, and workload rules. You can create multiple rulesets, but only one ruleset is active on the production server at a time. After creating a ruleset, you can specify settings, such as states, sessions, and workloads, using the toolbar buttons. New rulesets are automatically locked so only the owner can edit the ruleset.

1. From the WORKLOAD DESIGNER view, select a system from the list.
2. Click Create.
3. Enter a ruleset name.
4. [Optional] Enter a description up to 80 characters long.
5. Click Save.
6. [Optional] Specify settings using the tabs in the General view, such as Intervals and Bypass.
7. [Optional] Click States and create a state matrix.
8. [Optional] Click Sessions and create any of the following:
   - Query Sessions
   - Utility Limits
   - Utility Sessions
9. [Optional] Click Filters and create a filter.
10. [Optional] Click Throttles and create a system throttle.
11. [Optional] Click Workloads and create a workload.
12. [Optional] Click Exceptions and create an exception.

Editing a Ruleset

In the WORKLOAD DESIGNER view, you can edit ruleset properties. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action. Without permission to edit the ruleset, the menu option is View and the ruleset view is read-only.

1. From the WORKLOAD DESIGNER view, select a system from the list.
2. In the local Working section, click the ruleset name.
3. Specify settings using the toolbar buttons and tabbed views.
4. Click Save after making changes in each view.

Cloning a Ruleset

Cloning a ruleset makes an exact copy of the ruleset, except for the name and description. Cloning is a convenient way to create a ruleset using the criteria of an existing ruleset as a base.

1. From the WORKLOAD DESIGNER view, select a system from the list.
2 In the local **Working** section, click the ruleset and click **Clone**.
   An exact copy of the ruleset is made, and the **General** view appears.

3 Enter a name.

4 [Optional] Enter a description up to 80 characters long.

5 Click **Save**.

6 Specify additional settings using the toolbar buttons and tabbed views.

7 Click **Save**.

**Deleting a Ruleset**

Deleting a ruleset removes the ruleset and all associated information. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action.

1 From the **WORKLOAD DESIGNER** view, select a system from the list.

2 In the local **Working** section or the system **Ready** section, click the ruleset and click **Delete**.

3 Click **Delete**.
   The ruleset is deleted from the section.

**Importing a Ruleset**

A ruleset can be imported to copy a ruleset from one system to another. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action. Only rulesets exported from Workload Designer and a Teradata Database of the same release can be imported.

1 From the **WORKLOAD DESIGNER** view, select a system from the list.

2 Click **Import**.

3 Enter a name for the imported ruleset.

4 Click **Browse**.

5 Locate and select the saved ruleset file.
   **Note:** Exported ruleset files might be stored in the download area configured for your browser.

6 Click **Save**.

**Exporting a Ruleset**

The import and export options can be used to copy a ruleset from one system to another. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action.

1 From the **WORKLOAD DESIGNER** view, select a system from the list.

2 In the local **Working** section, click the ruleset and click **Export**.
3 Click **Save**.

The ruleset file is saved to your download area or the location you specify, depending on your browser settings.

**Showing All Criteria in a Ruleset**

You can display a read-only summary of all settings and state-specific values for a single ruleset.

1 From the **WORKLOAD DESIGNER** view, select a system from the list.

2 In the local **Working** section, click the ruleset  

3 [Optional] Do any of the following:
   - Click **Collapse All** to hide all sections of the view.
   - Click **Print** to print the full summary.
   - Click the section name to show or hide individual sections of the view.

**Copying a Ruleset to the Production System**

When you are finished editing a ruleset in the Working section, copy the ruleset to the **Ready** section on the production system. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action. After copying a ruleset to the **Ready** section, you can make the ruleset the active ruleset on the production system.

1 From the **WORKLOAD DESIGNER** view, select the production system containing the ruleset you want to copy.

2 In the **Working** section, click the ruleset  

**Activating a Ruleset**

Activating a ruleset copies the ruleset to the active state on the selected system. Only one ruleset is active on the system at a time. A ruleset activated from the local **Working** section is copied to the **Ready** section before being made active. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action.

1 From the **WORKLOAD DESIGNER** view, select a system from the list.

2 From a ruleset in the **Working** or **Ready** section, click the ruleset  

**Deactivating a Ruleset**

Deactivating a ruleset removes the ruleset from the active state on the selected system. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action.

1 From the **WORKLOAD DESIGNER** view, select a system from the list.

2 In the system **Active** section, click the ruleset  

**About Ruleset Locks**

An exclusive lock can be placed on a ruleset so that the ruleset cannot be edited, deleted, or otherwise modified except by the owner of the lock. A ruleset is automatically locked by the user when it is created and each time changes to the ruleset are saved. Use the
WORKLOAD DESIGNER view to lock and unlock rulesets. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action.

The WORKLOAD DESIGNER view displays ruleset lock status:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔒</td>
<td>Locked.</td>
</tr>
<tr>
<td>🗝️</td>
<td>Unlocked.</td>
</tr>
</tbody>
</table>

The ruleset views display ruleset lock status:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>⌛️</td>
<td>Unlocked.</td>
</tr>
<tr>
<td>⚒️</td>
<td>Locked by the current user.</td>
</tr>
<tr>
<td>🛰️</td>
<td>Locked by another user.</td>
</tr>
</tbody>
</table>

**Locking or Unlocking a Ruleset**

Locking a ruleset prevents others from editing or deleting the ruleset. The Teradata Viewpoint Administrator must grant your role permission to edit rulesets so you can complete this action.

1. From the WORKLOAD DESIGNER view, select a system from the list.
2. In the local Working section, click the ruleset ✅, and click Lock or Unlock.

**About the Ruleset General View**

The ruleset General view displays general attributes of a ruleset and appears after you click the General button on the ruleset toolbar. The General view appears by default when creating, editing, cloning, or viewing a ruleset. This view contains the following tabs:

**General**
Ruleset name and description.

**Intervals**
Collection and reporting intervals.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default Value</th>
<th>Minimum Value</th>
<th>Maximum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Interval</td>
<td>How often event thresholds are checked.</td>
<td>60 seconds</td>
<td>1 second</td>
<td>3600 seconds</td>
</tr>
<tr>
<td>Dashboard Interval</td>
<td>How often workload statistics are collected.</td>
<td>60 seconds</td>
<td>1 second</td>
<td>600 seconds</td>
</tr>
<tr>
<td>Logging Interval</td>
<td>How often workload and exception logs are written.</td>
<td>600 seconds</td>
<td>1 second</td>
<td>3600 seconds</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
<td>Default Value</td>
<td>Minimum Value</td>
<td>Maximum Value</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Exception Interval</td>
<td>How often exception thresholds are checked.</td>
<td>60 seconds</td>
<td>1 second</td>
<td>3600 seconds</td>
</tr>
</tbody>
</table>

**Blocker**

Settings for responding to throttled blockers. The log is located at DBC.TDWMEventLog. Selecting *Log* only logs the blocker. If *Abort* or *Release* is selected, the action is logged after the abort or release occurs.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default Value</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Cycles</td>
<td>The number of intervals over which the query must be blocked before the specified Block Action is taken.</td>
<td>Off</td>
<td>Off, 1, 2, 3</td>
</tr>
<tr>
<td>Block Action</td>
<td>The action to perform in response to query blocking.</td>
<td>Log</td>
<td>Log, Abort (abort query), Release (release query from queue)</td>
</tr>
</tbody>
</table>

**Activation**

Features that are available when the ruleset is activated. *Events and States* is a required field and can be the only field selected.

**Bypass**

Users, accounts, and profiles whose queries are allowed to bypass system filters and throttles.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Type</td>
<td>Type of query source (you can select one or more items from each available source type): Usersnames (usernames <em>dbc</em> and <em>tdwm</em> cannot be removed)</td>
</tr>
<tr>
<td></td>
<td>Account Names</td>
</tr>
<tr>
<td></td>
<td>Account Strings</td>
</tr>
<tr>
<td></td>
<td>Profiles</td>
</tr>
<tr>
<td>Filter</td>
<td>Limits your choices in the source list.</td>
</tr>
<tr>
<td>Items</td>
<td>Lists the names of all available query sources of the selected type.</td>
</tr>
<tr>
<td>Bypass</td>
<td>Selected sources, listed by source type. Queries from each of the listed query sources will bypass system filters and throttles for this ruleset.</td>
</tr>
</tbody>
</table>

**Defining System-Level Bypass Settings**

A *system-level bypass* is a collection of users, accounts, and profiles that are not filtered or throttled at the system level. The *dbc* and *tdwm* usernames are listed automatically and cannot be changed, renamed, or removed.
1. Edit or create a ruleset.
2. From the ruleset toolbar, click **General**.
3. Click the **Bypass** tab.
4. Select a **Source Type** from the list to exclude it from system-level filters and throttles.
5. [Optional] Enter a filter string in the **Filter** box to limit your choices.
6. Select a source from the list or select multiple sources by using **Ctrl** or **Shift**.
7. Click **Add Selection** to add your selections to the bypass list.
8. [Optional] Repeat steps 4 through 7 to add sources to the bypass list.
9. [Optional] Mouse over a source in the bypass list, and click **X** to include it in system-level filters and throttles.
10. Click **Save**.

### About Ruleset States

A **state** is the intersection of a health condition and a planned environment. A **health condition** is composed of unplanned events and a **planned environment** is composed of planned events. Creating states provides greater control over how the system allocates resources. When a health condition and a planned environment intersect, the resulting state triggers system changes.

Use the state matrix to create and organize states for a ruleset. With the state matrix, create states so one ruleset can respond to a range of different system conditions. For example, if you have many system users on weekdays, but run batch jobs on the weekend, allocate system resources differently during the week than you do on weekends by creating two planned environments: Weekdays and Weekends.

In the state matrix, create planned events, unplanned events, health conditions, planned environments, and corresponding states specific to your business situation. Update the state matrix at any time to reflect business, system, or priority changes.

The **Normal** health condition, **Always** planned environment, and **Base** state are defaults. The defaults apply unless planned or unplanned events occur, triggering other configured states. The defaults cannot be deleted or moved within the state matrix. Like any state, the **Base** state can be used in multiple cells of the matrix.
Any states you create use the default settings. The default settings can be viewed and edited on the state-specific settings tabs in workloads, filters, throttles, query sessions, and utility limits. You can override the default settings by entering new values on the state-specific settings tabs.

Using only a few states in the state matrix reduces maintenance time. However, consider adding states to the matrix to manage the following situations:

- Consistent, peak workload hours or days where priority management must be strictly assigned and enforced.
- Load or query times where priority tasks must finish within a specific time frame.
- Conditions where resources must be managed in a different way, such as giving higher priority to critical work when system health is degraded.

Creating a State Matrix

If you have created a ruleset, you can create a state matrix for the ruleset. The state matrix instructs the system as to which predefined state to use when a specific combination of planned environment and health condition exists.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click States.
   The state matrix appears. For a new ruleset, the default state matrix consists of one cell.
3. Define at least one health condition.
4. Define at least one unplanned event.
   Unplanned events are system events, user-defined events, or a combination of these events.
5. Drag the unplanned event to the appropriate health condition so the event triggers the health condition.
6. Define at least one planned environment.
7. Define at least one planned event.
   Planned events are period events, user-defined events, or a combination of these events.
8. Drag the planned event to the appropriate planned environment so the event triggers the environment.
9. Define at least one state.
10. For each cell in the state matrix, drag and drop a state from the States list into the appropriate cell of the matrix. When the defined combination occurs, the state is triggered.
11. Click Save.

Defining Health Conditions

Health conditions define levels of system health and are used to reallocate system resources when an event degrades the system. When at least one unplanned event occurs, a health condition can be triggered. The default health condition is Normal, and it is used if no other health conditions are triggered. The Normal health condition always remains at the top. The lowest severity is listed at the top. The highest priority is at the bottom. If multiple unplanned events are active at the same time, the health condition with the highest severity is triggered.
1 Edit or create a ruleset.
2 From the ruleset toolbar, click States.
3 Mouse over Health Conditions, and click 📅.
   A health condition is added with the default name newCond.
4 Mouse over the health condition, and click 📅.
5 Enter a name for the health condition.
6 Enter a minimum duration, in minutes, for the health condition.
   The event that triggers the change to the health condition must remain above the trigger
   threshold for the minimum duration you enter before the health condition goes into
   effect. Setting minimum duration prevents short incidents of an event from triggering a
   change in the health condition.
7 Click OK.
8 [Optional] If there are more than two health conditions, click the health condition name,
   and drag the name to reorder.
9 [Optional] To delete a health condition, mouse over a health condition name, and click ✗.
10 Click Save.

**Defining System Events in the State Matrix**

System events are unplanned events, such as a down node. Incorporating system events into
health conditions within the state matrix gives you greater control over what actions
Teradata Database takes when unexpected events occur. To create an event that only sends
out a notification, create the event, but do not assign it to any unplanned environment.
When the event occurs, the notification action you specified is triggered.

**Note:** Some event types give you the option to set qualification time. *Qualification time* is the
length of time the specified event must last to be recognized as an event. Setting qualification
time prevents very short incidents of an event from being acknowledged as events.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click States.
3 Mouse over Unplanned Events, and click 📅.
4 Click 🌐 next to Available Events.
5 Select System Event.
6 Enter a name.
7 [Optional] Enter a description up to 80 characters long.
8 Select an Event Type from the list:
   - **Node Down.** Specify the maximum allowed number of nodes down in a clique as a
     percentage between 0 and 100. The default is 24%.
   - **AMP Fatal.** Specify the maximum number of AMPs reported as fatal at system startup.
• **Available AWT's.** Specify the minimum number of AWTs available on an AMP. Set a qualification time in minutes and seconds. (Release 13.10 and later.)

• **AWT Limit.** Specify the maximum number of AWTs in use on an AMP. Set the number of AMPs that must exceed the limit. Set a qualification time in minutes and seconds. (Release 12.0 and Release 13.0.)

• **Gateway Fatal.** Specify the maximum number of gateways reported as fatal at system startup.

• **PE Fatal.** Specify the maximum number of PEs reported as fatal at system startup.

• **Flow Control.** Specify the maximum allowed number of AMPs in flow control. Set a qualification time in minutes and seconds.

Maximum and minimum limits must be positive integers.

9  [Optional] Under **Notifications**, enable any of the following actions for the start or end of the event:

• **Send Alert.** Select the Teradata Alerts to run.

• **Run Program.** Select the program registered with Teradata Alerts to run.

• **Post to QTable.** Enter a string to post to the QTable at the start or end of the event. This option is not integrated with Teradata Alerts.

10 Click **OK**.

11 [Optional] Drag the event under a specific health condition.

12 Click **Close**.

13 Click **Save**.

**Defining Planned Environments**

Planned environments reallocate system resources during scheduled times. Planned environments are triggered when at least one planned event occurs. The default planned environment is **Always** and it cannot be deleted or moved. The order of precedence is from lowest to highest, reading from left to right. The planned environment with the highest precedence is activated if multiple planned events are active at the same time.

1  Edit or create a ruleset.

2  From the ruleset toolbar, click **States**.

3  Mouse over **Planned Environments**, and click **Add**.

   A planned environment is added with the default name **newEnv**.

4  Mouse over the planned environment, and click **Edit**.

5  Enter a name.

6  Click outside the name.

7  If there are more than two planned environments, click a planned environment name, and drag the name to the left or right in the list to change the order of precedence.

8  [Optional] To delete a planned environment, mouse over the environment name, and click **Delete**.
You cannot delete the **Always** environment.

9 Click **Save**.

**Defining Period Events in the State Matrix**

*Period events* are planned events occurring on specific days and times, such as month-end financial processing. To create an event that only sends out a notification, create the event, but do not assign it to any planned environment. When the event occurs, the notification action you specified is triggered.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **States**.

3 Mouse over **Planned Events**, and click ☑️.

4 Click ☐️ next to **Available Events**.

5 Select **Period Event**.

6 Enter a name.

7 [Optional] Enter a description up to 80 characters long.

8 [Optional] Select **Create New Corresponding Planned Environment** to automatically create a planned environment that this event triggers.

9 Select **Day of Week** or **Day of Month**, and click a single day or multiple days.

10 [Optional] Select **Month of Year**, and click one or more months.

11 [Optional] Select **Start Time**, and enter a start and end time.

12 [Optional] Select **Wrap around midnight** to have a time range spanning midnight for a period event.

13 [Optional] In **Notifications**, select any of the following:
   
   - **Send Alert**. Specify the Teradata Alerts to trigger at the start or end of the event.
   - **Run Program**. Specify the Teradata Alerts registered programs to trigger at the start or end of the event.
   - **Post to QTable**. Enter a string to post to the QTable at the start or end of the event.
     (This option is not integrated with Teradata Alerts.)

14 Click **OK**.

15 [Optional] Drag the event under a planned environment.

16 Click **Close**.

17 Click **Save**.

**Wrap Around Midnight Example**

When creating period events, use the **Wrap around midnight** option to have a time range spanning midnight.

If the **From** time of a period event is later than the **To** time, two time segments are available: midnight until the **To** time and the **From** time until midnight. When **Wrap around midnight** is not selected, the period event is in effect for segment 1 and segment 2 on each
specified day. When **Wrap around midnight** is selected, the event is in effect for segment 2 on each specified day and for segment 1 on each day following the specified day.

For example, specify that a period event occurs on Mondays and Tuesdays with a **From** time of 17:00 and a **To** time of 08:00.

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>midnight—08:00 (time segment 1)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>08:00—17:00</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>17:00—23:59 (time segment 2)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

If **Wrap around midnight** is not selected:

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>midnight—08:00 (time segment 1)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>08:00—17:00</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>17:00—23:59 (time segment 2)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

If **Wrap around midnight** is selected:

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>midnight—08:00 (time segment 1)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>08:00—17:00</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>17:00—23:59 (time segment 2)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**Defining User-Defined Events in the State Matrix**

User-defined events can be planned or unplanned. To create an event that only sends out a notification, create the event, but do not assign it to any planned or unplanned environment. When the event occurs, the notification action you specified is triggered.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click **States**.
3. Mouse over **Unplanned Events** or **Planned Events**, and click 🖼.
4. Next to **Available Events**, click 🖼.
5. Select **User Defined Event**.
6. Enter a name.
7. [Optional] Enter a description up to 80 characters long.
8. [Optional] If you are creating the user-defined event as a planned event, you can select **Create New Corresponding Planned Environment** to automatically create a planned environment that this event triggers.
9. Under **Activate/Deactivate Event**, copy the appropriate SQL request text.
10. Paste the text into an SQL script.
11. [Optional] Under **Notifications**, do any of the following:
   - **Send Alert**. Specify the Teradata Alerts to trigger at the start or end of the event.
   - **Run Program**. Specify the Teradata Alerts registered programs to trigger at the start or end of the event.
• **Post to QTable.** Enter a string to post to the QTable at the start or end of the event. (In Release 12.0, you can select the Post to QTable option, but the text box is not available.)

12 Click OK.

13 [Optional] Do one of the following:
   • For unplanned events, drag the event under a health condition.
   • For planned events, drag the event under a planned environment.

14 Click Close.

15 Click Save.

**Defining Event Combinations in the State Matrix**

An *event combination* is a mix of two or more different events, such as period, system, and user-defined events. Event combinations can be planned or unplanned. To create an event that only sends out a notification, create the event, but do not assign it to any planned environment. When the event occurs, the notification action you specified is triggered.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click States.

3 Mouse over Unplanned Events or Planned Events, and click 📊.

4 Next to Available Events, click ➕.

5 Select Event Combination.

6 Enter a name.

7 [Optional] Enter a description up to 80 characters long.

8 [Optional] If you are creating the combination event as a planned event, you can select Create New Corresponding Planned Environment to automatically create a planned environment that this event triggers.

9 Add available events and operators to build the formula representing the combination of events that must occur to trigger the event. For example, Node Down OR Batch Processing, or NOT PEI.

When creating event combinations, avoid placing two operators or two events next to each other. When an event combination is valid, the background of the Event Combination Formula text box is white. If a combination is invalid, the background is orange.

10 [Optional] In Notifications, select any of the following:
   • **Send Alert.** Specify the Teradata Alerts to trigger at the start or end of the event.
   • **Run Program.** Specify the Teradata Alerts registered programs to trigger at the start or end of the event.
   • **Post to QTable.** Enter a string to post to the QTable at the start or end of the event. (This option is not integrated with Teradata Alerts.)

11 Click OK.
12 [Optional] Do one of the following:
   • For unplanned events, drag the event under a health condition.
   • For planned events, drag the event under a planned environment.

13 Click Close.

14 Click Save.

Defining States in the State Matrix

You can create a state to control how resources are allocated in different health condition and planned environment combinations.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click States.

3 Mouse over States at the top of the states list and click .
   A state is added to the list with the default name newState.

4 Mouse over the state name, and click .

5 Enter a name.

6 Click outside the name.

7 [Optional] To edit a state, mouse over the state name, and click .

8 Click Save.

Mapping States in the State Matrix

After creating a state, you can map it in the state matrix to control how resources are allocated when different health condition and planned environment combinations occur. By default, the cell in the upper left corner of the state matrix is assigned the Normal health condition, the Always environment, and the Base state. This cell cannot be changed. All other cells in the matrix must be associated with a single state. Any state, including the Base state, can be used in multiple cells.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click States.

3 To map a state in the state matrix, drag and drop a state name from the States list to a matrix cell.
4 [Optional] To view details about a state, mouse over the state name in the States, list and click 🖼.

5 Click Save.

**Mapping Events in the State Matrix**

If you have created events in the state matrix, you can combine the events with health conditions and planned environments for greater control of Teradata Database. Create the health conditions and planned environments that you need before mapping events in the state matrix.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click States.

3 Map a planned event:
   a Mouse over Planned Events, and click 🖼.
   b In Available Events, drag and drop an event from the list into one or more of the Planned Environment columns.
   c [Optional] To create a planned event, click 🏷 next to Available Events.

4 To map an unplanned event:
   a Mouse over Unplanned Events, and click 🏷.
   b In Available Events, drag an event from the list and drop it into one or more of the Health Condition rows.
   c [Optional] To create an unplanned event, click 🏷 next to Available Events.

5 Click Close.

6 Click Save.

**Deleting States from the State List**

If a state is not used in the state matrix, you can remove it from the State list.
1. Edit or create a ruleset.
2. From the ruleset toolbar, click States.
3. In the State list, mouse over a state name, and click \[\).
4. Click Save.

**About Classification Settings**

**Workload Designer** provides a common classification process for workloads, filters, throttles, query sessions, and utility sessions. Classification determines which queries use which rules. Teradata Database detects classification criteria before executing queries. The goal in creating a useful classification scheme is to meet business goals and fine-tune control of Teradata Database.

Modifications to the classification settings can be made in response to data monitoring, regular historical analysis, or changes. For example, classification groups may need to be created, or existing groups modified, if an application is added, two production systems are consolidated, or service-level goals are missed.

**About Classification Criteria**

The following classifications are available:

- Request source (Where does the query come from?)
- Target (What is the query acting on?)
- Query characteristics (What is the query composed of?)
- Query band (What metadata is attached to the query?)
- Utility (Which utility submitted the query?)

A good approach to using classification is to first use request source to determine where the query is coming from. Often, the account string is selected, but other options include username, account name, or client IP address. If you need a more detailed level of classification, establish where the query data is located, such as a database, table, or view. To narrow classification further, select query characteristics, query bands, or utilities. For utilities, use the check boxes to select the specific utilities you want to include.

For example, you could create a filter and add the request source classification to reject all queries from the Finance department when the Red state is in effect. To further refine the filter, add the query characteristic classification to filter out all requests from the finance department that are estimated to run longer than 10 seconds. (You include classification items in a filter to reject those items.) The query characteristic setting is added to the request source setting already in place.

All classification settings for a workload, filter, throttle, query session, utility session, or utility limit are listed on the Classification tab.
On the Classification tab:

- Request source and target criteria can have a single criteria or several. In Release 13.10, if a criteria group has more than one criteria, then within the group the criteria are joined by AND. In Release 12.0 and Release 13.0, the criteria are joined by OR.
- If request source and target groups exist together, they are joined by an AND in Release 13.10. In Release 12.0 and Release 13.0, a button can be used to join the groups by AND or by OR.
- Within a query characteristics criteria group, if the Statement Type parameter is enabled, it is joined to any additional parameters with an AND. In Release 13.10, if there is more than one parameter, they are joined by an AND. In Release 12.0 and Release 13.0, a button can be used to join the parameters by AND or by OR.

About Request Source Classification Type

The request source classification type establishes which username, account name, account string, profile, application, client IP address, or client ID is making the request.

Consider the following when using request source to classify information:

- A source type can only be used once per rule. After a source type is used, it no longer appears in the menu.
- A match string must be an exact match. A match string can contain ? to match exactly one character or an * to match zero or more characters. Use the Match String Include and Exclude buttons to add the match string to a list. You can also select items from the list and use the Items Include and Exclude buttons to create your classification criteria.

Adding Request Source Classification Type

You can classify filters, throttles, workloads, utility sessions, and query sessions by request sources such as account name or client IP address.

In Release 12.0 and Release 13.0, when adding the request source classification type to filters and throttles, an Add button is available instead of the Include and Exclude buttons. In Release 12.0, when adding the request source classification type to workloads, all specified criteria can be either included or excluded. In Release 12.0, wild cards are not available in Match String. In Release 12.0 and Release 13.0, the request source types available for filters and throttles are Username, Profile, Account Name, and Account String.
1 Click Filters, Throttles, Workloads or Sessions (Query Sessions or Utility Sessions tab) and select the name of a rule or create a rule.

2 Click the Classification tab.

3 Do one of the following:
   - From the Add Classification Criteria list, click Request Source, and click Add.
   - Click Add Criteria if you are classifying a query session.
   - Select an existing request source criteria.

4 Select a Source Type from the list.

5 Do at least one of the following:
   - In Match String, enter a string. A match string can contain ? to match exactly one character or an * to match zero or more characters. (Wildcards in match strings are supported in Release 13.0 and later.) Use the Match String Include and Exclude buttons to add the match string to a list.
   - Select Items from the list and use the Items Include and Exclude buttons to create your classification criteria. (In Release 12.0 and Release 13.0, use the Add button.)

6 Click OK.

**About Target Classification Type**

The target classification type establishes the query data location.

Consider the following when using target to classify information:

- Available target types include database, table, macro, view, or stored procedure. If table, macro, view, or stored procedure is selected, a database selection list appears. A target type can only be used once per rule. After a target type is used, it no longer appears in the menu.

- Optionally, each selected target item can have subcriteria. For example, if you select a database as the target, you could add subcriteria so that it only applies if you are performing a full table scan. If you select two or more subcriteria, they must all be present for the classification setting to be used. The icon appears next to target items containing subcriteria.

- A match string must be an exact match. A match string can contain ? to match exactly one character or an * to match zero or more characters. Use the Match String Include and Exclude buttons to add the match string to a list. You can also select items from the list and use the Items Include and Exclude buttons to create your classification criteria.

**Adding Target Classification Type**

The target classification type specifies the query data location. You can classify filters, throttles, or workloads by targets such as database, table, or stored procedure. You can add subcriteria in Release 13.10. If you add multiple subcriteria to a single item, all subcriteria conditions must be true in order for the query to be classified into the rule. In Release 12.0 and Release 13.0, when adding the target classification type to filters and throttles, an Add button is available instead of the Include and Exclude buttons. In Release 12.0, when adding the target classification type to workloads, all specified criteria can be either included or excluded. In Release 12.0, wild cards are not available in Match String.
1. Click Filters, Throttles, or Workloads and select the name of an existing item or create one.

2. Click the Classification tab.

3. Do one of the following:
   - From the Add Classification Criteria list, click Target, and click Add.
   - Select an existing target criteria.

4. Select a Target Type from the list.

5. [Optional] Select a database from the list for Table, View, Macro, or Stored Procedure target types.

6. Do at least one of the following:
   - Enter a Match String and use the Match String Include and Exclude buttons to add the match string. A match string can contain ? to match exactly one character or an * to match zero or more characters.
   - Select Items from the list and use the Items Include and Exclude buttons to add the items.

7. [Optional] To add subcriteria, mouse over an item in the Selected list, click ⬇️, and choose from the following:
   - Full Table Scan. Include or exclude full table (all row) scans.
   - Join Type. Select a type, such as No Join or Any Join.
   - Minimum Step Row Count. Set minimum rows at each step.
   - Maximum Step Row Count. Set maximum rows at each step.
   - Minimum Step Time. Set minimum time at each step.

8. If you specified subcriteria, click Apply.
   The icon ⬇️ appears next to target items containing subcriteria.

9. Click OK.

About Query Characteristic Classification Type

The query characteristic classification type describes a query by answering such questions as what does the query do and how long will the query run.

Consider the following when using query characteristics to classify information:

- After a characteristic is selected, its value can be edited.
- Many characteristics have minimum and maximum values that can be set independently. You can set all values above the minimum, below the maximum, or between a minimum and a maximum.
- Query characteristic classification and utility classification are mutually exclusive. If you use one, the other option is not available.
- You can have one query characteristic classification per rule.
- If you select Join Type, you can choose from No Join, Any Join, Product Join, No Product Join, Unconstrained Product Join, and No Unconstrained Product Join.
**Adding Query Characteristic Classification Type**

You can classify filters, throttles, or workloads by query characteristics.

1. Click Filters, Throttles, or Workloads and select the name of an existing item or create one.

2. Click the Classification tab.

3. Do one of the following:
   - From the Add Classification Criteria list, click Query Characteristics, and click Add.
   - Select an existing query characteristics criteria.

4. Choose from the following query characteristics criteria:
   - **Statement Type.** Click DDL, DML, or SELECT.
   - **AMP Limits.** Include or exclude queries that use all AMPs. (Available for filters in Release 13.10.)
   - **Step Row Count.** Set minimum and maximum rows at each step.
   - **Final Row Count.** Set minimum and maximum rows in the result set.
   - **Estimated Processing Time.** Set minimum and maximum estimated processing time. (Longer or more complex queries have less accurate estimates.)
   - **Minimum Step Time.** Set a minimum time at each step.
   - **Join Type.** Use the Include Only list to select one of the following join types: No Join, Any Join, Product Join, No Product Join, Unconstrained Product Join, or No Unconstrained Product Join.
   - **Full Table Scan.** Choose to include or exclude full table (all row) scans.

5. Click OK.

**About Query Band Classification Type**

The query band classification type describes the query band data attached to a query.

Consider the following when using query band to classify information:

- A name must be selected from the Name list or entered into the box.
- After picking a name, one or more values must be specified. The value is selected from the Previously Used Values list or entered into the New Value box. Multiple values can be selected for the same name.
- After a name and value are specified, the Include and Exclude buttons are available.
- Multiple included query band key and value pairs are connected with "AND."
- Multiple excluded query band key and value pairs are connected with "OR."

**Adding Query Band Classification Type**

A query band contains name and value pairs that use predefined names (on Teradata Database) or custom names to specify metadata, such as user location or application version. The query band classification type describes the query band data attached to a query.

In Release 12.0 and Release 13.0, when adding the query band classification type to filters and throttles, an Add button is available instead of the Include and Exclude buttons. In
Release 12.0, when adding the query band classification type to workloads, all specified criteria can be either included or excluded.

1. Click **Filters, Throttles, or Workloads** and select the name of an existing item or create one.

2. Click the **Classification** tab.

3. Do one of the following:
   - From the **Add Classification Criteria** list, click **Query Band**, and click **Add**.
   - Select an existing query band criterion.

4. Do one of the following:
   - Select a predefined query band name from the list.
   - Enter a name.

5. Select a **Previously Used Value** or enter a **New Value**.
   You must select a name and a value.

6. Use the **Include** and **Exclude** buttons to create your classification criteria.

7. Click **OK**.

**About Utility Classification Type**

The utility classification type identifies which utility submitted the query.

Consider the following when using utility to classify information:

- Available utility types include **FastLoad**, **FastExport**, **MultiLoad**, and **Archive/Restore**.
  Select a top level utility such as **FastExport** or a specific implementation of a utility such as **JDBC FastExport**.
- Utility classification and query characteristic classification are mutually exclusive. If you use one, the other option is not available.
- You can have one utility classification per rule.

**Adding Utility Classification Type**

You can classify filters, throttles, workloads, or sessions by utilities such as FastLoad or MultiLoad.

1. From the **Filters, Throttles, Workloads, or Sessions** (click the **Utility Limits** or **Utility Sessions** tab) button, select the name of an item or create one.

2. Click the **Classification** tab.

3. Do one of the following:
   - From the **Add Classification Criteria** list, click **Utility**, and click **Add**.
   - Select an existing utility criterion.

4. Select any combination of **FastLoad, FastExport, MultiLoad, and Archive/Restore** utilities. Select a utility type, such as **FastLoad** or **FastExport**, or a specific version, such as **JDBC FastLoad** or **Stand Alone MultiLoad**.

5. Click **OK**.
Deleting a Classification Type
You can delete classification criteria from filters, throttles, workloads, query sessions, utility sessions, or utility limits at any time.

1. From the ruleset toolbar, click Filters, Throttles, Workloads, or Sessions (click the Query Sessions, Utility Limits, or Utility Sessions tab).

2. In Name, select existing item.

3. Click the Classification tab.

4. Mouse over an existing classification criteria, and click . If you are deleting a utility limit criterion, clear the utilities you want to delete from the classification.

5. Click Save.

About Ruleset Sessions
This topic describes the session limit information you can specify when creating and editing rulesets. In Release 12.0 and Release 13.0, session throttles are configured on the Throttles tab. The Sessions view appears after you click the Sessions button on the ruleset toolbar and has the following tabs:

Query Sessions
Limits on the number of query sessions that can be logged on at one time. You can create, enable, clone, and delete query sessions. (Release 13.10 and later)

Query Sessions by State
Limits on the number of query sessions for each state. The default session limit for a state is listed, along with each state you have created and its assigned, state-specific session limit. (Release 13.10 and later)

Utility Limits
Limits on the number of utilities that can run at the same time. You can create, enable, clone, and delete utility limits.

Utility Limits by State
Limits on the number of utilities for each utility limit rule in each state. The default utility limit for a state is listed, along with each state you have created and its assigned, state-specific utility limit.

Utility Sessions
Limits on the number of sessions a specific utility can use. You can create, enable, clone, and delete utility sessions. (Release 13.10 and later)

Utility Sessions Evaluation Order
Precedence, from highest to lowest, of utility session rules. Evaluation order determines the rule in which the utility job is placed if a utility job matches more than one utility session rule. (Release 13.10 and later)
**Creating a Query Session**

You can create a query session in Release 13.10 or later. In Release 12.0 and Release 13.0, use a throttle. A *query session* limits the number of sessions that can be logged on at one time. After the query session is created, additional controls in the **Query Sessions** tab allow you to clone, delete, and enable or disable the query session. View all created query sessions on the **Query Sessions by State** tab.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click **Sessions**.
3. Click the **Query Sessions** tab.
4. Click **Create Query Session**.
5. Enter a name.
6. [Optional] Enter a description up to 80 characters long.
7. Select a **Rule Type** from the list:
   - Select **Collective** if you want all users that meet the classification criteria treated as a group, with the group allowed a maximum number of queries.
   - Select **Individual** if you want to apply limits to each user individually.
   - Select **Member** if you want accounts or profiles that represent user groups used as the classification criteria for the rule. Limits are placed on each individual in the group, and no limit is placed on the account or group.
8. Click **Save**.
9. Click the **Classification** tab.
10. Add classification criteria.
11. Click the **State Specific Settings** tab.

**Setting Classification for Query Sessions**

Add classification settings to existing query sessions or when creating a query session. Classification options determine which sessions match a rule.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click **Sessions**.
3. Do one of the following in the **Query Sessions** tab:
   - In **Name**, select an existing query session.
   - Click **Create Query Session**, enter a name and optional description (up to 80 characters long), select a rule type, and click **Save**.
4. Click the **Classification** tab.
5. Click **Add Criteria**.
6. In **Source Type**, click ☑ and select one of the following:
• **Account Name.** The Teradata Database account name.
• **Account String.** The Teradata Database account identification string.
• **Profile.** The Teradata Database profile name.
• **Application.** The application on the network client.
• **Client IP Address.** The IP address of the network client.
• **Client ID.** The logon name on the network client.

7 Do at least one of the following:

• In **Match String**, enter a string. A match string can contain ? to match exactly one character or an * to match zero or more characters. Use the **Match String Include** and **Exclude** buttons to add the match string to a list.
• Select **Items** from the list and use the **Items Include** and **Exclude** buttons to create your classification criteria.

8 Click **OK**.

**Setting State Specific Values for Query Sessions**

Add state-specific settings to existing query sessions or when creating a query session.

You can override the default by specifying session limits on a per-state basis. For example, you might want to have session limits during high-traffic states and no session limits during low-traffic states. View all created query sessions on the **Query Sessions By State** tab.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **Sessions**.

The **Query Sessions** tab appears, listing all existing query sessions and their attributes.

3 Do one of the following in the **Query Sessions** tab:

• In **Name**, select an existing query session.
• Select **Create Query Session**, enter a name and optional description (up to 80 characters long), select a rule type, and click **Save**.

4 Select **State Specific Settings**.

5 Click a state in the state matrix to set a query session limit for that state.

6 Select **Create State Specific Settings**.

7 Select **Unlimited**, or enter a session limit in the box.

8 Click **OK**.

Your selection is applied to each cell having that state, and overrides the setting specified in **Default Settings**.

9 [Optional] Change the default setting by selecting **Unlimited**, or enter a session limit number in the box.

10 Click **Save**.
Creating a Utility Limit

A utility limit determines the number and type of utility jobs that can be run at one time. After the utility limit is created, additional controls in the Utility Limits tab allow you to clone, delete, and enable or disable the utility limit.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click Sessions.
3. Click the Utility Limits tab.
4. Click Create Utility Limit.
5. Enter a name.
6. [Optional] Enter a description up to 80 characters long.
7. Select Reject utilities that exceed limit to abort any utilities that exceed the limit. If you do not select this option, utilities are delayed. (Release 12.0 only.)
8. Click Save.
9. Click the Classification tab.
10. Select the utilities to which the limit should be applied. When a utility limit is created, several utilities are selected by default. The default utilities can be cleared.
11. Click Save.
12. Click the State Specific Settings tab.
13. Click Save.

Setting Classification for Utility Limits

Add classification settings to existing utility limits or when creating a utility limit. Classification options determine which sessions match a rule.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click Sessions.
3. Click the Utility Limits tab.
4. Do one of the following:
   - In Name, select an existing utility limit.
   - Click Create Utility Limit, enter a name and optional description (up to 80 characters long), and click Save.
5. Click the Classification tab.
6. Select any combination of FastLoad, FastExport, MultiLoad, and Archive/Restore utilities. Select a utility type such as FastLoad or FastExport, or a specific version, such as .NET FastLoad or Stand-Alone MultiLoad. (In Release 12.0 and Release 13.0, specific versions are not available, and only one utility type can be selected.)
When a utility limit is created, several utilities are selected by default. The default utilities can be cleared.

7 Click Save.

**Setting State-Specific Job Limits for Utility Limits**

Set state-specific job limits for existing utility limits or when creating a utility limit.

You can override the default by setting job limits on a per-state basis. For example, you might want to raise the job limit during a low-traffic state, and lower the job limit during a high-traffic state.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click Sessions.

3 Select Utility Limits, and do one of the following:
   - In Name, select a utility limit.
   - Select Create Utility Limit, enter a name and optional description (up to 80 characters long), and click Save.

4 Select the State Specific Settings tab.

5 Click a state in the state matrix to select it.

6 Select Create State Specific Settings.

7 Select Job Limit.

8 Enter a number in the box.

9 Select Delay or Reject.
   (Release 13.0 or later.)

10 Click OK.

   Your selection is applied to each cell having that state, and overrides the settings specified in Default Values.

11 [Optional] To change the default setting:
   a Select Job Limit.

   Your selection is applied to each cell having that state, and overrides the settings specified in Default Values.

   b Enter a number in the box.

   c Select Delay or Reject. (Release 13.0 or later.)

12 Click Save.

**Creating a Utility Session**

You can create a utility session in Release 13.10 or later. A utility session controls the number of sessions that are allowed to be logged on to each utility at one time. After the utility session is created, additional controls in the Utility Sessions tab allow you to clone, delete, and enable or disable the utility session.
1. Edit or create a ruleset.
2. From the ruleset toolbar, click **Sessions**.
3. Click the **Utility Sessions** tab.
4. Click **Create Utility Session**.
5. Enter a name.
6. [Optional] Enter a description up to 80 characters long.
7. Select the utilities to which this session limit applies.
8. From the list, select the **Data Size**.
9. In **Max Sessions**, enter the maximum number of sessions that are allowed to be logged on to each of the selected utilities at one time.
10. Click **Save**.
11. Click the **Classification** tab to add and save classification criteria.

**Setting Classification for Utility Sessions**

Add classification settings to existing utility sessions or when creating a utility session. Classification options determine which sessions match a rule.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click **Sessions**.
3. Click the **Utility Sessions** tab.
4. Do one of the following:
   - In **Name**, select an existing utility session.
   - Click **Create Utility Session**, enter a name, select the utilities to which the session limit applies, select a **Data Size**, enter a **Max Sessions** number, and click **Save**.
5. Click the **Classification** tab.
6. In the **Add Classification Criteria** list, select **Request Source** or **Query Band**.
7. Click **Add**.
8. Specify options based on the classification criteria you selected. If you selected **Request Source**, do at least one of the following:
   - In **Match String**, enter a string. A match string can contain ? to match exactly one character or an * to match zero or more characters. Use the **Match String Include** and **Exclude** buttons to add the match string to a list.
   - Select **Items** from the list and use the **Items Include** and **Exclude** buttons to create your classification criteria.
9. Click **OK**.

**Setting Evaluation Order for Utility Sessions**

You can create utility sessions and set evaluation order in Release 13.10 or later. If a utility job matches more than one utility session rule, evaluation order determines the rule in which the utility job is placed. The rule in the highest position on the Utility Sessions Evaluation
Order tab is applied. You cannot change the order of the system rules located at the bottom of the list.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click Sessions.
3. Click the Utility Sessions Evaluation Order tab.
4. Drag rules to reorder the list of utility rules.
5. Click Save.

About Ruleset Filters

A filter rejects or limits a query before the query starts running. You can specify filters when creating or editing a ruleset. Add criteria to each filter that identifies the queries to which the filter should be applied. When creating or editing a ruleset, filters are specified by clicking Filters in the ruleset toolbar. Any time after creating a filter, you can specify the states to which you want the filter applied.

Following are examples of using filters:
- Create a filter that prohibits a specific user from running a query with an estimated processing time of longer than 15 minutes.
- Create a filter to limit all members of a specific department that runs large reports from accessing the database during peak work hours.

Creating Filters

A filter rejects or limits user queries.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click Filters.
3. Click Create Filter.
4. Enter a name.
5. [Optional] Enter a description (up to 80 characters long).
6. [Optional] Select Global Rule - applies to all requests to apply global filters to all objects and, as a result, to all logon and query requests that meet the criteria of the rule. If Global Rule - applies to all requests is selected, the request source and target classification types are not available. If request source or target classification type is used, the Global Rule - applies to all requests option is not available.
   (Release 12.0 and Release 13.0 only.)
7. [Optional] Select Warning Only to have a warning message for the filter logged by the database. (Queries still run.)
8. Click Save.
9. Click the Classification tab.
10. Add and save classification criteria.
Include classification items in a filter to reject those items. For example, create a filter and add classification criteria to reject all queries from the finance department.

11 Click the State Specific Settings tab.
12 Enable or disable the filter for specific states.
13 Click OK.
14 Click Save.

**Filter Classification Criteria**

Some filters for query characteristics classification criteria are only available in Release 13.10.

<table>
<thead>
<tr>
<th>Filter Options</th>
<th>Rel 12.0</th>
<th>Rel 13.0</th>
<th>Rel 13.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement Type</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>AMP Limits</td>
<td></td>
<td></td>
<td>available</td>
</tr>
<tr>
<td>Step Row Count</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>Final Row Count</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>Estimated Processing Time</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>Minimum Step Time</td>
<td></td>
<td></td>
<td>available</td>
</tr>
<tr>
<td>Join Type</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>Full Table Scan</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>AND or OR option to establish how multiple criteria are joined</td>
<td>available</td>
<td>available</td>
<td></td>
</tr>
</tbody>
</table>

**Setting Classification for Filters**

Filters limit or reject user queries. Add classification settings to existing filters or when creating a filter. Classification options determine which queries or sessions match a rule.

When using the query characteristics classification criteria with filters, consider the following:

- In Release 13.0 and earlier, select the **AND** or **OR** option to establish how multiple criteria are joined.
- In Release 13.0 and earlier, the **Statement Type**, **AMP Limits**, and **Estimated Processing Time** criteria are available.
- In Release 13.10 or later, a **Minimum** option is available when using **Step Row Count** criteria.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click Filters.
3 Do one of the following:
   - In **Name**, select an existing filter.
• Click Create Filter, enter a name and optional description (up to 80 characters long), and click Save.

4 Click the Classification tab.

5 In the Add Classification Criteria list select Request Source, Target, Query Characteristics, Query Band, or Utility.

6 Click Add.

7 Specify options based on the classification criteria you selected.

8 If you selected Request Source or Target, do at least one of the following:

   • In Match String, enter a string. A match string can contain ? to match exactly one character or an * to match zero or more characters. Use the Match String Include or Exclude buttons to add the match string to a list.

   • Select Items from the list and use the Items Include and Exclude buttons to create your classification criteria.

9 Click OK.

Setting State-Specific Values for Filters

Add state-specific settings to existing filters or when creating a filter.

You can override the default by enabling or disabling the filter on a per-state basis. For example, you may want to leave a filter enabled under all circumstances except when a specific state occurs.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click Filters.

   The Filters tab appears, listing all existing filters and their attributes.

3 Do one of the following in the Filters tab:

   • In Name, select an existing filter.

   • Select Create Filter, enter a name and optional description (up to 80 characters long), and click Save.

4 Select State Specific Settings.

5 Click a state in the state matrix to enable or disable the filter for that state.

6 Select Create State Specific Setting.

7 Select Filter is Enabled or Filter is Disabled.

8 Click OK.

   Your selection is applied to each cell having that state, and overrides the settings specified in Default Settings.

9 [Optional] Change the default setting by selecting Filter is Enabled or Filter is Disabled.

10 Click Save.
About Ruleset Throttles

A throttle limits the number of user queries that can be active at one time. When creating or editing a ruleset, you can specify throttles. Throttles are different from filters, which reject queries. After the throttle limit is reached, the workload adds new queries to the delay queue.

The following are examples of using throttles:

- Create a throttle that limits a specific user to running no more than 10 queries at a time.
- Create a throttle that limits a specific department to no more than 4 simultaneous queries.

When creating or editing a ruleset, throttles are specified by clicking Throttles in the ruleset toolbar.

Anytime after creating a ruleset throttle, you can specify the throttle limits for each state.

Creating Throttles

Throttles limit the number of user queries that can be active at one time. This is different from filters, which reject queries and prevent them from running at all.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click Throttles.
3. Click Create Throttle.
4. Enter a name.
5. [Optional] Enter a description up to 80 characters long.
6. Select a Rule Type:
   - Select Collective if you want all users that meets the classification criteria treated as a group, with the group allowed a maximum number of queries.
   - Select Individual if you want to apply limits to each user individually.
   - Select Member if you want accounts or profiles that represent user groups used as the classification criteria for the rule. Limits are placed on individuals in the group and no limit is placed on the account or group.
   - Select Global if you want all queries placed in a single queue. If Global is selected, the request source and target classification types are not available. If request source or target classification type is used, the Global Rule option is not available. (Release 12.0 and Release 13.0.)
7. [Optional] Select Disable Manual Release or Abort to prevent Teradata Database Administrators from aborting or releasing throttled queries in the queue.
8. [Optional] Select Reject throttled queries to abort throttled queries. (Release 12.0.)
9. Click Save.
10. Click the Classification tab.
11. Add and save classification criteria.
12. Click the State Specific Settings tab.
14 Click OK.
15 Click Save.

**Throttle Classification Criteria**

Some throttles for query characteristics classification criteria are only available in Release 13.10.

<table>
<thead>
<tr>
<th>Filter Options</th>
<th>Rel 12.0</th>
<th>Rel 13.0</th>
<th>Rel 13.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement Type</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>AMP Limits</td>
<td>available</td>
<td>available</td>
<td>available</td>
</tr>
<tr>
<td>Any Step Time Exceeds</td>
<td>available</td>
<td>available</td>
<td></td>
</tr>
<tr>
<td>Step Row Count</td>
<td>available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Row Count</td>
<td></td>
<td>available</td>
<td></td>
</tr>
<tr>
<td>Estimated Processing Time</td>
<td></td>
<td>available</td>
<td></td>
</tr>
<tr>
<td>Minimum Step Time</td>
<td></td>
<td>available</td>
<td></td>
</tr>
<tr>
<td>Join Type</td>
<td></td>
<td>available</td>
<td></td>
</tr>
<tr>
<td>Full Table Scan</td>
<td></td>
<td>available</td>
<td></td>
</tr>
<tr>
<td>multiple criteria joined by AND</td>
<td></td>
<td>available</td>
<td></td>
</tr>
</tbody>
</table>

**Setting Classification for Throttles**

Throttles limit the number of user queries that can run at the same time. Add classification settings to existing throttles or when creating a throttle. Classification options determine which queries match a rule.

When using the query characteristics classification criteria with throttles in Release 13.0 or earlier, the **Statement Type**, **AMP Limits**, and **Any Step Time Exceeds** criteria are available.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click **Throttles**.
3 In the **Throttles** tab, do one of the following:
   - In **Name** or **Workload Name**, select a throttle.
   - Click **Create Throttle**, enter a name and optional description (up to 80 characters long), select a rule type, and click **Save**.
4 Click the **Classification** tab.
5 In the **Add Classification Criteria** list, select **Request Source**, **Target**, **Query Characteristics**, **Query Band**, or **Utility**.
6 Click Add.
7 Specify options based on the classification criteria you selected.
8 If you selected the **Request Source** or **Target** criteria, do at least one of the following:
- In **Match String**, enter a string. A match string can contain ? to match exactly one character or an * to match zero or more characters. Use the **Match String Include** and **Exclude** buttons to add the match string to a list.
- Select **Items** from the list and use the **Items Include** and **Exclude** buttons to create your classification criteria.

9  Click **OK**.

**Setting State-Specific Values for Throttles**

Set state-specific query limits for existing system throttles or when creating a throttle.

You can override the default by setting query limits on a per-state basis. For example, you may want to raise the query limit of a system throttle during a low-traffic state, and lower the query limit during a high-traffic state.

1  Edit or create a ruleset.

2  From the ruleset toolbar, click **Throttles**.
   
   The **Throttles** tab appears, listing all existing throttles and their attributes.

3  Do one of the following:
   
   - Select an existing system throttle from the **System Throttles** list.
   - Select **Create Throttle**, enter a name and optional description (up to 80 characters long), select a rule type, and click **Save**.

4  Select **State Specific Settings**.

5  In **When Query Limit Exceeded**, select **Delay** or **Reject**. (Release 12.0.)

6  Click a state in the state matrix to set the throttle query limit for that state.

7  In **Edit [state name] Settings**, select **Create State Specific Settings**.
   
   **Note:** If you select the **Use Default Settings** option, the settings at the bottom of the **Throttles** tab apply to the state.

8  Do one of the following:
   
   - Next to **Query Limit**, select **Unlimited** to place no limits on the number of queries for this throttle.
   - Enter a query limit number in the box, and select either **Delay** or **Reject**. (The **Delay** and **Reject** options are available in Release 13.0 or later.)
   - Next to **Session Limit**, select **Unlimited** or enter a session-limit number in the box. (Release 12.0 and Release 13.0.)

9  Click **OK**.
   
   Your selection is applied to each cell having that state, and overrides the setting specified in **Default Settings**.

10  [Optional] Change the **Default Settings** by selecting **Unlimited**, or enter a query limit number in the box and select **Delay** or **Reject**. (The **Delay** and **Reject** options are available in Release 13.0 or later.)
[Optional] Change the **Session Limit** by selecting **Unlimited** or entering a session limit number in the box. (Release 12.0 and Release 13.0.)

12 Click **Save**.

**About Ruleset Workloads**

A ruleset **workload** is a group of queries that share characteristics so that a set of workload management controls can be applied to the group. A workload has working values and defining characteristics that are evaluated during the classification phase of system management. High-quality workload management can improve response times and ensure more consistent response times for critical work.

The Workloads tab lists workload names, types, throttle limits, and enabled status. For each workload, you can specify one or more of the following:

- Classification criteria which determine if a query is assigned to the workload.
- Throttles which limit the number of concurrent active queries that can run.
- Service level goals which specify a goal for workload query performance.
- Exceptions which monitor queries and take specified actions if a query exceeds exception criteria while executing.

You can create up to 250 workloads. The following requests are examples of workloads:

- Batch jobs further subdivided by region or organization for reporting.
- Weekly or monthly reports that follow the calendar or a regular schedule.
- Jobs that are always critical whenever they occur.

Queries not classified into a specific workload are placed into the default workload named WD-Default. The WD-Default workload cannot be deleted or disabled.

**Creating a Workload**

You can group queries that share characteristics into a workload so that a set of workload management controls can be applied to the group.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **Workloads**.

3 Click **Create Workload**.

4 In the **General** tab, enter a name.

5 [Optional] Enter a description up to 80 characters long.

6 Select an **Enforcement Priority** (the type of queries you expect to run in this workload):

   - **Tactical** queries are short and high-priority.
   - **Priority** queries are longer-running than tactical queries and higher priority.
   - **Normal** queries are the customary queries running on the system.
   - **Background** queries run when the system is not busy.

7 Click **Save**.
Chapter 26 Workload Designer

8 [Optional] Click the **Classification** tab.

9 [Optional] Determine if you want incoming queries classified into this workload. For example, select **Target** to have queries from a specific database sent to this workload.

10 [Optional] Click the **Throttles** tab.

11 [Optional] Determine if you want to set a throttle just for this workload. Any query that is classified into this workload is subject to this throttle.

12 [Optional] Click the **Service Level Goals** tab, and do one of the following:
   - Select **Response Time Goal**, and enter a time in seconds for how quickly you want the queries to run. For example, type 4 if you want all queries to finish within 4 seconds. You can also set a service percentage. For example, type 90 if you expect 90% of queries to meet the time goal.
   - Select **Throughput Goal**, and type a throughput number per hour. For example, type 200 if you expect 200 queries to be processed per hour.
   - Select **No Goal** if you want no service-level goal for this workload.

13 [Optional] Click the **Exceptions** tab. Determine if you want an exception triggered for this workload. For example, if a query in this workload is taking too long, create an exception to move the query to a different workload.

14 Click **Save**.

**Setting Classification for Workloads**

Classification options determine which queries go into a workload. Add classification settings to existing workloads or when creating a workload. Classification options cannot be added to the default workload, WD-Default.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **Workloads**.

3 Do one of the following:
   - In **Name**, select an existing workload.
   - Click **Create Workload**, enter a name and optional description (up to 80 characters long), select an **Enforcement Priority**, and click **Save**.

4 Click the **Classification** tab.

5 Select classification criteria from the list.
   - The classification types are **Request Source**, **Target**, **Query Characteristics**, **Query Band**, and **Utility**.

6 Click **Add**.

7 Specify options based on the classification criteria you selected.

8 If you selected **Request Source** or **Target**, do at least one of the following:
   - In **Match String**, enter a string. A match string can contain ? to match exactly one character or an * to match zero or more characters. Use the **Match String Include** and **Exclude** buttons to add the match string to a list.
- Select **Items** from the list and use the **Items Include** and **Exclude** buttons to create your classification criteria.

9 Click **OK**.

**Setting State-Specific Throttles for Workloads**

Set state-specific throttle query limits for existing workloads or when creating a workload. If you select the **Use Default Settings** option, the settings at the bottom of the Throttles tab apply to the state.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **Workloads**.

3 Do one of the following:
   - In **Name**, select an existing workload.
   - Click **Create Workload**, enter a name and optional description (up to 80 characters long), select an **Enforcement Priority**, and click **Save**.

4 Click the **Throttles** tab.

5 Click on a state in the state matrix.

6 In **Edit [state name] Settings**, select **Create State Specific Settings**.

7 Do one of the following:
   - Select **Unlimited** to prevent limits on the number of queries for this workload.
• Enter a query limit number in the box, and select either **Delay** or **Reject**. (The **Delay** option is available in Release 13.0 and later.)

8 Click **OK**.

Your selection is applied to each cell having that state and overrides the setting specified in **Default Settings**.

9 [Optional] Change the default setting by selecting **Unlimited** or entering a number in the box so queries over the limit are rejected. (In Release 13.0 and later, **Delay** and **Reject** options are available.)

10 Click **Save**.

### Setting Service-Level Goals

_Service level goals_ (SLGs) help determine if workload management is meeting expectations. You can state service-level goals in throughput or response time with a service percentage.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **Workloads**.

3 Do one of the following:
   - In **Name**, select an existing workload.
   - Click **Create Workload**. Enter a name, optional description (up to 80 characters long), and enforcement priority. Click **Save**.

4 Click the **Service-Level Goals** tab.

5 Do one of the following:
   - Select **Response Time Goal**, enter a time in seconds, and set a service percentage. For example, if you want 90% of queries to finish within 4 seconds, set a response time of 4 and a service percent of 90. You can have different goals in different planned environments. For example, you can set a response time of 4 seconds for a daytime environment and 12 seconds for a nighttime environment. Metrics graphs show response times.
   - Select **Throughput Goal** and enter a throughput number per hour.
   - Select **No Goal** if you want no service-level goal. This option may be appropriate, for example, for very low priority background workloads.

6 Click **Save**.

### Defining a Workload Exception

_A workload exception_ is one or more events that, when all occur at the same time (or continuously for a specified period of time) cause a defined action to occur. You can add multiple criteria to an exception. If you add more than one criteria for an exception, all criteria must be satisfied for the exception to be triggered.

**Note:** Some exception criteria give you the option to add qualification time. Qualification time is the amount of time the criteria must take place to be recognized. Setting qualification time prevents very short incidents of a criteria from being acknowledged.
1 Edit or create a ruleset.
2 From the ruleset toolbar, click Workloads.
3 Do one of the following:
   • In Name, select an existing workload.
   • Click Create Workload, enter a name, optional description (up to 80 characters long), and enforcement priority, and click Save.
4 Click the Exceptions tab.
   *Note: In Release 12.0 and Release 13.0, local exceptions are displayed separately from shared exceptions on the Exceptions tab.
5 Click Create Exception.
6 Enter a name.
7 [Optional] Enter a description up to 80 characters long.
8 In Criteria, select an option from the list.
9 Click Add.
10 Specify the additional required information.
11 In Actions, select one of the following actions to be performed when the specified criteria occur:
   • Select Notification Only to send notification, and take no other action.
   • Select Abort to stop the query.
   • Select Abort Selects Only to stop the query only if it is a SELECT.
   • Select Change Workload to to change the query workload to the workload you select from the list.
12 [Optional] In Notifications, select any of the following options:
   • Select Alert to specify the Teradata Alerts to trigger at the start of the event. Select an alert name from the list.
   • Select Run Program to specify the Teradata Alerts registered programs to trigger at the start of the event. Select a program from the list.
   • Select Post to QTable to post the text you specify to the system queue table when the event starts. (This option is not integrated with Teradata Alerts.)
13 Click OK.
14 If there is more than one local exception assigned to the Change Workload action, use the Exception Precedence tab to set the priority of the exceptions. (Release 12.0 and Release 13.0.)

**Viewing Workload Service Level Goal Summary**

A service level goal for workload query performance is set in either throughput or response time with a service percentage. You can view a summary of service level goals that have been set for individual workloads.
1 Edit or create a ruleset.
2 From the ruleset toolbar, click Workloads.
3 Click the SLG Summary tab.
   Workloads are listed, along with their service level goals for each planned environment.

**About Evaluation Order**

*Evaluation order* determines the placement of queries into workloads and utility jobs into rules. Setting evaluation order is useful when you have created several workloads or utility sessions.

For workloads, if classification criteria can sort the same query into different workloads, evaluation order determines the workload in which the query is placed. For example, account finance users are classified into one workload and users in a specific geographical location are classified into a different workload. If an individual is a member of both groups, the workload highest on the evaluation order list is the workload in which the individual is sorted.

For utility sessions, if a utility job matches more than one utility session rule, evaluation order determines the rule in which the utility job is placed.

**Setting Evaluation Order for Workloads**

If classification criteria can sort the same query into different workloads, evaluation order determines the workload in which the query is placed. The workload in the highest position on the Evaluation Order tab is applied.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click Workloads.
3 Click the Evaluation Order tab.
4 Select a Planned Environment from the list.

5 In the list of workloads, do one of the following to order the list and place higher priority workloads at the top:
• Drag workload names to reorder.
• Click in a number box, highlight the existing number, and enter a new number.

6 Click Save.

**Setting Enforcement Priority for Workloads**

*Enforcement priority* establishes the type of queries you expect to run in a specific workload.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click **Workloads**.
3 Do one of the following in the Workloads tab:
   • In **Name**, select an existing workload.
   • Click **Create Workload**, and enter a name.
4 Select an **Enforcement Priority**:
   • **Tactical** queries are short and high-priority.
   • **Priority** queries are longer-running than tactical queries and high-priority.
   • **Normal** queries are the regular queries running on the system.
   • **Background** queries run when the system is not busy.
5 Click Save.

**Adjusting Priority Distribution for Workloads**

On the Priority Distribution tab, each cell in the diagram is an allocation group. The size of each cell is proportional to the relative weight. Each column in the diagram is a resource partition. The width of each column is proportional to the relative weight of the resource partition. Drag cell borders to dynamically change the amount of CPU (as a percentage) allocation groups are given. Drag column borders to change the amount of CPU available to resource partitions.

*Note:* If you modify the base state on the Priority Distribution tab, the changes are applied to other states as long as no change has been made to any of the other states. Once any of the states are changed, the only values that are applied are the changes to system values.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click **Workloads**.
3 Click the **Priority Distribution** tab.
4 In **State**, select a state from the list.

5 For resource partitions, do any of the following:
   - Mouse over any resource partition name to obtain information about the partition.
   - Click on a resource partition name, and drag the column resize bar. This resizes the column and reallocates space between the resource partitions.
   - Click on a resource partition name, and click ![Resize](image) Enter a system percentage allocation and, optionally, a CPU percentage limit. If you select the **Locked** option, this column becomes fixed in the diagram, and other columns can be dynamically resized around this column.
   - Click on a resource partition name and click ![Unlock](image) or ![Lock](image) to unlock or lock the column.

6 For allocation groups, do any of the following:
   - Mouse over any allocation group to obtain information about the group.
   - Click in a cell, and drag the cell resize bar. This resizes the cell and reallocates space within a resource partition.
   - Click in a cell, and click ![Resize](image) Enter a system percentage allocation and, optionally, a CPU percentage limit. If you select the **Locked** option, this cell becomes fixed in the diagram and other cells can be dynamically resized around this cell.
   - Click in a cell and click ![Unlock](image) or ![Lock](image) to unlock or lock the cell.

7 **[Optional]** Select **System Values**, and enter a CPU limit to set the maximum percentage of system CPU that Teradata Database can use.

8 **[Optional]** Select **Reserved AWTs** (AMP Worker Task), and enter a number to set the maximum number of AWTs that are reserved for tactical workloads.
9 [Optional] Select **Max Expedited AWTs**, and enter a number to set the maximum number of AWTs that are created on each node.

10 Click **Save**.

**Mapping Console Utilities to Workloads**

Map console utilities to workloads so utilities can be organized and prioritized.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **Workloads**.

3 Click the **Console Utilities** tab.

4 In **Console Utility to Workload Mapping**, use the lists to set a workload name for each console utility.
   
   The lists contain the predefined workload, WD-Default, and any workloads you have created. WD-Default is used when no other workload is specified.

5 Click **Save**.

**About Performance Groups**

A **performance group** is a collection of parameters used to control and prioritize resource allocation for a particular set of database sessions. Performance groups belong to a resource partition, a set of prioritized performance groups related by their users' associations. Resource partitions have an assigned weight that determines the proportion of resources available to that partition relative to other partitions.

On the **Console Utilities** tab, the mapping of performance groups to workloads only applies to console utilities that are not included in the **Console Utility to Workload Mapping** section.

**Creating a Performance Group**

Create a performance group to determine which allocation group manages a query. Performance groups belong to a resource partition, a collection of prioritized performance groups related by their users' associations.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click **Workloads**.

3 Click the **Console Utilities** tab.

4 Click **Create Performance Group Mapping**.

5 Mouse over **New Performance Group**, and click ✕.

6 Enter a name.

7 Click outside the name.

8 In **Workload Name**, select a workload from the list for the performance group.

9 Click **Save**.

10 [Optional] To delete a performance group, mouse over the group name, and click ✕.
Mapping Performance Groups to Workloads

Map performance groups to workloads so the groups can be prioritized along with other work.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click Workloads.

3 Click the Console Utilities tab.

4 In Performance Group to Workload Mapping, use the lists to set a Workload Name for each Performance Group.
   The lists contain the predefined workload, WD-Default, and any workloads you have created. WD-Default is used when no other workload is specified.

5 Click Save.

About Allocation Groups

An allocation group can limit the total amount of CPU used by sessions under its control. An allocation group has an assigned weight that is compared to other allocation group weights. The four default allocation groups are tactical, priority, normal, and background. The default allocation groups and any groups you create are assigned to resource partitions.

Note: The allocation groups named L, M, H, and R stand for Low, Medium, High, and Rush. Do not use or modify the allocation groups named L, M, H, and R. The groups represent levels of priority and are used by the system for console utilities.

By default, individual workloads are associated with a specific allocation group based on the enforcement priority assigned to the workload. You can change the default mapping using the diagram on the Workload Mapping tab. The diagram enables you to reassign workloads to allocation groups and reassign allocation groups to resource partitions. Allocation groups that contain workloads cannot be deleted.

Carefully consider the allocation groups you drag in and out of the tactical resource partition because this can have a significant effect on the amount of CPU available to the queries running in the allocation group. The tactical resource partition normally has a much higher weight than other resource partitions. If you move an allocation group containing long, resource-intensive queries into the tactical resource partition, those queries can consume a large amount of the available CPU, impacting queries running in other resource partitions. If you move a tactical allocation group out of the tactical resource partition, the queries running in the tactical allocation group are assigned a lower priority and may not meet their response-time goals.

Creating an Allocation Group

Create allocation groups using the Workload Mapping tab.

1 Edit or create a ruleset.

2 From the ruleset toolbar, click Workloads.

3 Click the Workload Mapping tab.

4 Mouse over the name of the resource partition, such as Tactical or Standard, to which you want to add an allocation group, and click .
5 Enter a name.
6 Click outside the name.
7 [Optional] To move the allocation group to a different resource partition, mouse over the name of the group, and drag the group to a different column.
8 [Optional] To change the name of the allocation group, mouse over the name of the group, and click 📝.
9 Click Save.

Mapping Allocation Groups to Workloads

If you have created workloads, you can view the **Workload Mapping** tab to see how the workloads map to allocation groups and resource partitions. Allocation groups and resource partitions determine how much CPU is available to the queries that are running in the listed workloads. The allocation groups named L (Low), M (Medium), H (High), R (Rush) represent levels of priority. These groups are used by the system for console utilities and cannot be deleted.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click **Workloads**.
3 Click the **Workload Mapping** tab.

4 Do any of the following:
   - Create allocation groups by mousing over a resource partition name, such as Tactical or Standard, and clicking 📝.
   - Create a resource partition by mousing over **Resource Partitions** and clicking 📝.
- Drag an allocation group to a different resource partition.
- Drag a workload to a different allocation group of same priority in any resource partition.
- Rename a resource partition by mousing over a name and clicking ✎.
- Delete an empty allocation group by mousing over a name and clicking ✕.
- Delete an empty resource partition by mousing over a name and clicking ✕.

5 Click Save.

### Deleting An Allocation Group

You cannot delete the L (Low), M (Medium), H (High), R (Rush) allocation groups or allocation groups that contain workloads.

1 Edit or create a ruleset.
2 From the ruleset toolbar, click Workloads.
3 Click the Workload Mapping tab.
4 Mouse over the name of an allocation group, and click ✎.
5 Click Save.

### About Ruleset Exceptions

An exception is a collection of one or more events that, when all occur at the same time (or continuously for a specified period of time), cause a defined action to occur. When creating or editing a ruleset, you can specify a set of exception criteria and exception actions to apply to workloads for each planned environment.

The tabs on the ruleset Exceptions view display all exception information for a ruleset from different perspectives:

**By Planned Environment**

Exceptions organized by planned environment. After selecting a planned environment, all exceptions are listed alphabetically by name. All workloads are listed in workload evaluation order. Select and clear the workload check boxes to enable or disable the use of individual exceptions for individual workloads. If the All-WD check box is selected, all check boxes in the row are selected and cannot be individually controlled.

**By Workload**

Exceptions organized by workloads. After selecting a workload, all exceptions are listed by name. All planned environments are listed by name and by how they are arranged in the state matrix. Select and clear the planned environment check boxes to enable or disable individual exceptions for individual planned environments. Within a workload, if an exception is enabled for All-WD in a specific planned environment, the check box is selected and disabled. (You can change the exception setting on the Planned Environment tab.) In Release 12.0 and Release 13.0 local exceptions are displayed separately from shared exceptions.
By Exception

List of all exceptions created for planned environments and workloads. After selecting an exception, all workloads are listed in workload evaluation order. All planned environments are listed by name. Select and clear the planned environment check boxes to enable or disable individual workloads for individual planned environments. If the All-WD check box is selected, all check boxes in the column are selected and cannot be individually controlled.

Defining an Exception

An exception is defined by a collection of one or more threshold events that, when all occur at the same time and for a specified period of time, cause a defined action to be taken. If you add more than one criteria, all criteria must be satisfied in order for the exception to be triggered. Only one qualification time can be specified even if multiple qualified criteria are added. If qualified criteria are specified, the exception is triggered only if all of the qualified criteria are satisfied for the duration of the qualification time. After an exception is created, additional controls in the tabs of the Exceptions view allow you to manage the exception.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click Exceptions.
3. From any of the tabs in the Exception view, click Create Exception.
4. Enter a name.
5. [Optional] Enter a description up to 80 characters long.
6. Select an option from the Exception Criteria list, and click Add.
7. Enter a value for the criteria.
8. For qualified criteria (marked with *), enter a value in Qualification Time.
9. Select one of the following actions to be performed when the specified criteria are satisfied:
   - Notification Only sends a notification only. No other action is performed.
   - Abort stops the query.
   - Abort Selects Only stops the query only if it is a SELECT.
   - Change Workload to changes the workload of the query to the specified workload.
   Change Workload to is unavailable if the Blocked Time criterion or Elapsed Time criterion was selected.
10. [Optional] Select any of the following notifications:
   - Alert sends the selected alert.
   - Run Program starts the selected program.
   - Post To QTable posts the string entered in the box to the QTable. (In Release 12.0, you can select the Post to QTable option, but the text box is not available.)
11. Click OK.
12. If there is more than one shared exception assigned the Change Workload to action, use the Exception Precedence tab to set the priority of the exceptions.
(Release 12.0 and Release 13.0.)

About Tactical CPU per Node Exceptions

If you select the Tactical CPU per Node exception criteria, the following rules apply:

- The exception can be enabled for workloads that use the tactical enforcement priority. Tactical workloads are in the top row of the Workload Mapping tab.
- The exception must have a Change Workload to action to another workload in the same resource partition column.
- The exception must have Tactical CPU per Node set to five cpu-seconds or less.
- The exception must have CPU Time set to a number greater than Tactical CPU per Node.
- Using Tactical CPU per Node criteria disables the Blocked Time and Elapsed Time criteria for the exception.

Managing Exceptions

Ruleset exceptions are managed from the ruleset Exceptions view. In Release 12.0 and Release 13.0, local exceptions are displayed separately from shared exceptions on the by Workload tab.

1. Edit or create a ruleset.
2. From the ruleset toolbar, click Exceptions.
3. [Optional] Create exceptions by clicking Create Exception from any tab.
4. After exceptions have been created, click the by Planned Environment, by Workload, or by Exception tab to manage exceptions.
5. Depending on the tab, select Workload or Exception from the list.
6. [Optional] Edit an exception from the by Planned Environment or by Workload tab by mousing over the exception and clicking 
7. [Optional] Delete an exception from the by Planned Environment or by Workload tab by mousing over the exception and clicking 
8. In the selected view, select or clear the appropriate check boxes to enable or disable the exceptions for the listed workloads, planned environments, or workload and planned environment combinations.
9. Click Save.
Workload Health

The Workload Health portlet displays workload health information for one system at a time. You choose which system, workloads, and metrics to monitor. Filter and Sort menus allow you to customize the information displayed. Data in the Workload Health portlet is refreshed every minute.

The Workload Health portlet displays workloads that:
- Have completed processing according to their Service Level Goals
- Have missed their Service Level Goals
- Are inactive
- Are disabled
- Have no defined Service Level Goals

The workload name HEALTH DETAILS view displays detailed metrics for an individual workload.

Workload Health Concepts

What is a Workload?

A workload is a group of queries that share characteristics so that a set of workload management controls can be applied to the group. A workload has working values and defining characteristics that are evaluated during the classification phase of system management.

<table>
<thead>
<tr>
<th>Name</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>WD-Accounting-All</td>
<td>Requests for the account strings for the entire accounting department. The characteristics are the accountIDs and region identifiers.</td>
</tr>
<tr>
<td>DBA_GrandRapids</td>
<td>Requests submitted by the DBA Department in Grand Rapids. An IP address or user name could be specified as characteristics.</td>
</tr>
<tr>
<td>MULTILOAD_SMP</td>
<td>Requests that execute the Teradata MultiLoad utility and single-AMP queries. These requests require fast response times.</td>
</tr>
</tbody>
</table>

What is a Service Level Goal?

A Service Level Goal (SLG) measures whether workload management is meeting defined criteria. An SLG can be expressed as a number or percentage. SLGs are defined for logging.
and reporting purposes. There are no provisions in the Teradata Database to enforce these goals.

Not all workloads need an SLG. In general, it is good practice to establish SLGs for tactical workloads. However, low-priority, background workloads do not need an SLG.

**What is an Enforcement Priority?**

When a workload is created, it is assigned an *enforcement priority* (EP) and an *allocation group* (AG). An EP is a ranking given to establish a processing order for the queries running within the workload. Each AG has only one EP, and an EP can have multiple AGs. Teradata Database uses the following EPs:

**Tactical**

High-priority, critical queries with a short response-time requirement for single or few-AMP queries or all-AMP queries that consume less than 1 CPU second per node.

**Priority**

Important queries that might need extra resources.

**Normal**

Default enforcement priority for queries.

**Background**

Low-priority queries with no response-time requirements or Service Level Goals.

**About the Workload Health View**

Use the **WORKLOAD HEALTH** view to display the health status of one or more workloads. Workload health is determined in relation to a Service Level Goal (SLG).

The following list describes the features in this view:

- System name in the portlet frame, color-coded to red if a workload has missed its SLG
- Active ruleset name (the ruleset currently enabled on the Teradata Database system)
- Workload names
- Workload health, presented using color, icons, and predefined states
• Workload sort and filter capabilities
• Portlet rewind and share capabilities

Click a workload icon to go to the workload name HEALTH DETAILS view. The workload name HEALTH DETAILS view is not available for workloads having a health state of NO_DATA.

Workload Health States

Workload health is described using a set of icons and predefined states. Health states are listed in the default sort order.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Text Color</th>
<th>State</th>
<th>Description</th>
</tr>
</thead>
</table>
| Red  | MISSED_SLG | Workload missed its SLG for a period of time, based on the enforcement priority:  
• Tactical: last minute  
• Priority: last 30 minutes  
• Normal and Background: last 60 minutes |
| Blue | MET_SLG    | Workload met its enforcement-priority Service Level Goals.  
This health state is determined by comparing the measured query Response Time with the expected Response Time and Percent SLG metrics. |
| Black| NO_SLG     | No Service Level Goals have been set for this workload. |
| Blue | NO_DATA    | No data is available for this workload. |
| Blue | DISABLED   | The workload has been disabled. |
| Gray | INACTIVE  | The workload is inactive. |

Selecting Filter Criteria

1. Click Filter.

The Filter Workloads dialog box appears.
2 [Optional] Select the All Enforcement Priorities check box or click to display the enforcement priority list and select at least one enforcement priority.

3 [Optional] Select the All Health States check box or click to display the health state list and select at least one health state.

4 [Optional] Select the Name check box and enter a workload name or name pattern.

5 Click to close the menu.

**Setting Sort Criteria**

1 Click Sort.

   The Sort menu appears.

2 To specify the sort criteria, do one of the following:
   
   - Click Missed SLG to sort workloads into workload health state groups in alphabetical order by workload name.
   - Click Name to display workloads in alphabetical order by workload name, regardless of workload health state.

**About the Workload Health Details View**

The workload name HEALTH DETAILS view displays metrics for a single workload. Use the PREFERENCES view to select the metrics. This view appears after you click the workload icon, name, or information balloon for a workload in the WORKLOAD HEALTH view. The workload name HEALTH DETAILS view is not available for workloads having a health state of NO_DATA.
Metrics are arranged in a two-column format:

- Metric names
- Sparkline graphs

As you mouse over the sparklines, information balloons display event information. Each sparkline ends with a percentage or a value, depending on the metric.

**About Workload Metrics Graphs**

Sparkline graphs illustrate workload performance metrics.

Solid lines represent the current data for their respective metric.

On a single-sparkline graph (for example, the MAX RESPONSE metric), the solid line represents current data for the metric, and the grayed skyline represents the past averages for that same metric.

On a multi-sparkline graph, a metric can be expressed in more than one value. When you mouse over the sparkline, the color of the metric name, end data points, and information balloons match.
A dotted line in the graph is called the SLG reference line. Data points above the SLG reference line are color-coded in red.

### Workload Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aborted Queries</td>
<td>Number of aborted queries in the last 60 seconds.</td>
<td>Number</td>
</tr>
<tr>
<td>Active Queries</td>
<td>Number of active queries in the last 60 seconds. This metric is a default for the Priority, Normal, and Background EPs.</td>
<td>Number</td>
</tr>
<tr>
<td>Arrivals</td>
<td>Number of queries arriving in the last 60 seconds. Historical data is not displayed for this metric. This is the default metric for all EPs.</td>
<td>Number</td>
</tr>
<tr>
<td>Avg CPU-SEC per Query</td>
<td>Average CPU seconds per completed queries is a default metric for the Tactical enforcement priority, providing throughput and processing information.</td>
<td>Number</td>
</tr>
<tr>
<td>Avg Response &amp; Delay Time</td>
<td>Default metric for all EPs.</td>
<td>Number</td>
</tr>
<tr>
<td>Cumulative CPU</td>
<td>Cumulative CPU seconds per amp. This is a default metric for the Priority, Normal, and Background EPs.</td>
<td>Number</td>
</tr>
<tr>
<td>Delayed Queries</td>
<td>Number of queries in the delay queue in the last 60 seconds. This metric is a default metric for Priority, Normal, and Background EPs.</td>
<td>Number</td>
</tr>
<tr>
<td>Exceptions</td>
<td>Number of queries classified as exceptions in the last 60 seconds.</td>
<td>Number</td>
</tr>
<tr>
<td>Max CPU-SEC per Query</td>
<td>Maximum CPU seconds used by completed queries is a default metric for the Tactical EP.</td>
<td>Number</td>
</tr>
<tr>
<td>Maximum Response Time</td>
<td>Default metric for the Tactical EP.</td>
<td>Number</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Queries Throttled</td>
<td>Number of queries throttled in the workload in the last 60 seconds.</td>
<td>Number</td>
</tr>
<tr>
<td>Rejected Queries</td>
<td>Number of rejected queries in the last 60 seconds.</td>
<td>Number</td>
</tr>
<tr>
<td>Throughput</td>
<td>Number of completed queries in the last 60 seconds. This metric does not display historical data.</td>
<td>Number</td>
</tr>
</tbody>
</table>

**About the Preferences View**

The **PREFERENCES** view allows you to customize the **Workload Health** portlet.

From the portlet frame, click ![PREFERENCES](image) to access the **PREFERENCES** view and the following tabs:

- **System and Workloads**
  
  Choose a system and its workloads to monitor.

- **Metrics-Tactical**
  
  Select metrics for workloads in the Tactical enforcement priority.

- **Metrics-Priority**
  
  Select metrics for workloads in the Priority enforcement priority.

- **Metrics-Normal**
  
  Select metrics for workloads in the Normal enforcement priority.

- **Metrics-Background**
  
  Select metrics for workloads in the Background enforcement priority.

- **Trend Interval**
  
  Set the time period for calculating each trend interval.

- **Past Average**
  
  Choose the time period for which a historical average is calculated.

**Selecting a System and Workloads to Monitor**

Use the **System and Workloads** tab in the **PREFERENCES** view to select the system and which of its workloads to monitor.

1. From the portlet frame, click ![PREFERENCES](image) to access the **PREFERENCES** view.
2. Click the **System and Workloads** tab.
3. [Optional] Click **Clear Defaults** to clear all default settings for this portlet.
4. Select a system from the list.
5. Select the check box for each workload you want to monitor.
6 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

7 Click OK.

Setting Enforcement Priority Metrics

For each enforcement priority group, you can select and order metrics for display from the PREFERENCES view. Choose from a defined list of metrics.

1 From the portlet frame, click to access the PREFERENCES view.

2 Click the Metrics tab for an enforcement priority group.

The Preview pane uses sample data to show how metric rows are displayed in the summary view.

3 [Optional] Click Clear Defaults to clear all default settings for this portlet.

4 Do any of the following to change the way metric rows are displayed:
   - Add a metric row. Drag a metric from the Select metrics for display list to the Preview pane.
   - Remove a metric row. Drag a metric from the Preview pane to the Metric Removal pane.
   - Change metric row order. Drag a metric already in the Preview pane to a new location in the pane (up or down).

Changes to the metrics affect only the system currently selected, provided that the metrics are available on that system.

5 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.

Setting the Workload Trend Interval

Use the Trend Interval tab in the PREFERENCES view to set the length of time used to plot sparkline metrics in the portlet details view.
1. From the portlet frame, click to access the PREFERENCES view.
2. Click the Trend Interval tab.
3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. In the dialog box, select an Interval.
   The default is 24 hours.
5. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
6. Click OK.

Setting Past Averages

Use the Past Averages tab in the PREFERENCES view to specify the number of weeks of data points used to calculate the average values displayed in metric graphs.

1. From the portlet frame, click to access the PREFERENCES view.
2. Click the Past Averages tab.
   
3. [Optional] Click Clear Defaults to clear all default settings for this portlet.
4. Enter the number of weeks (1 to 99 weeks).
   The default is 2 weeks.
5. [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
6. Click OK.
Workload Monitor

The Workload Monitor portlet allows you to monitor workload activity, allocation group, and session data in Teradata Database.

The Workload Monitor portlet provides:

- Multiple summary and details views for presenting information
- A state matrix icon that displays the status of the Teradata Database system
- A choice of data sampling periods
- The ability to filter workloads and sort columns

Workload Monitor Concepts

What is a Workload?

A workload is a group of queries that share characteristics so that a set of workload management controls can be applied to the group. A workload has working values and defining characteristics that are evaluated during the classification phase of system management.

**Workload Examples**

<table>
<thead>
<tr>
<th>Name</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>WD-Accounting-All</td>
<td>Requests for the account strings for the entire accounting department. The characteristics are the accountIDs and region identifiers.</td>
</tr>
<tr>
<td>DBA_GrandRapids</td>
<td>Requests submitted by the DBA Department in Grand Rapids. An IP address or user name could be specified as characteristics.</td>
</tr>
<tr>
<td>MULTILOAD_SMP</td>
<td>Requests that execute the Teradata MultiLoad utility and single-AMP queries. These requests require fast response times.</td>
</tr>
</tbody>
</table>

What is a Service Level Goal?

A Service Level Goal (SLG) measures whether workload management is meeting defined criteria. An SLG can be expressed as a number or percentage. SLGs are defined for logging and reporting purposes. There are no provisions in the Teradata Database to enforce these goals.

Not all workloads need an SLG. In general, it is good practice to establish SLGs for tactical workloads. However, low-priority, background workloads do not need an SLG.
What is an Enforcement Priority?

When a workload is created, it is assigned an *enforcement priority* (EP) and an *allocation group* (AG). An EP is a ranking given to establish a processing order for the queries running within the workload. Each AG has only one EP, and an EP can have multiple AGs. Teradata Database uses the following EPs:

**Tactical**

High-priority, critical queries with a short response-time requirement for single or few-AMP queries or all-AMP queries that consume less than 1 CPU second per node.

**Priority**

Important queries that might need extra resources.

**Normal**

Default enforcement priority for queries.

**Background**

Low-priority queries with no response-time requirements or Service Level Goals.

### Workload Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Queries</td>
<td>Number of active queries in the last 60 seconds. This is a default metric for the Priority, Normal, and Background enforcement priorities.</td>
<td>Number</td>
</tr>
<tr>
<td>Average Response Time and Average Delay Time</td>
<td>Average response time and the average delay time for all active requests. This is a default metric for all enforcement priorities.</td>
<td>Number</td>
</tr>
<tr>
<td>Maximum Response Time</td>
<td>Maximum response time for all active requests. This is a default metric for the Tactical enforcement priority.</td>
<td>Number</td>
</tr>
<tr>
<td>Delayed Queries</td>
<td>Number of queries in the delay queue in the last 60 seconds. This metric is a default metric for Priority, Normal, and Background enforcement priorities.</td>
<td>Number</td>
</tr>
<tr>
<td>Average CPU-SEC per Request</td>
<td>Average CPU time, in seconds, of workload requests. This is a default metric for the Tactical enforcement priority.</td>
<td>Number</td>
</tr>
<tr>
<td>Maximum CPU-SEC per Request</td>
<td>Maximum CPU time, in seconds, of workload requests. This is a default metric for the Tactical enforcement priority.</td>
<td>Number</td>
</tr>
<tr>
<td>Throughput</td>
<td>Number of queries arriving and completing in the last 60 seconds. This metric does not display historical data. This is a default metric for all enforcement priorities.</td>
<td>Number</td>
</tr>
<tr>
<td>Impact CPU-SEC</td>
<td>Maximum amount of CPU time used by a workload compared to the total CPU used by all workloads on the system.</td>
<td>Number</td>
</tr>
</tbody>
</table>
### Metric

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative CPU</td>
<td>Cumulative CPU seconds per amp. This is a default metric for the Priority, Normal, and Background enforcement priorities.</td>
<td>Number</td>
</tr>
</tbody>
</table>

### What is an Exception?

A workload management *exception* occurs when a query executes outside of the system regulation that is currently in effect. The **Workload Monitor** portlet reports on exceptions for CPU or I/O skew, an excessive number of concurrent workloads, or queries that are reassigned or reclassified to another workload.

### Working with Workload Monitor Views

The **Workload Monitor** portlet provides summary views to help you identify issues in workload management.

- Use the Dynamic Pipes view to analyze workload data in near-real time at each system management point of control. You can choose the data sampling period and workload filter criteria. Workloads can be displayed within their enforcement priority (EP).
- Use the Static Pipes view to compare summary and detail workload metrics. Workloads can also be viewed within their EP, and data can be sorted by column. You can also determine whether system resources within an EP are being skewed to a workload by comparing the statistics of a particular workload to other workloads within the EP.
- Use the Distribution view to review workload information within the context of its allocation group (AG). Mouse over the pie charts to see CPU consumption for workloads within an AG compared to the relative weight of the AG. Colors relate pie chart segments to each other and to list information. Use this view to determine:
  - Why a workload is over-consuming system resources, causing other workloads to miss their SLGs
  - Why a workload is not receiving the system resources required to complete processing

### About the State Matrix

The Teradata Database state matrix icon in the toolbar shows changes in state, planned environment, or health condition during the cumulative sampling period.

The state matrix icon uses color to show the following:

**Dark blue**
- Active-state cell.

**Medium blue**
- Previously active state cell

**Light blue**
- Inactive-state cell
Note: During a state change, the cell representing the previous state changes from dark blue to medium blue. If there was a second state change during the sampling period, the previous state cell is shown in light blue.

The number of cells in the state matrix icon depends on the state matrix of the monitored system. If a one-by-one state matrix is configured, the state matrix icon appears as one active cell:

When you mouse over the state matrix icon, information balloons show detail information and the last state change if there was a state change within the sampling period.

Selecting a Summary View

You can select a summary view. The Workload Monitor portlet saves the active view from your last session to open for your next session.

1. Click one of the following:
   - to go to the Dynamic Pipes view.
   - to go to the Static Pipes view.
   - to go to the Distribution view.

Setting the Sampling Period

The sampling period you select applies to all views that contain a sampling period menu. The Cumulative System Data menu is dimmed if the selected sampling period has not been reached. The default is 60 minutes. Sampling period totals are updated during the portlet refresh, which is every 60 seconds. Cumulative data is not affected by workload filter criteria.

1. Select a sampling period:
   - In the Dynamic Pipes and Static Pipes views under Cumulative System Data from Last.
- In the Distribution view under **CPU Consumption Per Workload from Last**.

**Workload Monitor Icons**

This topic describes the icons used in the **Workload Monitor** portlet. You can click on the values associated with these icons to see to the details views.

![Cumulative System Data](image)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Requests arriving into system management." /></td>
<td>Requests arriving into system management.</td>
</tr>
</tbody>
</table>
| ![Requests that were not allowed to continue processing.](image) | Requests that were not allowed to continue processing. This icon appears with the following values:  
- The number of rejected requests by system filters  
- The number of rejected requests by system throttles  
- The number of aborted requests that were caused by exceptions |
| ![Requests that have been allowed to continue processing after a warning message has been written to the system log file.](image) | Requests that have been allowed to continue processing after a warning message has been written to the system log file. |
| ![Requests that were delayed and completed or are currently delayed. Does not include requests that were delayed, but are still active.](image) | Requests that were delayed and completed or are currently delayed. Does not include requests that were delayed, but are still active. |
### Icon Description

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>!</td>
<td>Requests that use exception processing. This icon appears with these values:</td>
</tr>
<tr>
<td></td>
<td>• The total number of workload exceptions in the sampling period</td>
</tr>
<tr>
<td></td>
<td>• The number of requests reclassified to a different EP</td>
</tr>
<tr>
<td></td>
<td>• The number of requests that have been aborted</td>
</tr>
<tr>
<td>✅</td>
<td>Completed requests. These requests no longer require system resources.</td>
</tr>
</tbody>
</table>

### Navigating to Details Views

Many WORKLOAD MONITOR views provide detailed information and can be accessed from one or more views. To display system data, click the values associated with the arrivals, exceptions, delayed, and completions icons in the Dynamic Pipes, Static Pipes, or workload name (workload pipe) view.

1. To display data for an individual workload, click the workload name in any of the top-level views and do one of the following:
   - Click **Cumulative** to display cumulative values for the selected sampling period.
   - Click **Snapshot** to display current values and the allocation group (workload pipe) view.
   - Click **Trends 24hrs** to display sparkline metrics for the workload.
   - Click the allocation group button to display the allocation group details view.
   - Click the **Cumulative Workload Data** to change the sampling period.

2. To display system data, click the values associated with the arrivals, exceptions, delayed, and completions icons in the Dynamic Pipes, Static Pipes, or workload name (workload pipe) view.

3. To display workload data and allocation group, do one of the following:
   - Click the AG name in the Distribution view.
   - Click the AG name button in the workload name (workload pipe) view.

### Configuring Columns to Display

Use the **Columns** dialog box to select, lock, and order columns. You can resize columns in the table.

1. In the table, click ![resizable](image). 
2. In the **Columns** dialog box, select the check boxes of columns to display. Mouse over the name to see the complete name.
3. [Optional] Click ![lock](image) next to the column name. The column remains stationary on the left when scrolling horizontally.
4. [Optional] Click ![resizable](image) and drag the row to reorder the column.
5 Click **Apply** to save changes and close the **Columns** dialog box.

6 [Optional] Sort on a column by clicking the column heading.

   - Sort on a column by clicking the column heading. A second click sorts in descending order.
   - Sort on two columns consecutively. Primary sort order is indicated by a dark blue column heading, and secondary sort order is indicated by a light blue column heading.
   - Sort in ascending or descending order on all pages when there are multiple pages.

7 [Optional] In the table, drag the column heading border ↑↓ in either direction to resize the column.

**Workload Monitor Details View Catalog**

This topic lists the details views available in the **Workload Monitor** portlet. Mouse over the error description columns to view the full message.

<table>
<thead>
<tr>
<th>View Name</th>
<th>Column and Icon Data</th>
<th>Accessed from These Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABORTED BY WORKLOAD EXCEPTION</td>
<td>workload, log time, session ID, username, account, error code, reason</td>
<td>Dynamic Pipes, Static Pipes, workload name cumulative and details views</td>
</tr>
<tr>
<td>ARRIVALS, COMPLETIONS</td>
<td>workload, arrivals, completions, completion %, aborted, delayed, exceptions, met SLG</td>
<td>Dynamic Pipes, Static Pipes, workload name cumulative views</td>
</tr>
<tr>
<td>CURRENT ACTIVE</td>
<td>session ID, workload, username, account, CPU time, duration, start, host ID, state, state icon, req CPU, ΔCPU, req I/O, ΔI/O, CPU skew, I/O skew, spool, temp space, PJI, blocked time, in state, partition, CPU use, unnecessary IO, and impact CPU</td>
<td>Dynamic Pipes, Static Pipes, workload name snapshot, allocation group details views</td>
</tr>
<tr>
<td>CURRENT DELAYED</td>
<td>session ID, workload, username, account, blocking count, delay time, system throttle delay time, utility throttle delay time, workload throttle delay time, host ID, duration, start, state, state icon, req CPU, ΔCPU, req I/O, ΔI/O, CPU skew, I/O skew, spool, temp space, PJI, blocked time, in state, partition, CPU use, unnecessary IO, and impact CPU</td>
<td>Dynamic Pipes, Static Pipes, workload name snapshot, allocation group details views</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The system throttle, utility throttle, and workload throttle delay time columns only appear for Teradata Database 13.10 systems.</td>
<td></td>
</tr>
<tr>
<td>EXCEPTIONS summary view</td>
<td>workload, exceptions, aborted, reclassified, and logged</td>
<td>Dynamic Pipes and Static Pipes views</td>
</tr>
<tr>
<td>EXCEPTIONS details view</td>
<td>log time, session ID, username, account, status, rule name, error code, and reason</td>
<td>EXCEPTIONS details, workload name cumulative views</td>
</tr>
<tr>
<td>REJECTED AT SYSTEM FILTERS</td>
<td>log time, session ID, username, account, error code, and reason</td>
<td>Dynamic Pipes and Static Pipes views</td>
</tr>
</tbody>
</table>

**Chapter 28 Workload Monitor**

**Workload Monitor**

Teradata Viewpoint User Guide 329
<table>
<thead>
<tr>
<th>View Name</th>
<th>Column and Icon Data</th>
<th>Accessed from These Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>REJECTED AT SYSTEM THROTTLIES and WORKLOAD THROTTLIES</td>
<td>log time, session ID, username, account, error code, and reason</td>
<td>Dynamic Pipes and Static Pipes views</td>
</tr>
<tr>
<td>WARNINGS AT SYSTEM FILTERS</td>
<td>log time, session ID, username, account, error code, and reason</td>
<td>Dynamic Pipes and Static Pipes views</td>
</tr>
<tr>
<td>STATIC PIPES ENFORCEMENT PRIORITY</td>
<td>enforcement priority, active, completions, CPU time, met SLG</td>
<td>Static Pipes view</td>
</tr>
<tr>
<td>STATIC PIPES WORKLOADS</td>
<td>workload, enforcement priority, arrivals, completions, aborted, exceptions, met SLG, CPU time, delay (avg), active, delayed, active (sampling period), and delay queue, reclassified in/out</td>
<td>Static Pipes view</td>
</tr>
<tr>
<td>REQUESTS DELAYED (active and completed)</td>
<td>workload, arrivals, delayed, delayed (summary), and delayed (average)</td>
<td>Dynamic Pipes and Static Pipes views</td>
</tr>
<tr>
<td>RECLASSIFIED (in and out)</td>
<td>log time, session ID, username, into, from, account, status, rule name, error code, reason</td>
<td>Dynamic Pipes, Static Pipes, workload name details views</td>
</tr>
</tbody>
</table>

You can link to the views listed in the previous table from the following views:

<table>
<thead>
<tr>
<th>View Name</th>
<th>Description</th>
<th>Accessed from These Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>workload name cumulative view</td>
<td>workload, enforcement priority, arrivals, completions, aborted, exceptions, reclassified in/out</td>
<td>Dynamic Pipes, Static Pipes, Distribution, allocation group details views</td>
</tr>
<tr>
<td>workload name snapshot view</td>
<td>workload, enforcement priority, active snapshot, delayed snapshot</td>
<td>Dynamic Pipes, Static Pipes, Distribution, allocation group details views</td>
</tr>
<tr>
<td>allocation group details view</td>
<td>workload, enforcement priority, allocation group name, workload name, workload throttle limit, cumulative delayed at workload throttle, percentage of AG CPU for each workload (sparkline), and percentage of total CPU for the AG, active requests</td>
<td>workload name details views</td>
</tr>
<tr>
<td>workload name trends view</td>
<td>enforcement priority, sparkline, active queries, average response time, average delay time, maximum response time, delayed queries, average CPU per query, maximum CPU per query, throughput, impact CPU-sec, cumulative CPU</td>
<td>workload name details views</td>
</tr>
</tbody>
</table>
About the Dynamic Pipes View

The Dynamic Pipes view helps you analyze workloads. You can access cumulative, snapshot, and trend data for each workload. Use the Filter menu to modify the active workload display. If there are more than 18 workloads, they are grouped by EP.

Use this view to see:

- Workloads that missed their SLGs
- Requests that are delayed or rejected at system filters and system throttles
- Delay queue that is growing. A pulsing indicator appears near the workload name when a workload is adding requests to the delay queue.

Selecting Filter Criteria

1. Click Active Workloads.
   The Filter dialog box appears.
2 [Optional] Select the **Group by enforcement priority** check box to group workloads by their enforcement priority.

3 [Optional] Select the **All Enforcement Priorities** check box or click ![button](https://example.com/button) to display the enforcement priority list and select at least one enforcement priority.

4 [Optional] Select the **Missed SLG** check box to display only those workloads which have missed their SLGs.

5 [Optional] Select the **Name** check box and enter a workload name or name pattern.

6 [Optional] Select the **Active Workloads** check box to display only those workloads which were active within the sampling period.

7 Click ![close button](https://example.com/close) to close the menu.

### About the Static Pipes View

Use the Static Pipes view to display workload metrics.

The **Workloads** tab displays all active workloads within the **Cumulative System Data** sampling period, the workload EP, and metrics. The following metrics can be added:

- Arrival count
- Aborted count
- Exception count
- Average delay time
- Delayed count
- Active count

The **Enforcement Priorities** tab displays all active workloads within the **Cumulative System Data** sampling period by EP. Available metrics include the total number of active requests classified into one or more workloads in the EP, percentage of completed requests within the EP, the CPU percentage, and the total number of workloads that met their SLGs.

Click ![button](https://example.com/button) to select the columns displayed on the **Workloads** tab and the **Enforcement Priorities** tab.
About the Distribution View

The Distribution view displays workload CPU consumption percentages, allowing you to compare the CPU consumption for workloads in an AG to the relative weight of the AG within the resource partition.

Use this view to see:

- A pie chart graph that uses color and information balloons to display CPU consumption data for each workload that was active within the Cumulative System Data sampling period. As you mouse over a pie chart section, workloads highlight in the workload list. Idle CPU time is shown if applicable during the sampling period.
- A pie chart graph that uses color and information balloons to relate the relative weight of each pie section to the AG in the AG list. As you mouse over a pie chart section, the AG highlights in the AG list.

The expand (.expand) and collapse (expand) list controls can be used to change the length of the portlet. Minimizing the lists save space on the portal page.
About the Request Details View

When viewing a request, you can see detailed read-only information from the following tabs:

**Overview**

Key statistics for a session. Any value exceeding preset thresholds is highlighted.

**SQL**

SQL for the selected query.

**Explain**

Explain steps for the query, including step statistics and explain text.

**Blocked By**

Details about other queries that are blocking this query.

**Delay**

Details about rules delaying this query.

**Details View Metrics**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE</td>
<td>Query state, such as ACTIVE, BLOCKED, TERMINATE</td>
<td>Character</td>
</tr>
<tr>
<td>Metric</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>TIME IN STATE</td>
<td>How long the query has been in the current state, displayed as HH:MM:SS</td>
<td>Number</td>
</tr>
<tr>
<td>TOTAL DURATION</td>
<td>How long the query has run, displayed as HH:MM:SS</td>
<td>Number</td>
</tr>
<tr>
<td>CPU</td>
<td>Total CPU usage time, in seconds, consumed by the query</td>
<td>Number</td>
</tr>
<tr>
<td>CPU delta</td>
<td>Total CPU usage time consumed, in seconds, since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>I/O</td>
<td>Number of I/O operations the query performed</td>
<td>Number</td>
</tr>
<tr>
<td>I/O delta</td>
<td>I/O count since the last sample</td>
<td>Number</td>
</tr>
<tr>
<td>UNNECESSARY I/O</td>
<td>All AMP I/O divided by all AMP CPU, displayed in milliseconds, to reveal large amounts of I/O occurring over a short period of time</td>
<td>Number</td>
</tr>
<tr>
<td>IMPACT CPU</td>
<td>CPU time in seconds of the highest CPU utilized AMP during the collection interval times the total number of AMPs participating for this session during the last session collection interval</td>
<td>Number</td>
</tr>
<tr>
<td>CPU SKEW</td>
<td>CPU skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td>I/O SKEW</td>
<td>I/O skew during the last sample</td>
<td>Percent</td>
</tr>
<tr>
<td>SPOOL</td>
<td>Amount of spool space the query is using</td>
<td>Number</td>
</tr>
<tr>
<td>TEMP SPACE</td>
<td>Amount of temp space the query is using</td>
<td>Number</td>
</tr>
<tr>
<td>WORKLOAD</td>
<td>Workload where the query is actively running</td>
<td>Character</td>
</tr>
<tr>
<td>PJI</td>
<td>Ratio of the CPU milliseconds per I/O for the query, where a larger Product Join Index number indicates system performance degradation</td>
<td>Number</td>
</tr>
<tr>
<td>CPU USE</td>
<td>Percent of the total amount of available CPU used by the query</td>
<td>Percent</td>
</tr>
</tbody>
</table>

**Session Information**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER</td>
<td>Name of the user that submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>ACCOUNT</td>
<td>Account of the user that submitted the query</td>
<td>Character</td>
</tr>
<tr>
<td>SOURCE</td>
<td>Source details, such as application name, IP address, and host user name</td>
<td>Character</td>
</tr>
<tr>
<td>PARTITION</td>
<td>Partition in which the query is running</td>
<td>Character</td>
</tr>
<tr>
<td>REQUESTS</td>
<td>Number of queries submitted by the session</td>
<td>Number</td>
</tr>
</tbody>
</table>

**Symbol Reference**

The following symbols appear in summary and details views:
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>ABORTING</td>
<td>Query has been aborted, and changes are being rolled back.</td>
</tr>
<tr>
<td>→</td>
<td>ACTIVE</td>
<td>Query is running.</td>
</tr>
<tr>
<td>→I</td>
<td>BLOCKED</td>
<td>Query is waiting for a lock held by another query.</td>
</tr>
<tr>
<td>⚪</td>
<td>DELAYED</td>
<td>Query is in a delay queue waiting to run.</td>
</tr>
<tr>
<td>□</td>
<td>IDLE</td>
<td>No query is running.</td>
</tr>
<tr>
<td>?</td>
<td>OTHER</td>
<td>Query is in an unknown state.</td>
</tr>
<tr>
<td>•</td>
<td>PARSING</td>
<td>Query is being parsed before running.</td>
</tr>
<tr>
<td>🔄</td>
<td>QTDELAYED</td>
<td>Query is waiting for rows to be inserted into a queue table.</td>
</tr>
<tr>
<td>↑</td>
<td>RESPONSE</td>
<td>Query is returning results to the user.</td>
</tr>
<tr>
<td>🔄</td>
<td>SESDELAYED</td>
<td>Query is delayed because a utility limit has been exceeded in FastLoad, MultiLoad, FastExport, or ARC.</td>
</tr>
</tbody>
</table>

### About the Details Overview Tab

The **Overview** tab provides detailed information about key metrics for the selected session and its queries. The metric values displayed provide a snapshot of Teradata Database system status. Metrics that exceed preset thresholds are highlighted.

### About the Details SQL Tab

The **SQL** tab displays the SQL for the selected query. This information is read-only.

### About the Details Explain Tab

The **Explain** tab displays an abbreviated version of the Step statistics and the Explain text that result from an Explain request in an SQL session. This information is read-only, and no actions are available from this tab. The **Explain** tab displays completed steps at the top of the list and future steps at the bottom. The tab periodically refreshes to display updated information. Each Explain step is uniquely identified with a number where the background of the number box indicates status:

- Completed steps are at the top of the list and indicated by a black number box.
- Active steps are indicated by a pulsating number box (flashes gray and white).
- Steps to run are at the bottom of the list and indicated by a white number box.

Each numbered step includes:

**EST. TIME**

Estimated execution time for the step.

**EST. I/O**

Estimated number of I/Os for the step.

**ACTUAL TIME**

Actual CPU time consumed by the step, or blank if the step has not run.
ACTUAL I/O

Actual number of I/Os for the step, or blank if the step has not run.

About the Details Blocked By Tab

The Blocked By tab displays details about other queries that are blocking this query. This information is read-only, and no actions are available from this tab. This tab is available when the selected query is blocked. The Blocked By tab displays:

USERNAME
Name of the user that is running the query that holds the lock.

HOST
Host ID that is logged on to the session.

SESSION ID
Session ID in which the blocking query was run.

LOCK TYPE
Type of lock.

STATUS
Lock status.

LOCKED
Name of the locked object.

About the Details Delay Tab

The Delay tab displays details about rules that are delaying this query. The Delay tab is available if the system being monitored is a Teradata Database 13.10 system or newer. The information on the Delay tab is read-only, and no actions are available from this tab. This tab is available when the selected query is delayed. The Delay tab displays all rules that apply to the query and a scroll bar appears if there are more than two rules. The Delay tab displays:

BLOCKING COUNT
Number of consecutive times this session has blocked at least one other session.

UTILITY THROTTLE DELAY TIME
Amount of time request has been delayed by a utility throttle rule.

SYSTEM THROTTLE DELAY TIME
Amount of time request has been delayed by a system throttle rule.

WORKLOAD THROTTLE DELAY TIME
Amount of time request has been delayed by a workload throttle rule.

RULE NAME
Name of rule causing request delay.
RULE TYPE
TASM type of rule causing request delay.

OVERRIDABLE
Indicates if the Teradata Database Administrator can abort or release the request.

About the Tools Menu

The Tools menu allows you to manage queries and sessions.

Use the Tools menu to balance system resources:

Abort
Abort the selected query or session.

Change Priority
Change the priority of the selected query or session.

Change Workload
Change the workload of the selected query or session.

Release Query
Release the selected query from a delay queue.

Aborting a Query or a Session

You can abort a query or a session of queries that is blocking other queries or consuming too many resources.

1 From the summary view, click the row of the query you want to abort.
2 Click Tools > Abort.
3 [Optional] Log in.
4 Click Next.
5 Select one of the following:
   • Abort Query to abort the selected query.
   • Abort Session to abort the selected query and log off the session.
6 Click Next.
7 Click Next to confirm your selection.

Changing the Priority of a Query or Session

You can change the priority of a query or session to allow higher priority queries to run or to balance session resources.

This menu item is only available when workloads are not enabled and the system being monitored supports this feature.
1 From the summary view, click the row of the query with a priority that needs to change.
2 Click **Tools > Change Priority**.
3 [Optional] Log in.
4 Click **Next**.
5 From the list of accounts that have been assigned to the user, select an account to copy the account name to the **Edit new account string** box.
6 [Optional] Edit the account string or enter a new account string.
7 Click **Next**.
8 Select one of the following:
   - **Move just this query** to change the priority of the selected query.
   - **Move this query and all future queries associated with this session** to change the priority of the selected query and all subsequent queries in the current session.
9 Click **Next**.
10 Click **Next** to confirm your selection.

**Changing the Workload of a Query or Session**

You can change the workload of a query or session to either allow higher priority workloads to run or to balance workload resources.

This menu item is only available when workloads are enabled and the system being monitored supports this feature.

1 From the summary view, click the row of the query with the workload that needs to change.
2 Click **Tools > Change Workload**.
3 [Optional] Log in.
4 Click **Next**.
5 [Optional] Select a different workload from the list.
6 Click **Next** to confirm your selection.
7 Select one of the following:
   - **Move just this query** to change the workload of the selected query.
   - **Move this query and all future queries associated with this session** to change the workload of the selected query and all subsequent queries in the same session.
8 Click **Next**.
9 Click **Next** to confirm your selection.

**Releasing a Query**

You can release a query that is queued and waiting to run.

1 From the summary view, click the row of the query you want to release.
2 Click Tools > Release Query.
3 [Optional] Log in.
4 Click Next.
5 Click Next to confirm your selection.

About the Preferences View

The PREFERENCES view allows you to customize the Workload Monitor portlet.

From the portlet frame, click to access the PREFERENCES view and the following tabs:

System and Workloads
Choose a system and its workloads to monitor.

Metrics-Tactical
Select metrics for workloads in the Tactical enforcement priority.

Metrics-Priority
Select metrics for workloads in the Priority enforcement priority.

Metrics-Normal
Select metrics for workloads in the Normal enforcement priority.

Metrics-Background
Select metrics for workloads in the Background enforcement priority.

Trend Interval
Set the time period for calculating each trend interval.

Past Average
Choose the time period for which a historical average is calculated.

Selecting a System and Workloads to Monitor

Use the System and Workloads tab in the PREFERENCES view to select the system and which of its workloads to monitor.

1 From the portlet frame, click to access the PREFERENCES view.
2 Click the System and Workloads tab.
3 [Optional] Click Clear Defaults to clear all default settings for this portlet.
4 Select a system from the list.
5 Select the check box for each workload you want to monitor.
6 [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.
7 Click OK.

**Setting Enforcement Priority Metrics**

For each enforcement priority group, you can select and order metrics for display from the **PREFERENCES** view. Choose from a defined list of metrics.

1 From the portlet frame, click to access the **PREFERENCES** view.

2 Click the **Metrics** tab for an enforcement priority group.

The **Preview** pane uses sample data to show how metric rows are displayed in the summary view.

3 [Optional] Click **Clear Defaults** to clear all default settings for this portlet.

4 Do any of the following to change the way metric rows are displayed:

   - Add a metric row. Drag a metric from the **Select metrics for display** list to the **Preview** pane.
   - Remove a metric row. Drag a metric from the **Preview** pane to the **Metric Removal** pane.
   - Change metric row order. Drag a metric already in the **Preview** pane to a new location in the pane (up or down).

Changes to the metrics affect only the system currently selected, provided that the metrics are available on that system.

5 [Optional] Select the **Use these settings as defaults** check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6 Click OK.

**Setting the Workload Trend Interval**

Use the **Trend Interval** tab in the **PREFERENCES** view to set the length of time used to plot sparkline metrics in the portlet details view.

1 From the portlet frame, click to access the **PREFERENCES** view.

2 Click the **Trend Interval** tab.
3  [Optional] Click Clear Defaults to clear all default settings for this portlet.

4  In the dialog box, select an Interval.
   The default is 24 hours.

5  [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6  Click OK.

Setting Past Averages

Use the Past Averages tab in the PREFERENCES view to specify the number of weeks of data points used to calculate the average values displayed in metric graphs.

1  From the portlet frame, click to access the PREFERENCES view.

2  Click the Past Averages tab.

3  [Optional] Click Clear Defaults to clear all default settings for this portlet.

4  Enter the number of weeks (1 to 99 weeks).
   The default is 2 weeks.

5  [Optional] Select the Use these settings as defaults check box to save the current settings as the default configuration each time you add this portlet to the portal page.

6  Click OK.