



Cisco TEO Training Guide for Auditors

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Preface

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TidalTM Enterprise Orchestrator comes with pre-defined security roles that ship with the product and cannot be modified. This document focuses on the steps that can be used in the TEO Console and reporting tool for those with the pre-defined Auditor role in TEO. Auditors can view any defined object, activity or process instance, but are not allowed to modify any of the objects. All user changes to configurations are audited. Process executions are audited. All aspects of task management are audited including changes to fields such as states and notes, and who ultimately makes an approval.

Organization

This guide includes the following sections:

Chapter 1	Monitoring Tasks	Provides the information used to view the state of tasks.
Chapter 2	Monitoring Activities	Provides information on viewing the state and properties of TEO activties.
Chapter 3	Monitoring Processes	Provides information on viewing the state and properties of TEO processes and activties.
Chapter 4	Viewing TEO Objects	Provides information on view the properties of TEO objects.
Chapter 5	Monitoring Auditing Information	Provides information on the Core reports TEO provides and how to access the available auditing information.

Conventions

This guide uses the following conventions:

Convention	Indication
bold font	Commands and keywords and user-entered text appear in bold font.
italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in <i>italic</i> font.
[]	Elements in square brackets are optional.
{x y z }	Required alternative keywords are grouped in braces and separated by vertical bars.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
courier font	Terminal sessions and information the system displays appear in courier font.
< >	Nonprinting characters such as passwords are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.



Means reader take note.



Means the following information will help you solve a problem.



Means *reader be careful*. In this situation, you might perform an action that could result in equipment damage or loss of data.



Timesaver

Means the described action saves time. You can save time by performing the action described in the paragraph.



Means *reader be warned*. In this situation, you might perform an action that could result in bodily injury.

Product Documentation

Documentation Formats

Documentation is provided in the following electronic formats:

- Adobe® Acrobat® PDF files
- Online help

You must have Adobe® Reader® installed to read the PDF files. Adobe Reader installation programs for common operating systems are available for free download from the Adobe Web site at www.adobe.com.

Guides and Release Notes

You can download the TEO product documentation from Cisco.com. Release Notes can be found on Cisco.com and the product CD.

Online Help

Online help is available and can be accessed using the following methods:

- Click **Help** on any dialog box in the application to open the help topic in a pane to the right of the dialog box.
- In the Tidal Enterprise Orchestrator console:
 - Click the Help Pane icon on the toolbar to open the help topic in a pane to the right of the Results pane.
 - Click **Help** on the menu bar.

Open Source License Acknowledgements

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http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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CHAPTER

Monitoring Tasks

The Operations workspace provides users with the ability to query information about the user interaction and IT record tasks based on the specified query. These queries display the tasks that are created in the Operations view and the tasks that are created as a result of the task activities defined in the Process Editor. The purpose of this section is to provide the steps on querying task information and what is displayed in the results.

This chapter does not provide any steps on how to create or modify tasks in the Operations view or define tasks in the Process Editor. For information on creating tasks, see the *Cisco Tidal Enterprise Orchestrator Reference Guide*.

The tasks that display in the following workspace depend on the

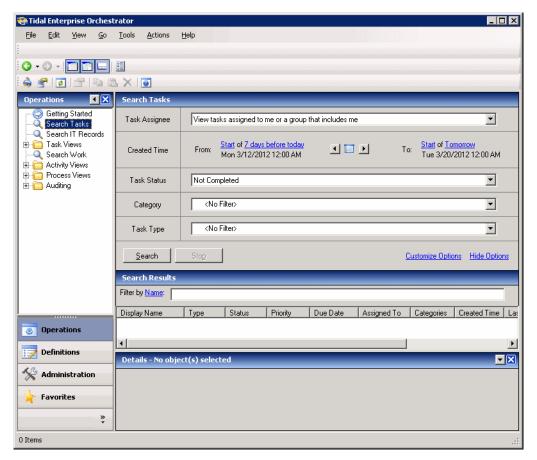
Use the following sections in this chapter for information on searching the history of tasks:

- Searching Tasks, page 1-2
- Searching IT Records, page 1-7
- Viewing Tasks View Information, page 1-9

Searching Tasks

The Operations—Search Tasks view displays all tasks created or defined in TEO. The results of the query based on the specified filter options. Users can search by the assignee, category, task type, and status.

Figure 1-1 Operations Workspace—Search Tasks



The Operations—Search Tasks view displays the default information about the queried task in the following columns:

Column	Description
Display Name	Name of the task
Type	Type of task
Priority	Priority of the task
Status	Status of the task
Due Date	Date the task should be completed
Assigned to	User name of the person assigned to the task
Categories	Category assigned to task alert
Created Time	Time at which the task view was accessed
Last Modified Time	The date and time the contents were last modified

Column	Description
Last Modified By	The object or user name that last modified the contents
Id	Task identifier
Notes	Notes associated with the task
Owner	User name of the person who assigned the task
Type Description	Brief description of the type of task
Expiration Date	Date the task is set to expire
Completed Time	Time the task was completed
Completed By	User who completed the task
Produced by	User who generated the alert or task
Related Tasks	Related tasks associated with the task
Parameters	Parameters of the task
Created By	User or object that created the task view

TEO Tasks

The following table displays the tasks that are provided by TEO.

Tasks	Description
Alert	Alerts reflect potential problems that a user may want to investigate and possibly diagnose the problem
Approval Request	Specifies the message and choices for the assignee who is approving the task
Change Request	Requests a modification to the configuration of an object or system
Guided Operation	Details the steps a user takes to complete an assigned task
Incident	Task requires an operator to take action in order to resolve an issue
Input Request	Task requires input from an individual or group
Review	Task assigns a document for review

Customizing Search Tasks Header

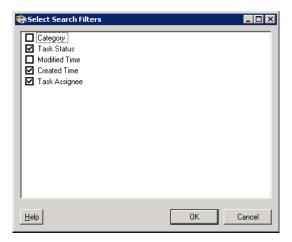
Use the Select Search Filters dialog box to customize the query header options. If the check box to the left of the option remains unchecked, then the filter option will not display on the designated Search header.

To customize the search filter options:

Step 1 On the Operations—Search Tasks header, click **Customize Options**.

The Select Search Filters dialog box displays.

Figure 1-2 Select Search Filters Dialog Box



Step 2 Check the check box to the right of the appropriate option, and then click **OK**.

Filter Option	Description
Task assignee	Check the check box to display the list of task assignee options on the header.
Created Time	Check the check box to display the time options to determine which task to display
Modified Time	Check the check box to display the time options to determine the time frame for which tasks to display.
Task Status	Check the check box to display the available statuses to filter.
Category	Check the check box to display the categories available for filtering.

The selected search filters display in the Search Tasks header.

Figure 1-3 Operations—Search Tasks Header



Query Tasks by Assignee

When performing a search query, users can search tasks by using all the default filters or they can modify the query according to the individual filters. Use the following steps to query tasks according to the assignee.

To query tasks by assignee:

Step 1 In the Search Tasks header, to the right of Task Assignee, choose *one* of the following options:

Task View	Description
View all tasks	Choose this option to query all tasks in progress.
View tasks explicitly assigned only to me	Choose this option to query all tasks assigned to the logged on user.
View tasks assigned to me or a group that includes me	Choose this option to query all tasks assigned to the logged in user and any groups containing the user.

Step 2 Click **Search** to query the tasks by the selected assignee.

The results display in the Search Results pane.

Chapter 1

Query Tasks by Date/Time

Use the following steps to query tasks according to when the task was created.

To query tasks by created time:

- **Step 1** In the Search Tasks header, to the right of Created Time, choose the appropriate time filter options to query the tasks. See Filtering the Activity View, page 2-5 for additional information.
- **Step 2** Click **Search** to query the tasks by the selected time filter options.

The results display in the Search Results pane.



These steps can also be used for querying tasks according to their modified date or time.

Query Tasks by Status

Use the following steps to query tasks according to current state of the task.

To query tasks by status:

- **Step 1** In the Search Tasks header, to the right of Task Status, from the drop-down list, choose *one* of the following options:
 - Complete
 - Not Complete
- **Step 2** Click **Search** to query the tasks by the selected state of completion.

The results display in the Search Results pane.

Filtering Search Results

Use the Filter pane in the Tasks Views header to display selected tasks in the results pane. The hyperlinked Filter by drop-down list in the Tasks Views header contains several options which can be used for filtering tasks.

The default selection is *<No Filter>*. After the initial change to the selection, the last selected item displays.

To filter task search results:

Step 1 In the Search Tasks header, to the right of Category, from the drop-down list, choose the appropriate category to query:

Option	Description
Category	Choose the appropriate category from the list
Name	Enter the name of the task

Option	Description
Description	Enter the description or class for the task
Туре	Displays list of all task types
Status	Choose from the list of available statuses
	Completed
	Not completed

Step 2 Click **Search** to query the tasks by the selected category.

The results display in the Search Results pane.

Searching IT Records

The Operations—Search IT Records view displays only the alerts, incidents, and change requests created in TEO. The results of the query are based on the specified filter options. Users can search by the assignee, category, task type, and status.

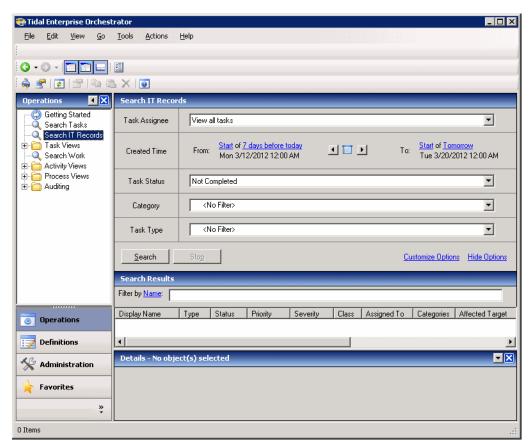


Figure 1-4 Operations Workspace — Search IT Records

The Operations—Search IT Records view displays the default information about the queried task in the following columns:

Column	Description
Display Name	Name of the task
Type	Type of task
Priority	Priority of the task
Status	Status of the task
Due Date	Date the task should be completed
Assigned to	User name of the person assigned to the task
Categories	Category assigned to task alert
Created Time	Time at which the task view was accessed
Last Modified Time	The date and time the contents were last modified
Last Modified By	The object or user name that last modified the contents
Id	Task identifier
Notes	Notes associated with the task
Owner	User name of the person who assigned the task
Type Description	Brief description of the type of task
Expiration Date	Date the task is set to expire
Completed Time	Time the task was completed
Completed By	User who completed the task
Produced by	User who generated the alert or task
Related Tasks	Related tasks associated with the task
Parameters	Parameters of the task
Created By	User or object that created the task view

Viewing Tasks View Information

The Operations—Tasks View displays all task activities and tasks that have been assigned to a specific user or group. Tasks that have been defined in the Process Editor and are run as part of an executed process will display in the Operations—Activities View similar to other activities. The tasks display can be filtered to display by category, task type, and status. The user can determine which task view to display.

This section provides instructions on viewing the information displayed in the Tasks View. For additional information on creating or modifying tasks, see the *Cisco Tidal Enterprise Orchestrator Reference Guide*.

Displaying Tasks Views

From this view, detailed information is provided about all the alerts, incidents, and other tasks that are assigned, in progress, or have been completed. Users with the appropriate security rights can create and modify tasks from this view.

Step 1 On the Operations workspace, choose **Task Views**.

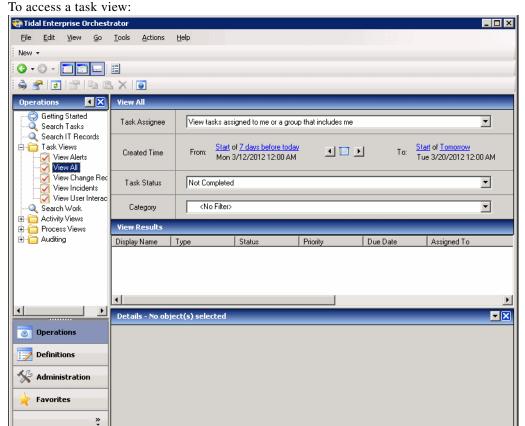


Figure 1-5 Operations Workspace—Tasks—View All

0 Items

 $\begin{tabular}{ll} \textbf{Step 2} & On the Operations workspace, choose $Task Views. \\ \end{tabular}$

The Results pane displays.

Step 3 To access detailed information about a task view, from the Tasks Views folder, choose *one* of the following items:

Task View	Description
View Alerts	Displays all task alerts
View All	Displays all tasks that are assigned, in progress, or have successfully completed
View Change Requests	Displays all task change requests
View Incidents	Displays all task incidents
View User Interactions	Displays all tasks that require user action

Step 4 On the Tasks Views Header, choose the appropriate filtering options to display.

The selected view displays in the Results pane. The Results pane displays the following default summary information for each of the four task views.

Column	Description
Display Name	Name of the task
Туре	Type of task
Priority	Priority of the task
Status	Status of the task
Due Date	Date the task should be completed
Class	String or numeric value indicating the class of the alert or incident
Assigned to	User name of the person assigned to the task
Related Tasks	Related tasks associated with the task
Categories	Category assigned to task alert
Target	Name of ITIL configuration item (IT component) which the alert or incident describes
Target CI	Name of the system on which the condition was detected
Created Time	Time at which the task view was accessed
Last Modified Time	The date and time the contents were last modified
Last Modified By	The object or user name that last modified the contents
Id	Task identifier
Notes	Notes associated with the task
Owner	User name of the person who assigned the task
Type Description	Brief description of the type of task
Expiration Date	Date the task is set to expire
Completed Time	Time the task was completed
Completed Date	Date task was completed

Column	Description
Produced by	User who generated the alert or task
Parameters	Parameters of the task
Affected Organizations	Organizations that consume the IT service affected by the alert or incident
Affected Services	IT Service affected by the alert or incident
Configuration Item	Name of the configuration item (IT component) to which the alert pertains.
Automation Summary	File path for the related automation summary
Created By	User or object that created the task view

Viewing Task Properties

Use the following steps to view the task properties for a specified tasks. See Common Task Properties, page 1-12 for additional information about the properties displayed in the individual tasks.

To view task properties:

Step 1 On the appropriate Operations—Task View, highlight the appropriate task, right-click and choose **Properties**.

The Properties dialog box displays.

Tab	Description
General	Displays the basic information for the task including the name of the user who submitted the task and the current status of the task.
Task-Specific Tab	Displays the properties of the selected task.
	See TEO Tasks, page 1-3 for the list of task in the TEO system.
Affects	Displays the organizations and configuration item elements of the alerts and incidents.
Assignment	Displays the assignment properties for the task.
Notification	Displays the recipients to be notified about the task.
Parameters	Displays the parameters included in the task.
Notes	Displays any notes related to the task in the text box.
Categories	Displays the categories in which the tasks are assigned.
Related	Displays any tasks assigned to the task as a related or duplicated task.

Tab	Description
External	Displays the external incident information to support the synchronization between TEO and the system the customer is using.
History	Displays the history of actions taken against the task.

Step 2 Review the properties and click **OK** to close the dialog box.

Common Task Properties

The following properties are associated with the tasks managed in TEO. The properties that display depend on the selected task. These properties can be updated using the [Update] activities as well as published in a SNMP trap.

Task Property	Description
Affected Configuration Item	Name of the configuration item (IT component) to which the alert pertains.
	For example, the name of a database server which failed or the name of a specific job which failed. A configuration item is defined in ITIL as any component that needs to be managed in order to deliver an IT Service. The true source of the CI is in the CMDB, so the Configuration Item properties reference a CMDB entry
	 Configuration Item Type—Type of ITIL configuration item (IT component) which the alert describes. For example, the type of the specific application element which failed such as a server, database, host, or user.
	 Description—Brief description of the ITIL configuration item (IT component) for the alert or incident
	Object Key—ID for the specific record in the CMDB which contains the configuration item
	 Object Name—Name for the specific record in the CMDB which contains the target configuration item
	 Source—Name for the specific record in the CMDB which contains the configuration item.
Affected Organizations	Organizations that consume the IT service affected by the alert or incident
Affected Services	IT Service affected by the alert or incident

Task Property	Description
Affected Target Configuration Item	Name of ITIL configuration item (IT component) which the alert or incident describes
	• Configuration Item Type—Type of ITIL configuration item (IT component) which the alert describes
	Description—Brief description of the ITIL configuration item (IT component) for the alert or incident
	Object Key—ID for the specific record in the CMDB which contains the target configuration item
	Object Name—Name for the specific record in the CMDB which contains the target configuration item
	• Source—Name of the specific CMDB containing the target configuration item
Affects Configuration Item	Name of the configuration item (IT component) to which the alert pertains.
Affects Target Configuration Item	Name of the system on which the condition was detected
Alert class	Numeric value indicating the class of the alert
Assignees	User name(s) or group assigned to the task
Automation Summary	File path for the related automation summary
Completed Time	Indicates the time period the task was completed
	Local Time
	Universal Time
Description	Brief description of the task
Due Date	Indicates the time period the task should be resolved
	Local Time
	Universal Time
Duplicate Task ID	Task ID of the duplicated alert
Expiration Date	Indicates the time period the task should expire
	Local Time
	Universal Time
Name	Display name of the task
Notes	Any notes related to the task
Parameter	Any parameters associated with a specific task
Priority	Indicates the priority of the task
	• Low
	Medium
	• High
Process Properties	For the list of process columns, refer to Viewing Process View Information, page 3-33.

Task Property	Description
Process Target Properties	For information on the target properties, see Viewing Activity Information, page 3-19.
Severity	Indicates the severity of the task
	• Low
	• Normal
	• High
Related Task IDs	Task ID of the related task
Task Status	Indicates status of the task. The statuses displayed depend on the currently open task.
	Note See Common Task Statuses, page 1-14 for additional information.
Task URL	URL of the task. This URL can be used to bring up the Web Console for viewing and editing the task properties.
	For example, this is the URL which could be placed in an email to notify the user of the task, enabling them to connect to the Web Console to view the task.
Web Form XSL File Name	Name of the source XML text file to transform the task XML into HTML for viewing in the Web Console

Common Task Statuses

The following statuses are associated with the tasks managed in TEO. The statuses that display depend on the currently open task.

Task Status	Description
Assigned	Task is assigned to a user
Bypassed	A step within the operation has been skipped
Canceled	Task has been canceled by the user
Closed	Task is closed
Completed	Task is completed and has been either approved or declined
Duplicate	Indicates whether the alert is a duplicate
Expired	Task due date is expired, but still needs to be completed
In Progress	User is working on the task
New	Indicates task is new
Not Resolved	Indicates task is not resolved
Past Due	Task is past due and still needs to be completed
Pending	Task is in a user's assigned task list
Resolved	Indicates task is resolved
Waiting	Waiting for more information



CHAPTER 2

Monitoring Activities

The Operations—Activity Views workspace is used to monitor all defined activities that have started, been triggered to execute based on specific criteria, executed adhoc, or scheduled to execute. The Activity Views folder includes a set of predefined views that displays information about the status of activities within the processes.

Individuals should review information in the Activity Views folders when querying the properties and status of activity instances. Display-only process instance properties can be observed through the Activity views, but cannot be edited or started from these views. However, running process instances can be canceled from this view.

Use the following sections for information on navigating the Activity Views in the Operations workspace:

- Viewing Activity Views Information, page 2-2
- Filtering the Activity View, page 2-5
- Viewing Activity Instance Properties, page 2-11

Viewing Activity Views Information

The Operations—Activity View folders display all activities that have been started, scheduled to start, started by a trigger, or started ad hoc. Each Activity view display can be filtered to display by the date/time of execution, category, or column view.

This section provides instructions on viewing the information displayed in the Activity Views. For additional information on defining or modifying activities, see the *Cisco Tidal Enterprise Orchestrator Reference Guide*.

Displaying Activity Views

From this view, detailed information is provided about all the alerts, incidents, and other tasks that are assigned, in progress, or have been completed. Users with the appropriate security rights can create and modify tasks from this view.

To access the Activity View folders:

Step 1 On the Operations workspace, choose Activity Views.

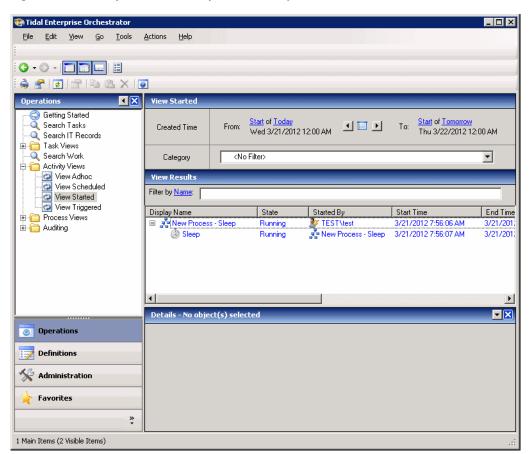


Figure 2-1 Operations Workspace—Activity Views Folder

Step 2 To access detailed information about an activity view, expand the Activity Views folder, and choose *one* of the following items:

Views	Descriptions
View Adhoc	Displays all process or activity instances that were executed manually and are in progress, have successfully completed, or failed during the selected time period
View Scheduled	Displays all process or activity instances that are scheduled to execute during the selected time period
View Started	Displays all process or activity instances that are in progress, have successfully completed, or failed during the selected display time period
View Triggered	Displays all process or activity instances that were triggered for execution (manually or automatically) and are in progress, have successfully completed, or failed during the selected time period

Step 3 On the Activity Views Header, choose the appropriate filtering options to display.



For information on the modifying the time period, see Filtering the Activity View, page 2-5.

The selected view displays in the Results pane. Certain columns display information about a process or activity instance by default.

Column	Description
Display name	Name of the process instance or activity instance that is scheduled, in progress, or completed
State	Current status of the operations activity
	Succeeded
	Scheduled
	• Running
	• Missed
	• Canceled
	• Failed (Canceled)
	• Failed (Not Completed)
Started By	User ID of the person who initiated the activity instance
Start Time	Start time of the activity
End Time	End time of the activity as it completed or failed. If the instance is in progress, 1/1/0001 12:00:00 AM is displayed.
Duration	Amount of time taken for the activity to complete
Type	Type of activity
Executor	Target where the process or activity is executing

Column	Description
Categories	The category to which this process has been assigned if applicable
Error	Brief description of any error that occurred
ID	Unique ID assigned to the activity instance
Description	Brief description of the process activity
Owner	Owner of the activity. This is typically the user name of the person who created the activity.
Type Description	Brief description of the type associated with the activity
Time Saved	Time taken to execute the process manually
Money Saved	Cost of manual process execution

Status Indicators

The State column displays the status of the individual process and activity. The following indicators definitions display in the Results pane.

Status	Description
Succeeded	Process has completed successfully
Scheduled	Processed is scheduled to run
Running	Process is in progress
Missed	Scheduled time for process was missed
Canceled	Displays when the process is canceled
Failed (Not Completed)	Displays when the process has failed and did not complete the process execution
Failed (Canceled)	Displays when the process is canceled manually

Color Indicators

The default colors associated with the individual activities indicate the status of the process instances.

Color Indicator	Description
Blue	Process is in progress
Green	Process has completed successfully
Red	Process has failed and did not complete the process execution
Orange	Process has stopped

Filtering the Activity View

The filter options in the header determine the time period for which activities display in the Results pane.

Querying Activities by Start Time Period

The Start of menu to the left of To provides the starting time period options used to define which activities are displayed. To use the current time as the start of the time period in which the activities are displayed, do not make any changes to Time menu options.

To query by the start time:

Step 1 On the Activity Views header, to the right of From, click the **Start** hyperlink to display the start time options.

The Start Time drop-down list displays.

Figure 2-2 Start Time List



Step 2 Choose *one* of the following options to modify the start time to display activities:

Option	Description
Start	Default option uses the current time on the console
Back	Adjusts the number of hours that precede the current console time
Forward	Adjusts the number of hours ahead of the current console time

Figure 2-3 Back Sub-Menu



Figure 2-4 Forward Sub-Menu



The selected time displays on the Start Time hyperlink.

Querying Activities by the Date Range

Use the following instructions to modify the start and end date on the Activity Views header. The options are located to the right of both the From and To sections. To the far right of From, click **Today** hyperlink to display the start and end date options.

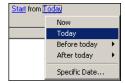
To query by the display date:

Step 1 On the Activity Views header, use *one* of the following methods:

- To modify the start date, click the Today hyperlink to the far right of From, to display the start date
 options.
 - -or-
- To modify the end date, click the **Tomorrow** hyperlink to the far right of To, to display the end date options.

The Date drop-down list displays.

Figure 2-5 Date Drop-down List



Step 2 Choose *one* of the following options to modify the display date:

Option	Description
Now	Displays activities beginning with the current Console date and time
Today	Displays activities on the current date beginning at 12:00 AM
Tomorrow	Displays activities beyond 24 hours after the current date and time

Option	Description
<u>*</u>	Adjusts the start date for activities to display before the current console date by a defined number of days
After Today	Adjusts the start date to follow the current console date

Figure 2-6 Before Today Sub-Menu

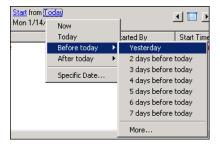
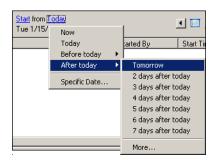


Figure 2-7 After Today Sub-Menu



The selected date displays on the Date hyperlink.

Querying Activities by End Time Period

The Start menu to the right of To provides the end of the time period options used to define which activities are displayed. To use the current time as the end of the time period in which the activities are displayed, do not make any changes to Time menu options.

To query by the display ending time:

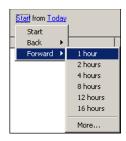
- **Step 1** On the Activity Views header, to the right of To, click **Start**.
 - The Start Time drop-down list displays.
- **Step 2** To adjust the results for activities to display that precedes the current ending time by a defined number of hours, click **Back** and choose the appropriate number of hours.

Figure 2-8 Back Submenu



Step 3 To adjust the results for activities to display after the current ending time by a defined number of hours, click **Forward** and choose the appropriate number of hours.

Figure 2-9 Forward Submenu



The selected time displays on the End Time hyperlink.

Specifying Time Period to Offset Query

The More option on the Back and Forward sub-menus should be used when the number of hours and minutes to offset is not on the predefined list. When selected, the More option launches the Select Time Offset dialog box to enter the specific hours and minutes for the start and end time.

To query by specific time frame:

Step 1 On either the Back or Forward submenus, click More.

The Select Time Offset dialog box displays.

Figure 2-10 Select Time Offset Dialog Box



Step 2 Enter the following information and click **OK**:

Field	Description
Hour Offset	Specific number of hours to precede or follow the current end time
	To specify hours before the displayed value, select or enter a negative number.
Minute Offset	Specific number of minutes to precede or follow the current end time
	To specify minutes before the displayed value, select or enter a negative number.

The selected time displays on the hyperlink.

Specifying Days to Offset Query

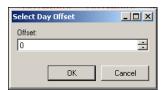
The More option on the Before today and After today sub-menus should be used when the appropriate number of days to offset is not on the predefined list. When selected, More option launches the Select Day Offset dialog box to enter a specific number of days for a start and end date.

To query by days to offset:

Step 1 From either the Before today or After today submenu, click **More**.

The Select Day Offset dialog box displays.

Figure 2-11 Select Day Offset Dialog Box



Step 2 In the Offset field, enter the number of days to precede or follow the current date and click **OK**. The selected date displays on the hyperlink.

Selecting a Specific Date

To choose specific date from calendar:

Step 1 From the Start Date menu, choose **Specific Date**.

The Select Date dialog box displays.

Figure 2-12 Select Date Dialog Box



Step 2 On the Select Date dialog box, choose the appropriate date, and click OK.

Navigating the Current Time Period

The two navigation arrows located on each side of the Calendar lool selects the next day on the Back and Forward options on the Start Date and End Date sub-menu.

To navigate between the currently selected time:

On the Filter by Date/Time toolbar, click the appropriate navigation arrow next to the Calendar icon.

Navigation Option	Description	
Back arrow	Chooses the previous day prior to the currently selected day on the Back submenu for the starting and ending dates	
	Example:	
	If Yesterday is currently selected, then clicking the Back arrow changes the display selection to 2 days before today.	
Forward arrow	Chooses the day after the currently selected day	
	Example:	
	If Tomorrow is currently selected, then clicking the Forward arrow changes the display selection to 2 days after today	

The Activity View header automatically updates the displayed time frame.

Viewing Activity Instance Properties

The activity instance properties displayed from the Activity View are display-only.

To view activity instance properties:

Step 1 On the Operations workspace, click the Activity Views folder.

Highlight the appropriate activity instance, right-click and choose **Properties**.

The [Activity Name] Properties display-only dialog box displays. The displayed tabs depend on the activity.

Tab	Description
General	Displays the basic information for the activity
Activity-Configuration Tab	Displays the defined properties of the activity
Activity-Results Tab	Displays any output results from the execution of hthe activity
Target	Indicates whether the process target was used for activity execution or overridden with a different target
Credentials	Displays the runtime user whose credentials were used to execute the activity
Knowledge Base	Displays the knowledge base article assigned to the activity
Result Handlers	Displays the condition branches defined on the workflow

Step 2 Review the properties and click **OK** to close the dialog box.

Canceling Running Processes

Process and activity instances can only be canceled from one of the views under the Activity Views folder or the bottom View Results pane on any of the Process Views. Users cannot cancel processes from the top Process results pane.

To cancel a process:

On an Activity View, highlight the appropriate process or activity instance, right-click and choose **Cancel**.

The Cancel Process dialog box displays.

Canceling Running Processes



CHAPTER 3

Monitoring Processes

The Operations—Process Views workspace is used to monitor the processes that are scheduled to execute, view processes that are currently running, and verify that processes have successfully completed.

The Process Views folder includes all the defined processes and their associated activity instances that are in progress, scheduled or have been completed. From this view, detailed information is provided about all the processes that have been triggered, executed adhoc, or are scheduled for execution.

Individuals can review both process and activity instances in the Process Views folders when querying the properties and status of process instances. Each Process View has two separate results panes. The top results pane displays the process instances for the selected view. This view also allows users with the appropriate rights to access the Process Editor to modify the configuration of the process, to start the process, and enable or disable the process.

The bottom results pane has functionality similar to the Activity Views and displays the process instances and the activity instances that were configured as part of the process. Display-only process instance properties can be observed from the bottom results pane, but cannot be edited or started from these views. However, running process instances can be canceled from this view.

Use the following sections in this chapter for information on navigating the Processes Views in the Operations workspace as well as querying:

- Searching Work, page 3-2
- Viewing Process View Information, page 3-6
- Starting a Process, page 3-10

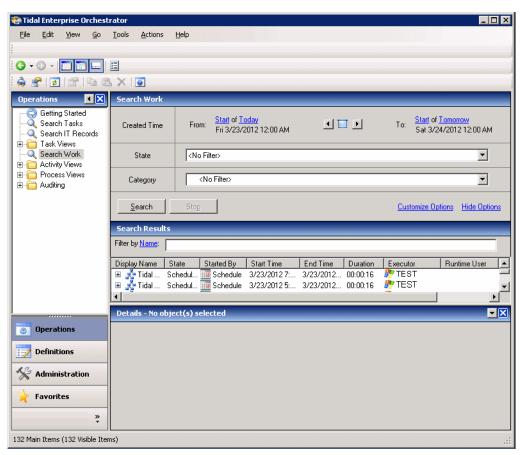
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Searching Work

The Operations—Search Work view displays the results of the query for processes and activities based on the specified filter options. The Search Work view displays all processes and activities that are scheduled to be performed during the selected display time period.

On the Operations workspace, choose Search Work.

Figure 3-1 Operations Workspace—Search Work



The default information about the queried process or activity displays in the following columns:

Column	Description
Display name	Name of the process instance or activity instance that is scheduled, in progress, or completed
State	Current status of the operations activity
	Succeeded
	Running
	Canceled
	• Failed (Canceled)
	• Failed (Not Completed)

Column	Description
Started By	User ID of the person who initiated the activity instance
Start Time	Start time of the activity
End Time	End time of the activity as it completed or failed. If the instance is in progress, 1/1/0001 12:00:00 AM is displayed.
Duration	Amount of time taken for the activity to complete
Туре	Type of activity
Executor	Target where the process or activity is executing
Runtime User	Runtime user of the activity
Categories	The category to which this process has been assigned if applicable
Error	Brief description of any error that occurred
ID	Unique ID assigned to the activity instance
Description	Brief description of the process activity
Owner	Owner of the activity. This is typically the user name of the person who created the activity.
Type Description	Brief description of the type associated with the activity
Time Saved	Time taken to execute the process manually
Money Saved	Cost of manual process execution

Customizing Search Work Header

Use the Select Search Filters dialog box to customize the query header options. If the check box to the left of the option remains unchecked, then the filter option will not display on the designated Search header.

To customize the search filter options:

Step 1 On the Operations—Search Work header, click **Customize Options**.

The Select Search Filters dialog box displays.

Figure 3-2 Select Search Filters Dialog Box

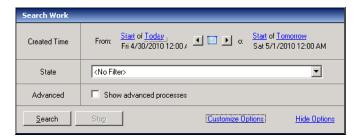


Step 2 Click the check box to the right of the appropriate option, and then click **OK**.

Filter Option	Description
Created Time	Check the check box to display the time options to determine the time period for which processes or activities to display
State	Check the check box to display the filtering option for the state of the process or activity.
Advanced	Check the check box to display the Show advanced processes check box for filtering.

The selected search filters display in the Search Work header.

Figure 3-3 Operations—Search Work Header



Query Work by Date/Time

Use the following steps to query according to when the process or activity was scheduled to run. To query work by created time:

- Step 1 On the Search Work header, to the right of Created Time, choose the appropriate time filter options to query the processes or activities. See Filtering the Activity View, page 2-5 for additional information.
- **Step 2** Click **Search** to begin the query.

The results display in the Search Results pane.

Query Work by State

Use the following steps to create a query according to current state of the process or activity.

To query by state:

- **Step 1** In the Search Work header, to the right of State, on the drop-down list, choose *one* of the following items:
 - Succeeded
 - Running
 - Canceled
 - Failed (Canceled)
 - Failed (Not Completed)
- **Step 2** Click **Search** to begin the query by the selected state of completion.

The results display in the Search Results pane.

Viewing Process View Information

The Operations—Process View folders display all processes that have been started, scheduled to start, started by a trigger, or started ad hoc. Each Process view display can be filtered to display by the name, category, or column view.

This section provides instructions on viewing the information displayed in the Process Views. For additional information on defining or modifying processes, see the *Cisco Tidal Enterprise Orchestrator Reference Guide*.

Displaying Process Views

From this view, detailed information is provided about the processes that are in TEO.

To access the Process View folders:

Step 1 On the Operations workspace, choose Process View.

File Edit View Go Tools Actions Help G - O - | | | | | | | | 🏟 🔗 🙋 😭 📭 🖺 🗶 🕡 Getting Started 🏅 Search Tasks **■ •** Created Time Thu 3/22/2012 12:00 AM 🔍 Search IT Records ± — Task Views 🔍 Search Work <No Filter> \blacksquare Category 🖨 🦲 Activity Views View Adhoc View Results View Scheduled
View Started
View Triggered Filter by Name: Started By Display Name State Start Time End Time Process Views 🗏 🚅 New Process - Sleep ▼ TEST\test
New Process - Sleep Running 🗓 📋 Auditing Sleep 3/21/2012 7:56:07 AM 3/21/201 Running Details - No object(s) selected $\neg \times$ Operations **Definitions** % Administration Favorites » * 1 Main Items (2 Visible Items)

Figure 3-4 Operations Workspace—Process Views Folder

Step 2 To access detailed information about an process view, expand the Process Views folder, and choose *one* of the following items:

Process View	Description
View Adhoc	Displays all process or activity instances that were executed manually and are in progress, have successfully completed, or failed
View All	Displays all process, activity, and scheduled process and activity instances that are in progress, have successfully completed, or failed
View Started	Displays all process or activity instances that have been executed
View Scheduled	Displays all process or activity instances that are in progress, have successfully completed, or failed and are also scheduled to execute
View Triggered	Displays all process or activity instances that were executed (manually or automatically) and are in progress, have successfully completed, or failed

Information about each process can be displayed in the following columns:

Column	Description
Display Name	Name assigned to the process
Triggers	Name of the trigger associated with the process
Enabled	Specifies whether the process is enabled (<i>True</i>) or disabled (<i>False</i>). A disabled process is unavailable for execution.
Target	The specific environment where the process runs
Runtime User	The name of the runtime user record assigned to the process. The runtime user record stores information about the user security context and passes this information to the adapters when running certain activities.
Categories	Category to which the process is assigned
Owner	The owner of the process. This is typically the creator of the process.
Last Modified Time	Time the process was last modified
Last Modified By	User name of the person who last modified the process
Id	Unique identification number of the process
Description	Brief overview of process
Time Saved	Amount of time saved by running the process and workflow
Created Time	Time the process was created
Created By	User or object that created the process

Column	Description
Automation Pack	Name of the automation pack
	Indicates the customization setting for the object in the automation pack

Step 3 On the Activity Views subheader, choose the appropriate category and time period to display.



For information on the modifying the time period, see Filtering the Activity View, page 2-5.

The selected view displays in the Results pane. Certain columns display information about a process or activity instance by default. To view the description for the activity instance columns, see Viewing Activity Views Information, page 2-2.

Viewing the Process Workflow Only

A graphical view of a process workflow can be viewed from the Process Views area after a process has been launched. The Workflow pane is a canvas located in the center portion of the Process Viewer.

To view the workflow:

Choose any of the Process Views to display in the Results pane, and use one of the following methods:

- Highlight the appropriate process instance, on the Process Views Details pane, click the Workflow tab.
- Double-click the process instance to launch the Process Viewer. The Workflow pane displays the graphical workflow of the process.

Viewing the Process Instance Properties

The Process Properties pane is located on the right side of the Process Viewer and displays the properties for the selected process instance. The information displayed on the Process Viewer is display-only.

- **Step 1** Choose any of the four process views to display the process instances in the Results pane.
- **Step 2** From the Process Instance Results pane, double-click the appropriate process instance.

The Process Viewer displays.

Properties - New Process (Process Instance) FX General Options | Target | Credentials | Variables | Triggers | Display name: New Process \underline{D} escription: À Ţ Notes: <u>0</u>wner TEST\test State: Failed (Not Completed) This process was not run since the 'StartProcessNode' activity with Id 6c195296-54f3-4361-8842-83d8a69c18a6 is Start time: 3/8/2012 9:18:20 AM End time: 3/8/2012 9:18:24 AM

Figure 3-5 Process Viewer—Process Properties Pane

Step 3 Click the appropriate tab to view the properties pane to define the process properties.

Property Page	Description
General	Specifies general information about the process
Options	Specifies execution and storage options about the process
Target	Specify which target or target group the process can execute.
Credentials	Specifies the runtime user for the process
Variables	Used to store or pass a value between executions of a process or between steps within a single process
Triggers	Used to determine how or when the process will be executed

Starting a Process

With the appropriate rights, a user can start any enabled process displayed on a Process View. Only one process can be manually started at a time. A process can display in the Process View, but it must be enabled before it can be executed.



When a process is started manually, all conditions and triggers included in the process definition will be overridden.

To start a process:

Step 1 On a process view, highlight the appropriate process, right-click and choose **Start Process**. The Confirm Start Process dialog box displays.

Figure 3-6 Confirm Start Process Dialog Box



- **Step 2** If the process has any input variables, verify the variables associated with the process in the Parameters table. To update the variable, highlight the variable, and click **Edit** to modify the value.
- Step 3 To start a process from a specific starting point, check the **Start from start point** check box and then select the appropriate starting point from the drop-down list. The first activity after the specified starting point will run first.
- Step 4 To specify a target different from the defined process target, check the Override target (Target name) check box and select a target from the drop-down list.

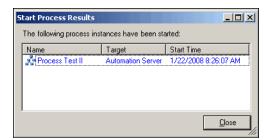


To create a new target for this process, click **New**. For additional information, see the *Cisco Tidal Enterprise Orchestrator Reference Guide*.

Step 5 Click OK to confirm.

The Start Process Results dialog box displays and the process begins executing.

Figure 3-7 Start Process Results Dialog Box





To view the process workflow on the Process Viewer, double-click the process instance.

Step 6 Click **Close** to return to the Console.

Starting a Process



CHAPTER 4

Viewing TEO Objects

The Definitions workspace displays the various components that are used in defining and executing processes. This chapter provides the steps to be used to display the defined properties of the TEO objects. The property pages may display as display-only if the user does not have the appropriate security rights to modify the object definition. For information on defining any of the objects provided in this chapter, see the *Cisco Tidal Enterprise Orchestrator*.

Use the following sections to review the defined objects in TEO:

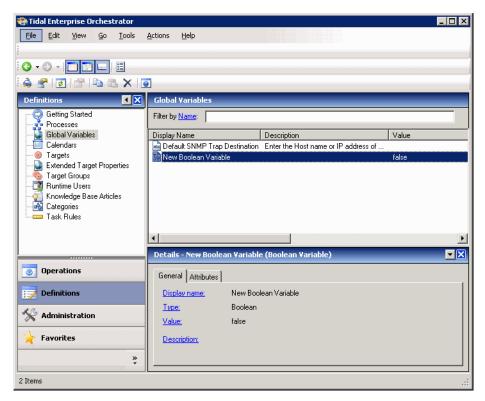
- Global Variables, page 4-2
- Calendars, page 4-3
- Targets, page 4-5
- Extended Target Properties, page 4-9
- Target Groups, page 4-10
- Runtime Users, page 4-13
- Knowledge Base Articles, page 4-15
- Categories, page 4-16
- Task Rules, page 4-18
- Automation Packs, page 4-21

Global Variables

Global variables are used to reference information that is used on a regular basis to avoid having to specify the same information in several instances.

The variables feature provides a storage area for information that is used on a regular basis to avoid having to specify the same information in several instances. Data stored in a variable can be altered to affect process execution behavior.

Figure 4-1 Definitions—Global Variables



Variable Descriptions

The following table provides a listing variable types supported by the product.

Variable	Description
Boolean	Indicates whether a set of elements should be true or false
Hidden String	Holds data that must be protected from other TEO users and from auditing operations performed by TEO
Identity	Represents the value of a user identity
Numeric	Single whole or decimal number (positive and negative)
String	Defines a variable containing a string of text
Table	Stores a set of records in a table format

Viewing Global Variable Properties

To view global variable properties:

Step 1 On the Definitions—Global Variables view, highlight the appropriate variable, right-click and choose **Properties**.

The Properties dialog box displays.

Click the appropriate tab to review the properties of the variable.

Tab	Description
General	Displays the general properties of the variable
Value	Values assigned to the variable
Used By	Displays the objects referenced by the variable
History	Displays the history of the changes made to the variable

Step 2 Click **OK** to close the dialog box.

Calendars

Tidal Enterprise Orchestrator ships with some pre-defined calendars for the most commonly use schedule scenarios. The calendars feature can specify when the process will execute according to a schedule, time, or condition.

When defining a process, users can specify when a process will execute. One option is to execute the process based on a schedule. For example, users can define a calendar for Saturdays. When defining a process that you want to run on Saturdays, you reference the *Saturday* calendar. This feature simplifies:

- Re-using calendar definitions across processes
- Building complex calendars from other calendars
- Viewing the processes that run based on a specific calendar

😜 Tidal Enterprise Orchestrator <u>File Edit View Go T</u>ools O-O- II II = I Getting Started Display Name Туре Automation Pack Customizable Getting Started
Processes
Global Variables
Calendars Christmas
Daily
Easter (US) Recurring Calendar Core No Recurring Calendar Core No Date List Calendar Core No Targets 🐼 Every Friday Recurring Calendar Core Nο Extended Target Properties Every Monday

Every Saturday Recurring Calendar Core No Target Groups Recurring Calendar Core No Runtime Users 🔯 Every Sunday Recurring Calendar Core No Knowledge Base Articles

Categories 🔯 Every Thursday Recurring Calendar Core No 🔯 Every Tuesday Recurring Calendar Core Νo Task Rules 🔯 Every Wednesday Recurring Calendar Core Date List Calendar Core Good Friday (US) No Holidays (US) Group Calendar Core No Recurring Calendar Core 🔯 Independence Day (US) No Labor Day (US)
Memorial Day (US)
New Years Day Recurring Calendar Core No Recurring Calendar Core No Recurring Calendar Core No **▼**X Details - No object(s) selected Operations **Definitions** \chi Administration 🌟 Favorites » 21 Items

Figure 4-2 Definitions—Calendars

Calendar Descriptions

The following table describes the calendars available for defining.

Calendar	Description
Date List	Contains an explicit list of dates which can be assigned to a process. The processes to which this calendar is assigned will execute on the specified dates in the calendar.
Group	Specify a collection of other defined calendars that are to be included or excluded in a group calendar.
Recurring	Specify the start and end date for a recurring calendar and the number of days in the recurrence cycle. The time period and duration indicates when the process repeats execution.

Viewing Calendar Properties

To view calendar properties

Step 1 On the Definitions—Calendars view, highlight the appropriate calendar, right-click and choose **Properties**.

The Calendar Properties dialog box displays.

Step 2 Click the appropriate tab to review the properties of the calendar.

Tab	Description
General	Displays the general information for the calendar
Calendar-specific Tab	Displays the properties of the specific calendar type (Recurrence, Dates, Calendars)
Preview	Displays the list of dates that are included in the calendar. The calendar highlighting the dates displays on the right side of the page.
Used By	Displays the objects that reference the calendar
History	Displays the history of the changes to the calendar

Step 3 Click **OK** to close the dialog box.

Targets

The Targets feature defines specific environments where activities, triggers and processes can be executed. You can define a target to run a process or activity on a specific computer, database connection, or application server.

Using targets simplifies specifying where certain processes, activities, or triggers will run. The target can be defined once and reused in several processes. The targets created depend on the adapters that are installed. You can create a target for a specific Windows computer or Active Directory domain.

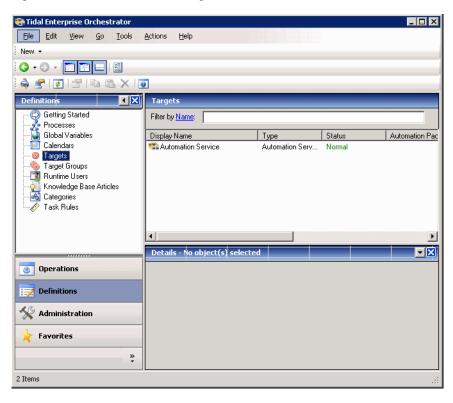


Figure 4-3 Definitions – Targets

Target Descriptions

The following table provides a listing of the targets that are associated with the product. It is important to note that not all targets can be created manually because they will be discovered automatically based on the information specified by other targets.

For additional information on defining a target not included in this chapter, please refer to the associated adapter guide.

Target	Description
Active Directory Domain	Connection information for an Active Directory domain target
	See Cisco TEO Adapter Guide for Microsoft Active Directory.
Cisco UCS Manager	Specify the connection information used to connect to the Cisco UCS Manager instance
	See Cisco TEO Adapter Guide for Cisco UCS Software Adapter.
DB2 Database	Connection target information for a DB2 database
	See Cisco TEO Adapter Guide for IBM DB2 Database.

Target	Description
Email Account (IMAP)	Specify the connection information to the IMAP email server
	See Cisco TEO Adapter Guide for Email.
Email Account (POP3)	Specify the connection information to the POP3 email server
	See Cisco TEO Adapter Guide for Email.
Generic Data Source (OLEDB)	Specify the connection information for a data source such as an Excel spreadsheet or a database not supported by other target types
	See Cisco TEO Adapter Guide for Microsoft (OLEDB) Generic Data Source (OLEDB) Database.
Oracle Database	Specify the connection information for an Oracle database
	See Cisco TEO Adapter Guide for Oracle Database.
Remedy Server	Specify the connection information to a Remedy server which is used for processes to run against
	See Cisco TEO Adapter Guide for BMC Remedy.
SAP BI Warehouse	Represent the connection to an SAP BI Warehouse server
	See Cisco TEO Adapter Guide for SAP ABAP.
SAP System	SAP System wizard to specify the connection and logon information for the SAP system
	See Cisco TEO Getting Started Guide for SAP.
SCOM Management Server	Specify the information about the SCOM management server
	See Cisco TEO Adapter Guide for Microsoft SCOM.
SNMP (Device) Agent	configure the host and operation and notification settings for accessing an SNMP agent.
	See Cisco TEO Adapter Guide for SNMP.
SNMP (Device) Manager	configure the host and security settings for sending traps to a SNMP server.
	See Cisco TEO Adapter Guide for SNMP.
SQL Server Database	Specify the connection information for a SQL server database
	See Cisco TEO Adapter Guide for Microsoft SQL Server Database.
Terminal	Specify the connection information used to access the device used for processes to run against
	See Cisco TEO Adapter Guide for Terminal Adapter.
Unix/Linux System	Specify the connection information used to access the device used for processes to run against
	See Cisco TEO Adapter Guide for Terminal Adapter.

Target	Description
VMware ESX Server	Specify the connection information to an ESX/ESXi server
	See Cisco TEO Adapter Guide for VMware.
VMware Virtual Center Server	Specify the connection information to the virtual center server
	See Cisco TEO Adapter Guide for VMware.
Windows Computer	Specify the connection information for the Windows computer
	See Cisco TEO Adapter Guide for Microsoft Windows.

Viewing Target Properties

View, create, and manage targets. A target is where a process will be executed.

To view target properties:

Step 1 On the Definitions—Targets view, highlight the appropriate target, right-click and choose **Properties**. The Properties dialog box displays.

Step 2 Click the appropriate tab to review the target properties.

Tab	Description
General	Displays the general information about the target
Connection	Displays the connection properties for the defined target
Member Of	Displays the target groups to which the target belongs. This tab will remain blank until added to a target group.
Extended Properties	Displays the list of all extended target properties defined for a specific target type. This tab will remain blank until an extended target property is defined for the target type.
Used By	Display the objects which reference the target. This tab will remain blank until the target is used by an object.
History	Display the history of actions taken against the target. This tab remains blank until after the initial target creation.

Step 3 Click **OK** to close the dialog box.

Extended Target Properties

Extended target properties allow users to define a specific target property value and provides flexibility for others to set or access the values to be used to customize process behavior.

Target properties also provides the ability to store data that is collected during the process execution against a target. For example, a networking process might gather configuration data about each device on a daily basis, then other workflows which run ad-hoc might consume that information. A target property can be used to store this collected data which is associated with some targets.

🕞 Tidal Enterprise Orchestrato 🏟 🔗 👩 🖀 🗙 Getting Started
Processes
Global Variables
Calendars Filter by Name: Description Value New Boolean Proc Targets 🔀 New Boolean Property false Extended Target Properties false 🛂 New Boolean Property Target Groups New Hidden String Property [Hidden] Runtime Users 🚺 New Identity Property Knowledge Base Articles New Numeric Property
New String Property Knowledge
Categories 0 Task Rules 🛅 New Table Property Mary Target Def Operations General Attributes Definitions New Boolean Property % Administration Favorites Target types: All target types Description: » • 10 Items

Figure 4-4 Definitions – Extended Target Properties

Extended Target Property Descriptions

The following table provides a listing target property types supported by the product. Target properties are available for defining from within the Definitions—Extended Target Properties view.

For information on defining extended target properties, see the appropriate section included later in this chapter.

Target Property	Description
Boolean	Indicates whether a set of elements should be true or false
Hidden String	Holds data that must be protected from other TEO users and from auditing operations performed by TEO
Identity	Represents the value of a user identity
Numeric	Single whole or decimal number (positive and negative)

Target Property	Description
String	Defines a target property containing a string of text
Table	Stores a set of records in a table format
Target Reference	Assigns a reference from one target to another target

Viewing Extended Targets Properties

To view extended target properties:

Step 1 On the Definitions—Extended Target Properties view, highlight the appropriate target property, right-click and choose **Properties**.

The Properties dialog box displays.

Step 2 Click the appropriate tab to review.

Tab	Description
General	Displays general information about the item including the name, type, value, and a description of the extended target
Values	Displays the specific values assigned to cells and rows of a table target property
Target Types	Displays the target types which apply to the target property
Target Values	Displays the specific targets and related values assigned to the target property
Used By	Displays the objects referenced by the target property
History	Displays when the target property was created or modified. The column also displays audit log entries that are relevant to the target property

Step 3 Review the properties and click **OK** to close the dialog box.

Target Groups

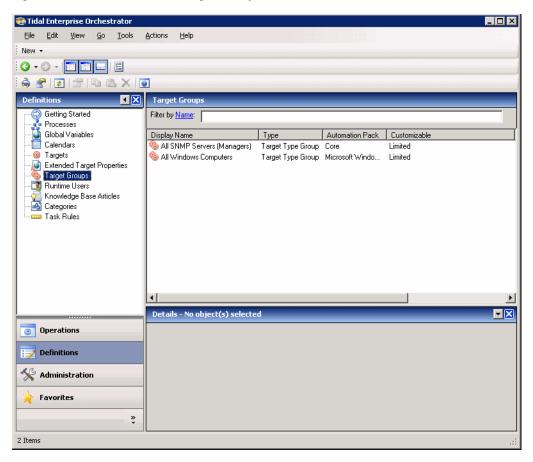
The Target Groups feature enable users to define specific environments or groups of environments that are appropriate for the processes that execute on them. You can define a target group that includes a collection of targets on which to execute processes at the same time.

When you create a process, you must specify where you want the process to run. You can specify that the process runs on a specific target group. If you specify to execute the process on a target group, you can further specify to run the process on all the objects that are included in the target group or run the process on a specific object within the target group.

Using target groups simplifies specifying where certain processes will run. The target group can be defined once and reused in several processes. For example, you may have a database maintenance process that is scheduled to run every month on all database servers. Instead of scheduling the process multiple times to run on each database server, you can create a target group that includes all the database servers and schedule the process to run on all the servers at the same time.

The target groups that can be created depend on the adapters that are installed. You can create a target group for an Active Directory Organizational Unit, Active Directory Group, Target Type Group, or a Virtual Group that can contain any target that has been created in Enterprise Orchestrator.

Figure 4-5 Definitions – Target Groups



Target Groups Descriptions

The following table provides a listing of the target groups that are associated with the product.

Target Group	Description
Active Directory Group	Specifies the targets in a group within an Active Directory domain.
	See Cisco TEO Adapter Guide for Microsoft Active Directory.
Active Directory OU	Specifies targets that belong to an organizational unit or container within an Active Directory domain.
	See Cisco TEO Adapter Guide for Microsoft Active Directory.
Target Type Group	Contains TEO targets of a specified type that satisfy an optional criteria type of target to be included
Virtual Groups	Target group includes a collection of any defined target

Viewing Target Group Properties

To view target group properties:

Step 1 On the Definitions workspace, highlight the appropriate target group definition, right-click and choose **Properties**.

The Properties dialog displays.

Step 2 Click the appropriate tab to review the properties.

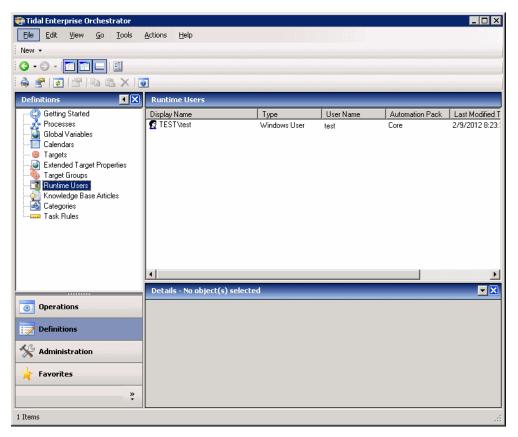
Tab	Description
General	Displays general information about the target group
Criteria	For Target Type Group only, the tab displays specific type of target and define the criteria based on the target properties
Members	Displays the target members included with the target group
Used by	Displays the objects that reference the target group
History	Displays when the target group was created or modified. The column also displays audit log entries that are relevant to the target group.

Step 3 Click OK to close the dialog.

Runtime Users

Many operating system and application activities require credentials for proper execution. The Runtime Users feature is used to create a runtime user record to store the information about the user security context and to pass this information to the adapters for activity execution, event monitoring and some target operations (such as availability monitoring and discovery). This runtime user can be used for database targets when needing database authentication.

Figure 4-6 Definitions—Runtime Users



Runtime User Accounts

The following table provides a listing of the runtime users that are available in the product. For additional information on defining a runtime user not included in this chapter, please refer to the associated adapter guide.

Runtime User	Description
Public-key Authenticated Admin Runtime User	Specify the credentials required to allow public key authentication and an administrative password to perform privileged operations.
	See Cisco TEO Adapter Guide for Terminal Adapter Guide.

Runtime User	Description
Runtime Admin User	Specify the user administrative credentials required to access a Cisco IOS Device.
	See Cisco TEO Adapter Guide for Terminal Adapter Guide.
Runtime User	Specify the credentials for a generic runtime user record consisting of a user name and password pair.
	See Cisco Tidal Enterprise Orchestrator.
SAP User	Specify the credentials for a SAP user.
	See Cisco TEO Getting Started Guide for Incident Analysis for SAP.
SNMP User	Specify the credentials for a SNMP runtime user.
	See Cisco TEO Adapter Guide for SNMP.
Tidal Server Provisioner User	Specifies the user credentials for the user account that connects to the Tidal Server Provisioner target
	See Cisco TEO Adapter Guide for Tidal Server Provisioner.
Windows User	Specify the credentials for a Windows user.
	See Cisco TEO Adapter Guide for Microsoft Windows.

Viewing Runtime User Properties

To view runtime user properties:

Step 1 On the Definitions—Runtime Users view, highlight the appropriate the runtime user, right-click and choose **Properties**.

The Properties dialog box displays.

Step 2 Click the appropriate tab to review the properties:

Tab	Description
General	Displays general credential information about the runtime user
Used by	Displays the objects that reference the runtime user
•	Displays when the runtime user was created or modified. The column also displays audit log entries that are relevant to the runtime user.

Step 3 Click **OK** to close the dialog box.

Knowledge Base Articles

The knowledge base articles provide information to help understand the results of an activity, including a summary of what has occurred, the possible cause of the result, and suggested actions to take to resolve issues with an activity.

Knowledge base articles are referenced by specific activities and can be viewed in the following locations in TEO:

- Operations Workspace—When viewing activity instance properties, users can view the display-only properties of the associated knowledge base articles by selecting the Knowledge Base tab.
- Process Editor—Users can reference a knowledge base article to an activity when defining the activity properties in the Process Editor.
- Automation Summary—All referenced knowledge base articles will display on the automation summary.

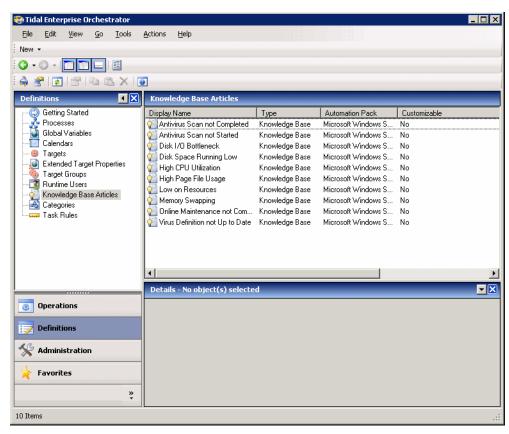


Figure 4-7 Definitions—Knowledge Base Articles

Viewing Knowledge Base Articles

To view the properties of the knowledge base article:

Step 1 On the Definitions—Knowledge Base Article view, highlight the appropriate knowledge base article, right-click and choose **Properties**.

The Properties dialog box displays.

Step 2 Click the appropriate tab to review the properties:

Tab	Description
	Displays general credential information about the knowledge base article
Used by	Displays the objects that reference the knowledge base article
•	Displays when the knowledge base article was created or modified. The column also displays audit log entries that are relevant to the knowledge base article.

Step 3 Click **OK** to close the dialog box.

Categories

The Categories feature provides a way to organize your processes based on your organizational or functional requirements. When creating a process, you can assign the process to a category. You can also add other categories to a category to create a hierarchy.

Categories can be used to organize your processes based on your business-specific requirements. Use the Definitions—Categories view to create a new category and add members to the category. Users can also add members to a category when defining a process.

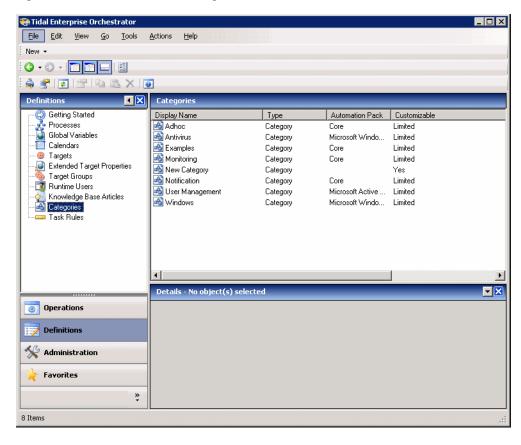


Figure 4-8 Definitions—Categories View

Viewing Category Properties

To view category properties:

Step 1 On the Definitions—Categories view, highlight the appropriate category, right-click and choose **Properties**.

The Properties dialog box displays.

Step 2 Click the appropriate tab to review the properties:

Tab Description					
General	Displays general information about the category				
Members	Displays the members included in the category				
Used by Displays the objects that reference the category					
History	Displays when the category was created or modified. The column also displays audit log entries that are relevant to the category.				

Step 3 Click **OK** to close the dialog box.

Task Rules

Task rules are used to manage task assignment and notifications for various customer-specific tasks. By enforcing a task rule, one change can affect tasks created by multiple processes. By default, the ability to create task rules is not applicable to everyone as only users with administrative rights can create task rules from this view in TEO. The permission to create or modify a task rule on the Definitions—Task Rules view is not available to all users. However, the security settings can change, if necessary, by the TEO administrator.

The Definitions—Task Rules view displays all task rules have been configured to assign, notify, or update tasks based on specific settings. The display can be filtered to display task rules by properties such as, name, description, and automation pack. The user can determine which task rule view to display.

The broad responsibilities of task rules are to streamline process creation and ease task administration by providing a mechanism to perform routine activities on tasks, such as notification and assignments, on newly-created tasks. Task rules are created and displayed in an ordered list on the Definitions—Task Rules view.

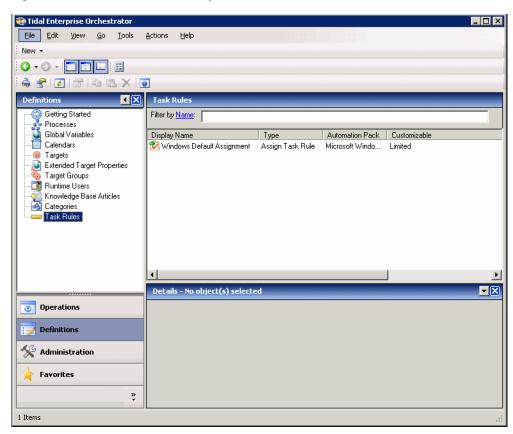


Figure 4-9 Definitions Workspace—Task Rules

Task Rules Descriptions

This table provides the different task rule types:

Task Rules Description			
Assign Task Rule	Assigns users to the task		
Notify Task Rule	Adds an entry to the notification list of a task		
Update Task Rule	Specifies the properties to update in a task		

Viewing Task Rule Properties

To view task rule properties:

Step 1 On the Definitions—Task Rule Views, highlight the appropriate task rule, right-click and choose **Properties**.

The Properties dialog box displays.

Step 2 Click the appropriate tab to review the properties:

TabDescriptionGeneralDisplays general information about the task rule					
Task Rule-specific tab	Displays the defined properties of the task rule				
Conditions	Displays the conditions on when the task rule action should be taken.				
History	Displays when the task rule was created or modified. The column also displays audit log entries that are relevant to the task rule.				

Step 3 Click **OK** to close the dialog box.

Security Roles

Security roles determine what permissions are granted to users. Users can be assigned to the appropriate groups in Windows Computer Management using the TEO Security function. On the Security view, customers can determine what TEO objects, users are allowed to view, create, or modify. A TEO administrator can limit users access to only a subset of TEO processes or limit a whole group to read-only access for specific objects.

If the user has permissions to view (or edit) only a subset of TEO objects, when the TEO user interfaces (Console, CLI or Web Service) display TEO objects to the user, the display will only show those objects that the user has permissions to view or modify.

When the user does not have sufficient permissions in TEO to perform an operation and then attempts to perform that operation, TEO will generate an error, as well as log an audit failure event to the event log.

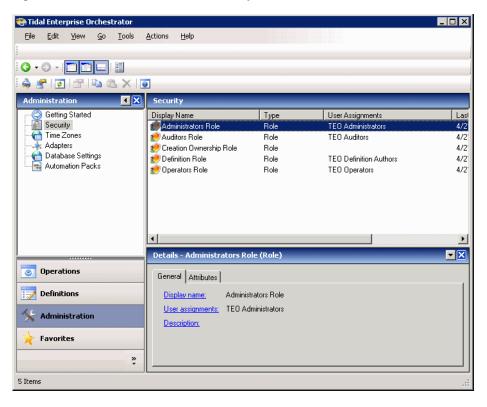


Figure 4-10 Administration—Security View

Pre-defined Security Roles

The Administration—Security view displays pre-defined security roles that ship with the product and cannot be modified. When TEO is installed, the installation creates several local computer groups on the TEO server, which are then used in the pre-defined security roles.

Role	Description				
Administrators Role	When assigned to this group, you have access to everything in the product. Users can view or modify any definition, process, or setting.				
Auditors Role	When assigned to this group, the user can view any definition, such as running processes.				
Create Ownership Role	All users are assigned to this group. This role provides users with full control over any objects that they own.				
Definition Role	When assigned to this group, the user can view or modify any definition or workflow.				
Operators Role	When assigned to this group, users have full access to all processes. All processes can be viewed, started, and canceled, but cannot be modified.				

Viewing Security Role Properties

The properties of each security rule can be accessed from the Security view in the Console.

To view security role properties:

Step 1 On the Administrations—Security view, highlight the appropriate security role, right-click and choose **Properties**.

The Security Role Properties dialog box displays.

Step 2 Click the appropriate tab to display the security role information:

Tab	Description
General	Displays the general information about the security role
Permissions	Security permissions and objects to be included in the security role
User Assignment	Binds the security principal (either a user or group) and the defined security permissions for the security role
Used By	Displays objects that directly reference the selected object in their configuration
History	Displays the history of changes made to an object

Step 3 Click **OK** to close the dialog box.

Automation Packs

Automation packs can encompasses everything related to representation, storage, import, packaging and management of content within TEO. Tidal automation pack files are a collection of TEO configuration objects, such as processes, variables, categories, targets, target groups, and more, all stored in one file.

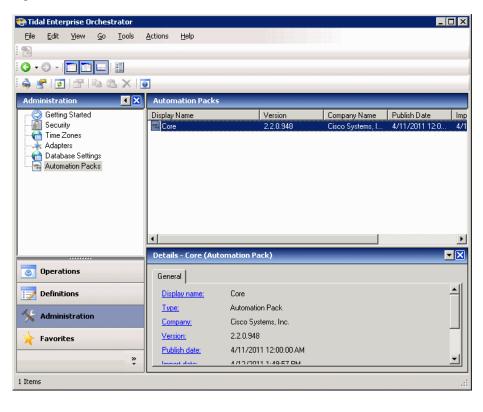


Figure 4-11 Administration—Automation Packs View

Viewing Automation Pack Properties

To view automation pack properties:

Step 1 On the Administration—Automation Packs view, highlight the appropriate automation pack, and right-click and choose **Properties**.

The Automation Pack Properties dialog box displays.

Step 2 Click the appropriate tab to review the properties

Tab Description					
General	Displays general information about the automation pack				
Objects	Displays the list of objects contained in the automation pack				
Dependencies	Displays the list of automation packs and adapters referenced by the objects in the automation pack				
History	Displays when the automation pack was created or modified. The column also displays audit log entries that are relevant to the automation pack.				



CHAPTER 5

Monitoring Auditing Information

This section provides the steps to use to access the system logs provided by TEO and accessing the reports provided by TEO in the SQL Server Reporting Services, Business Objects Reports.

The Auditing View displays the system logs for system events that have occurred within Tidal Enterprise Orchestrator. The Report Database feature offers the ability to run reports for viewing process execution history and to audit process changes.

Although TEO supports SQL Server Reporting Services, Business Objects Reports is the recommended reporting tool for TEO reports.

The following sections provide instruction on viewing the auditing information provided by TEO:

- Accessing Auditing Logs, page 5-2
- Viewing Core Reports, page 5-4
- Accessing SQL Server Reporting Services Reports, page 5-9
- Accessing Reports in Business Objects InfoView, page 5-10

Accessing Auditing Logs

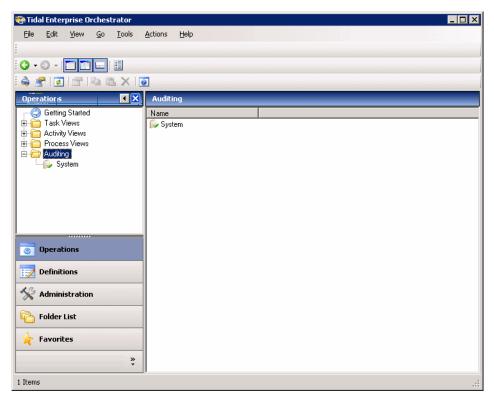
To access the auditing logs:

Step 1 In the Operations workspace, choose Auditing.

The Results pane displays the following default summary information for each of the auditing views:

Column	Description
Name	Name of the audit view
Description	Brief description of the audit view

Figure 5-1 Operations—Auditing View



Step 2 To access detailed information about the system event history, under the Auditing folder, choose **System** to display system event activity, such as start and shut down time and error occurrences.

The selected view displays in the Results pane.

The System Log Results pane contains the following column headings which show information about each system log entry.

Column	Description
Type	Type of event logged by the system
Created By	System-generated record, such as an error condition, or the user name of the person who initiated the process
Created Time	Date and time the event occurred

Column	Description
Event	Number associated with a specific condition on the server for the event
Description	Brief description of the state of a process or activity instance when the event was logged
Category	Numeric ID assigned to the category for a process instance

Viewing System Log Instance Properties

The activity instance properties displayed from the Auditing View are display-only.

To view auditing instance properties:

- **Step 1** On the Auditing folder, choose the **System** view.
- **Step 2** In the Auditing Log Results pane, use *one* of the following methods to launch the Audit Log Properties dialog box:
- **Step 3** Highlight the appropriate activity, and use *one* of the following methods:
 - Double-click the appropriate audit log entry.
 - Highlight the appropriate log entry, right-click and choose Properties.
 - Highlight the appropriate log entry, navigate to the Details pane, click the hyperlink of any item on the General tab.

The display-only Audit Log Properties dialog box displays detailed log entry information.

Figure 5-2 Audit Properties Dialog Box



The following information displays about the auditing properties.

Field	Description					
Туре	Type of event logged by the system. For example, a <i>Success Audit</i> , an <i>Error</i> , or an <i>Information</i> message					
Created By	System-generated record, such as an error condition, or the user name of the person who initiated the process					
Created Time	Date and time the event occurred					
Category	Category name for a process instance					
Message ID	Number associated with a specific condition on the server for the event					
Message	Brief message of the event associated with the Message ID					
Description	Brief description of the event					

Step 4 Click **OK** to close the properties dialog box.

Viewing Core Reports

The following section lists the Core reports that can be accessed from SQL Server Reporting Services and Business Objects Reports. See Accessing SQL Server Reporting Services Reports, page 5-9 and Accessing Reports in Business Objects InfoView, page 5-10 for information on how to access the report. For information on setting up the reports, see the Cisco TEO Installation and Administration Guide.

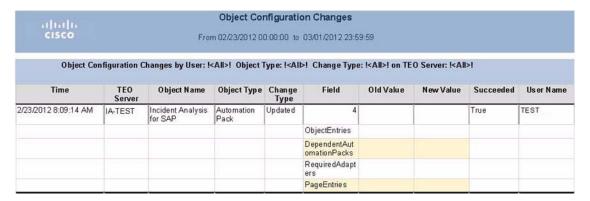
Auditing Reports

The following section provides an overview of the Core auditing reports provided by TEO.

Configuration Audit Report

Use this report to identify changes to the process definitions during a specific date range and the user who made the changes.

Figure 5-3 Core Configuration Audit Report



Process Audit Report

Use this report to view the status of all process instances that were run during a specific date range.

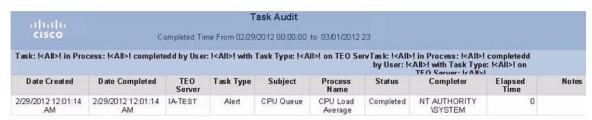
Figure 5-4 Core Process Audit Report



Task Audit Report

Use this report to view the status of all tasks that were run during a specific date range.

Figure 5-5 Core Task Audit Report



Operations Reports

The following section provides an overview of the Core operation reports provided by TEO.

All TEO Incidents Report

Displays a history of all TEO Monitoring incidents that meet the specified incident level. Click the link in the Time column to view detailed information about the incident.

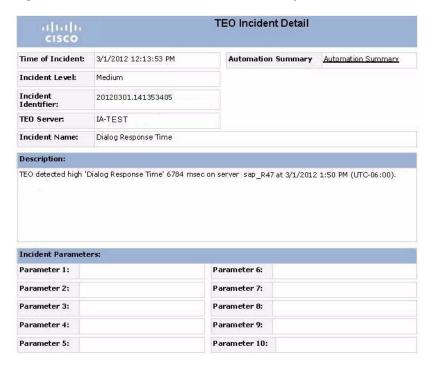
Figure 5-6 Core All TEO Incidents Reports



All TEO Incident Details Report

Displays details about the TEO incidents generated in the TEO Incidents report.

Figure 5-7 Core All TEO Incident Details Report



Process Weekly Summary Report

Use this report to view the overall status of process instances that were run during a specific date range.

Figure 5-8 Core Process Weekly Summary Report

iliili cisco	Process Instance Summary From 02/28/2012 00:00:00 to 02/29/2012 23:59:59								
Process: I <all>! exe</all>	cuted on Target:	I <all>! with S</all>	tart Type: ! <ai>! Com</ai>	pletion Stat	us: ! <all>! o</all>	n TEO Servi	er: I <all>!</all>		
Start Time	TEO Server	Target	Process Name	Record Count	Process Count (Failed)	Process Count (Adhoc)	Process Count (Trigger)	Average Duration (sec)	Total Cost Saving (\$)
/28/2012 12:00:00 AM				1012	16	0	1012	59.05	37,920.0
	IA-TEST			974	16	0	974	61.00	37,920.0
		IA-TEST		10	0	0	10	12.84	0.0
			Tidal Self Monitoring - Collect Persistence Queues Performance Counters	4	0	0	4	16.89	0.0
			Tidal Self Monitoring - Collect TEO Service Performance Counters	4	0	0	4	21.53	0.0
			Tidal Self Monitoring - Monitor TEO Service Performance Counters Thresholds	2	0	0	2	0.11	0.0
		DB2 ABAP Connection		106	0	0	106	4.18	4,240.0
			Daily Average Workload: Update2	1	0	0	1	1,45	40,0
			CPU Utilization Performance Metrics	6	0	0	6	3.30	240.0

ROI Report

Use this report to view the return on investment (ROI) during a specific date range.

Figure 5-9 Core ROI Report



Accessing SQL Server Reporting Services Reports

TEO provides database reports required by managers and auditors as well as reports required by developers of process automation. In general, the data that is provided for these diverse audiences is the same. What differs is the granularity and level of aggregation of this data and the specific data that is the focus of a given report.

Access to any automation summary is controlled and available only to authorized users. Automation summary reports are accessed through a web browser using Microsoft SQL Server Reporting Services.

Users are able to access reports from a web browser using SQL Server Reporting Services.

To access reports from your web browser:

Step 1 Open your web browser and in the Address bar, enter the following address:

http://<ReportServer>/Reports

where <ReportServer> is the name of the server hosting the reports.

The SQL Reporting Services Report Manager web page displays.

Step 2 Click the Tidal Enterprise Orchestrator TEO Reporting—<Report Server> hyperlink.

The TEO Reporting Database Report Manager home page displays.

Figure 5-10 Tidal Enterprise Orchestrator TEO Reporting <Report Server> Home



Step 3 Click **Core** to view the Core TEO report folders.

The available reports and a brief description of the information that is generated by each report is displayed.

Step 4 Click the report name to enter the search criteria and generate the report.

Accessing Reports in Business Objects InfoView

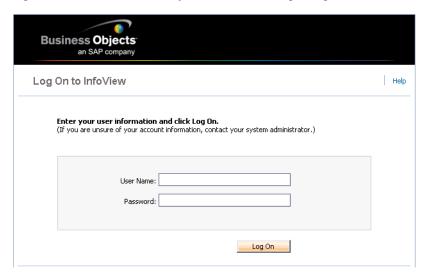
Using the recommended policy for Microsoft Windows may cause the Business Objects InfoView web interface to be blocked due to the enhanced security configuration. The security error dialog box will advise the user to add the site to the list of trusted web sites.

Use the following steps to access reports in Business Objects InfoView.

Step 1 In a web browser, in the Address bar, type the URL to the Business Objects InfoView website.

The Business Objects InfoView Login page opens.

Figure 5-11 Business Objects InfoView—Login Page



- **Step 2** Enter the appropriate credentials to access the BO reports.
- Step 3 Click Log On to continue.

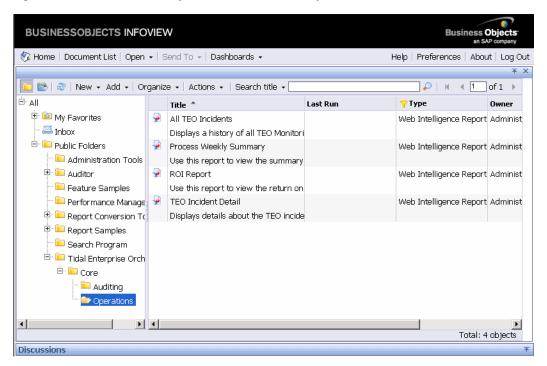
The Business Objects InfoView Dashboard page displays.

Step 4 On the Dashboard page, click **Document List**.

The Document List Navigation page display.

Step 5 Expand **Public Folders > Tidal Enterprise Orchestrator > Core** to access the Core reports.

Figure 5-12 Business Objects InfoView—Core Reports View



Step 6 Double-click the appropriate report to view report details.

Accessing Reports in Business Objects InfoView