Opswise Controller 6.1.x

General Information

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1. General Information 3
1.1 Opswise Controller - Overview 4
1.2 Opswise Controller - Directory Structure 5
1.3 Setting up Opswise Controller 6
1.4 Logging In 8
1.5 User Interface 14
1.5.1 Home Dashboard 23
1.5.2 Navigator 25
1.5.3 Records 33
1.5.4 Record Lists 53
1.5.5 Filters 63
1.5.6 Action Menus 70
1.5.7 Wildcards 82
1.5.8 Access Keys 83

General Information

Opswise Controller

Overview

Directory Structure

Setting up Opswise Controller

Logging In

Help

Troubleshooting

Tutorials for Opswise Controller

User Interface

Overview

Home Dashboard

Navigator

Records

Record Lists

Filters

Action Menus

Wildcards

Access Keys

The information on these pages also is located in the Opswise Controller 6.1.x General Information.pdf and the Opswise Controller 6.1.x Troubleshooting and Tutorials.pdf.

Opswise Controller - Overview

- Introduction
- Application Container
- Database
- Opswise Message Service (OMS)
- Command Line Interface (CLI)

Introduction

Opswise Controller, a Java web application running in a Tomcat web container, is the enterprise job scheduler and workload automation broker solution of Universal Automation Center. The Controller presents a user interface for creating, monitoring, and configuring Controller information; handles the scheduling logic; processes all messages to and from Opswise Universal Agents; and synchronizes much of the High Availability operation of Opswise Automation Center.

Each instance of a Controller in an Opswise Automation Center environment is referred to as a cluster node. A High Availability (redundant system) environment contains two or more cluster nodes.

Application Container

The application container is third-party software that serves as a container for the Controller. Opswise Controller uses Apache Tomcat as the application container.

Database

The database management component supports SQL queries to a set of tables in the Controller database.

The following databases are supported:

- Oracle 10g, 11g, 12c
- MS SQL Server 2005, 2008, 2014
- MySQL 5.6.x

Opswise Message Service (OMS)

Opswise Message Service (OMS) is the network communications provider between the Controller and Agent(s).

> **Note**
> OMS replaces the Message Hub and Transporter components of pre-5.2.0 releases of the Opswise Automation Center.

OMS is installed as a component of Opswise Universal Agent for Windows and UNIX.

Command Line Interface (CLI)

The Opswise Command Line Interface (CLI) is implemented as a set of commands that perform specific actions in a Controller. The CLI commands can execute on any system that has TCP/IP connectivity to OMS. The results of the action are printed to the CLI commands standard output.

The Opswise CLI is installed as a component of Opswise Universal Agent for z/OS, Windows, and UNIX.

Opswise Controller - Directory Structure

Directory Structure

Shown below is the directory structure of Opswise Controller.

```
/home/<username>/tomcat/
/home/<username>/tomcat/bin
/home/<username>/tomcat/conf
/home/<username>/tomcat/lib
/home/<username>/tomcat/logs
/home/<username>/tomcat/opswise_logs
/home/<username>/tomcat/opswise_export
/home/<username>/tomcat/opswise_export/Fri_Sep_12_14_54_21_EDT_2014
/home/<username>/tomcat/opswise_export/Mon_Sep_15_11_19_13_EDT_2014-BULK_EXPORT
/home/<username>/tomcat/opswise_export/System_Backups
/home/<username>/tomcat/opswise_export/System_Backups/History
/home/<username>/tomcat/opswise_export/System_Backups/Audit
/home/<username>/tomcat/opswise_export/System_Backups/Activity
/home/<username>/tomcat/temp
/home/<username>/tomcat/webapps
/home/<username>/tomcat/webapps/opswise
/home/<username>/tomcat/work
```

Setting up Opswise Controller

The following table provides a guideline for setting up Opswise Controller. It is a checklist of features and functions, including links to the detailed information and instructions on this website.

Perform Pre-installation Procedure	Perform the pre-installation procedure that is required before installing the Controller.
Download Opswise Controller Distribution File	Download the appropriate Opswise Controller distribution file from the Stonebranch Customer Portal.
Install Opswise Controller	Install the Controller package from the downloaded Controller distribution file. See Installing Opswise Controller for help in getting the Controller installed and verified.
Configure Opswise Controller	After installation, check the Opswise Controller properties. If you will be running the Controller in a High Availability environment, you must configure the Controller for High Availability.
Log in to Opswise Controller	Once the Controller is installed and configured, we recommend that you log in and familiarize yourself with the basic features of the user interface. All Controller functions are accessed from the Navigator. Within the user interface, you will create all your records (for example: users, tasks, and triggers) by entering information into record Details. (See Naming Tips for information on organizing your records.) The records are then displayed in lists of each type, which you can sort and filter and perform a wide variety of other functions.
Set up Security	Use the Controller Security feature to create users and user groups and assign them roles and permissions. You can also define credentials that are used by the Controller to log in to remote machines. You can create Business Services that represent your organization and assign Controller records to them, and assign permission only to users and/or user groups that belong to a specific Business Services. A complete audit history of all Controller activity also is available for regulatory compliance.
Define Resources	Define the types of resources that you will need in your operational database. If you have installed Opswise Universal Agent on any machines, records for each of them are automatically created when they connect to the Controller. You also may need to define one or more resources such as email, database, or SAP connections. You also can create status-based notifications for Agent, Cluster Node, and OMS Server resources. You can set up a throttling scheme for your machines using Virtual Resources and create a library of scripts that you can execute on remote machines.
Create Tasks and Workflows	Once you have your resources in place, you can begin creating tasks. Supported task types are Workflows, Linux/Unix, Windows, z/OS, Indesca, File Transfer, Manual, Timer, SQL, Stored Procedure, Email, Task Monitor, File Monitor, FTP File Monitor, System Monitor, SAP, and Application Control.
Create Task Triggers	To run your tasks outside of workflows, you can create task triggers, which define events, conditions, or dates/times that the tasks will run. Trigger types include Cron, Time, Temporary, Manual, File Monitor, Task Monitor, and Application Monitor. You may also need to set up one or more customized calendars that reflect your fiscal year and holiday schedules.
Create and Run Reports	The Reports feature lets you create reports from a variety of Opswise Controller database tables. You can use a report to create a Widget.
Monitor Operations	You will monitor your automated operations from the Activity Monitor, which you can customize using Filters.
Manually Run and Control Tasks	You also may need to manually run and control tasks, either from the user interface or from the command line.
Dashboards	The Home Dashboard, a system-defined Dashboard that displays when you log in to the Controller, provides details about the Controller system and status information on active task instances, Agents, Cluster Nodes, and OMS Servers]. You also can create your own Dashboards that display information about the Controller, its environment, and the jobs it is running as defined in system-provided and user-defined Widgets.
Monitor and Control Applications	The Controller lets you to monitor and control all of the applications that you may have running in your entire network.

Command Line Interface	You also can monitor and control your operations and perform basic administrative functions from the command line.
Manage Data and Audit Records	Comprehensive utilities are provided that allow you to manage your Controller records. You can view, restore, and purge old versions of Controller records, bundle and promote records from one Controller server to another, and export and import records when performing a Controller upgrade. You also can configure the automatic backup and purge of Controller data.
Help and Support	This documentation website provides information to help you install, configure, and use the Controller; see Documentation Help for information on documentation layout and usage. Step-by-step tutorials are available for many of the features and functions described here. Troubleshooting provides a description of error messages that you could encounter, as well as potential problems and solutions. Technical Support for critical and non-critical problems is always available.

Logging In

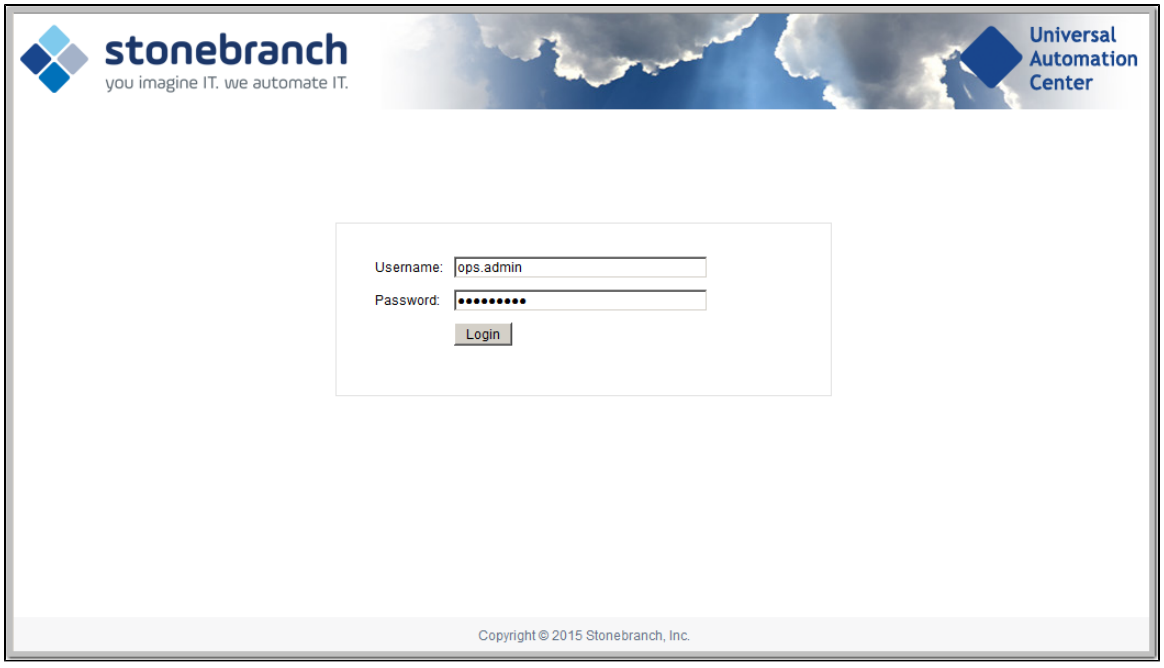
- Opswise Automation Center Login Page
- User Name
- Password
  - Changing Your Password
  - Password Expiration
- User Lockout
- User Restriction
- License Expiration
- Logging Out
  - Exiting without Logging Out
- Log File and Audits
  - Log File Messages
  - Audit Messages

Opswise Automation Center Login Page

The **Opswise Automation Center Login** page displays automatically when you bring up the Opswise Controller system and browse to its URL.

The default URL is: ***machinename*:8080/opswise**

For example, if you installed the Controller locally, the URL is **localhost:8080/opswise**



User Name

The default login User name is **ops.admin**.

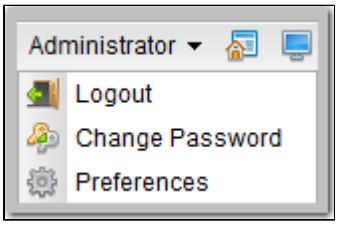
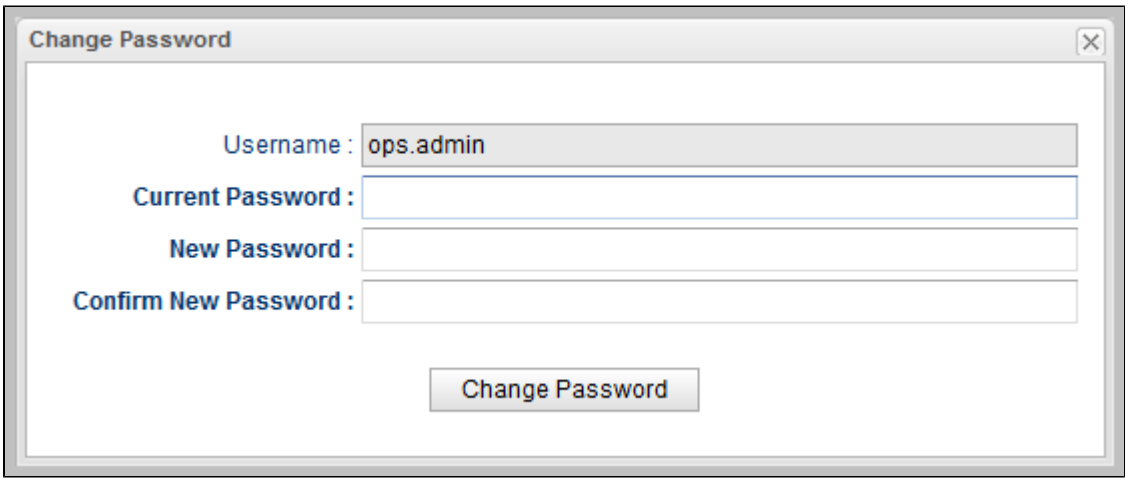
Password

For your initial login to the Controller, no password is required; the Controller prompts you to create a password.

Changing Your Password

> **Note**
> Changing your password is not applicable to users that log in using LDAP authentication.

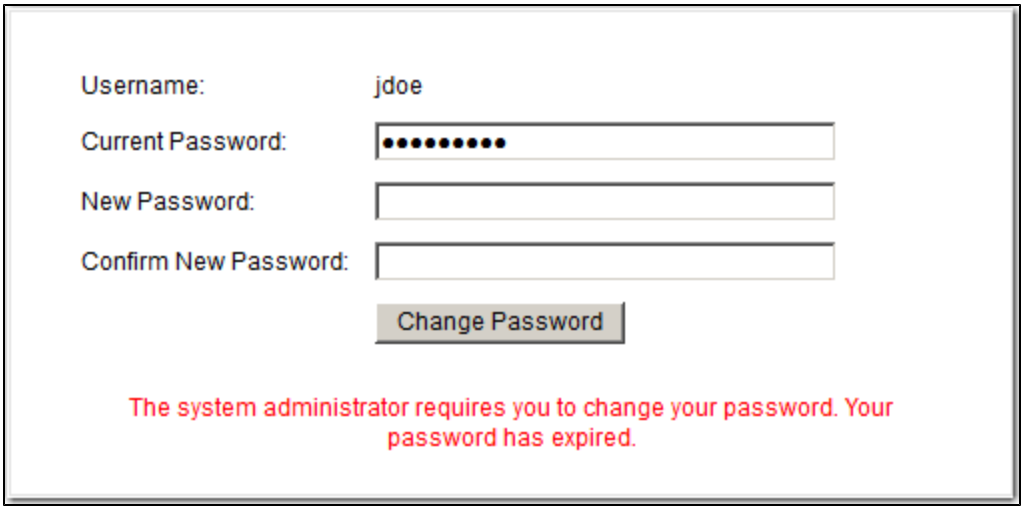
To change your password at any time after you have logged in:

Step 1	On the User task bar, click the User Actions drop-down list arrow to display a menu of user actions. 
Step 2	Click **Change Password**. The **Change Password** dialog pops up. 
Step 3	Enter your **Current Password** and a **New Password**, and reenter your new password in **Confirm New Password**.
Step 4	Click the **Change Password** button.

Password Expiration

> **Note**
> Password expiration is not applicable to users that log in using LDAP authentication.

If the Password Expiration Enabled Opswise Controller system property has been set to **true**, and you reach the maximum number of days that a user password can remain unchanged, as specified by the Password Expiration in Days Opswise Controller system property, the following dialog displays when you enter your password on the Opswise Automation Center Login Page:



You must enter a new password, one that is different than your currently expired password. (To maintain a high level of security, you should never use a password that you have used before.)

1. In **Current Password**, enter your password that has just expired.
2. In **New Password** and **Confirm New Password**, enter a new, previously unused password.
3. Click **Change Password**.

If you try to enter your currently expired password as your new password, the following error message displays on the Password Expired dialog:

```
Your new password cannot be the same as your current password.
```

User Lockout

If the Lock Account After Maximum Login Attempts Controller system property has been set to **true**, and you reach the maximum number of successive login attempts that is allowed, as specified by the Maximum Login Attempts Controller system property, your user account in Opswise Controller will be locked.

(Whenever Lock Account After Maximum Login Attempts is reset from **false** to **true**, the current number of login attempts for all users is reset to 0.)

If you attempt to log in to a locked account, the following message displays:

```
User account <Username> is locked. Please check with your administrator."
```

To unlock a locked account, your Controller system administrator must uncheck the **Locked out** field ion the User Details for that user account.

User Restriction

You can be restricted from logging in to the Opswise Controller user interface either of two ways:

1. The system level default for web browser access, specified by the System Default Web Browser Access Opswise Controller system property, has been set to **No**, and the **Web Browser access** field in the User Details for your user account is set to **-- System Default --**."
2. The **Web Browser access** field is set to **No**, which overrides the **System Default Web Browser Access** value (**Yes** or **No**).

If either restriction is in place, the following error message will display when you enter your user name at the **User name** prompt:

```
User <Username> not permitted to login through the web browser. Please check with your administrator.
```

To remove the restriction, the system administrator must either:

- Set the System Default Web Browser Access property to **Yes** and set the **Web Browser access** field in the User Details for your user account to **-- System Default --**.
- Set the **Web Browser access** field in the User Details for your user account to **Yes**.

License Expiration

If you log in to the Controller and your Controller license is about to expire within one week, the following informational message displays in the Universal Automation Center Console:

```
Universal Controller license for node <node_id> will expire in N days.

Please contact Stonebranch customer support to avoid service interruption.
```

If you log in to the Controller and your Controller license already has expired, the following error message displays in the Universal Automation Center Console:

```
Universal Controller license for node <node_id> has expired and the Controller has been suspended.

Licensed Number of Days: N
Actual Number of Days: N

Please contact Stonebranch customer support to restore services.
```

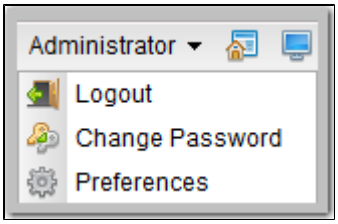
In each case, the Console will remain open until you manually close it.

Additionally, if you have configured the Controller for System Notifications, system notifications are sent when the Controller license will expire in seven days and if the license already has expired.

> **Note**
> If your license expires, you will not be able to run any tasks.

Logging Out

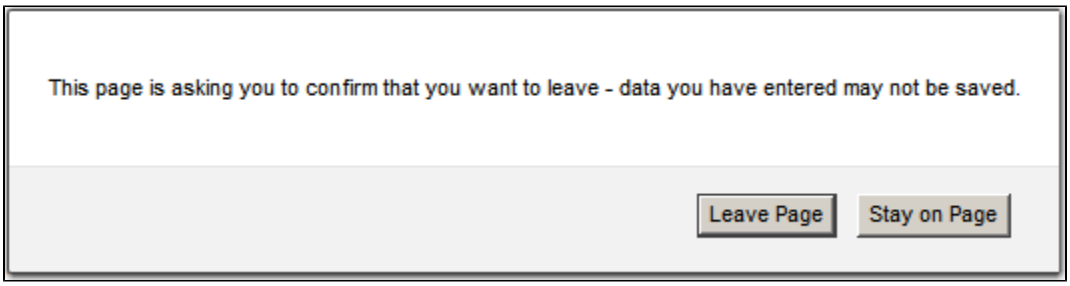
To log out of your Opswise Controller session:

Step 1	On the User task bar, click the User Actions drop-down list arrow to display a menu of user actions. 
Step 2	Click **Logout**. You are logged out of this session, and the Opswise Automation Center Login page displays.

Exiting without Logging Out

As a best practice, we recommend that you always end your Opswise Controller session by logging out before closing the browser or navigating away from the user interface.

If you attempt to close the browser or navigate away from the user interface before logging out, and the Confirm Exit Opswise Controller system property is set to **true**, the following pop-up dialog displays:



- Click **Leave Page** to navigate away from the Opswise Controller user interface.
- Click **Stay on Page** to remain in the Opswise Controller user interface.

> **Note**
> This dialog may differ from browser to browser.

Log File and Audits

All user login and logout activity, whether via the user interface or an Opswise Controller remote interface, is logged and audited (as a single audit type: User Login).

Log File Messages

Log file messages for login activity are in the following format:

```
timestamp (internal) login activity <user=user name, ipaddr=IP address>
```

For example:

```
2015-04-16-11:16:26:391 -0400   INFO [http-bio-8080-exec-5] Login OK <user=ops.admin,
ipaddr=192.55.44.123>
2015-04-16-11:17:20:208 -0400   INFO [http-bio-8080-exec-10] Login Failed <user=ops.admin,
ipaddr=192.55.44.123>
2015-04-16-11:16:57:442 -0400   INFO [http-bio-8080-exec-11] Logout OK <user=ops.admin,
ipaddr=192.55.44.123>
```

Audit Messages

Audit messages for login activity are in the following format:

```
login activity <user=user name, ipaddr=IP address>
```

For example:

```
LOGIN <user=stonebranch-user-01, ipaddr=192.55.44.123>
```

Note
The IP Address of the user is not logged or audited for login activity via the Command Line Interface (CLI).

User Interface

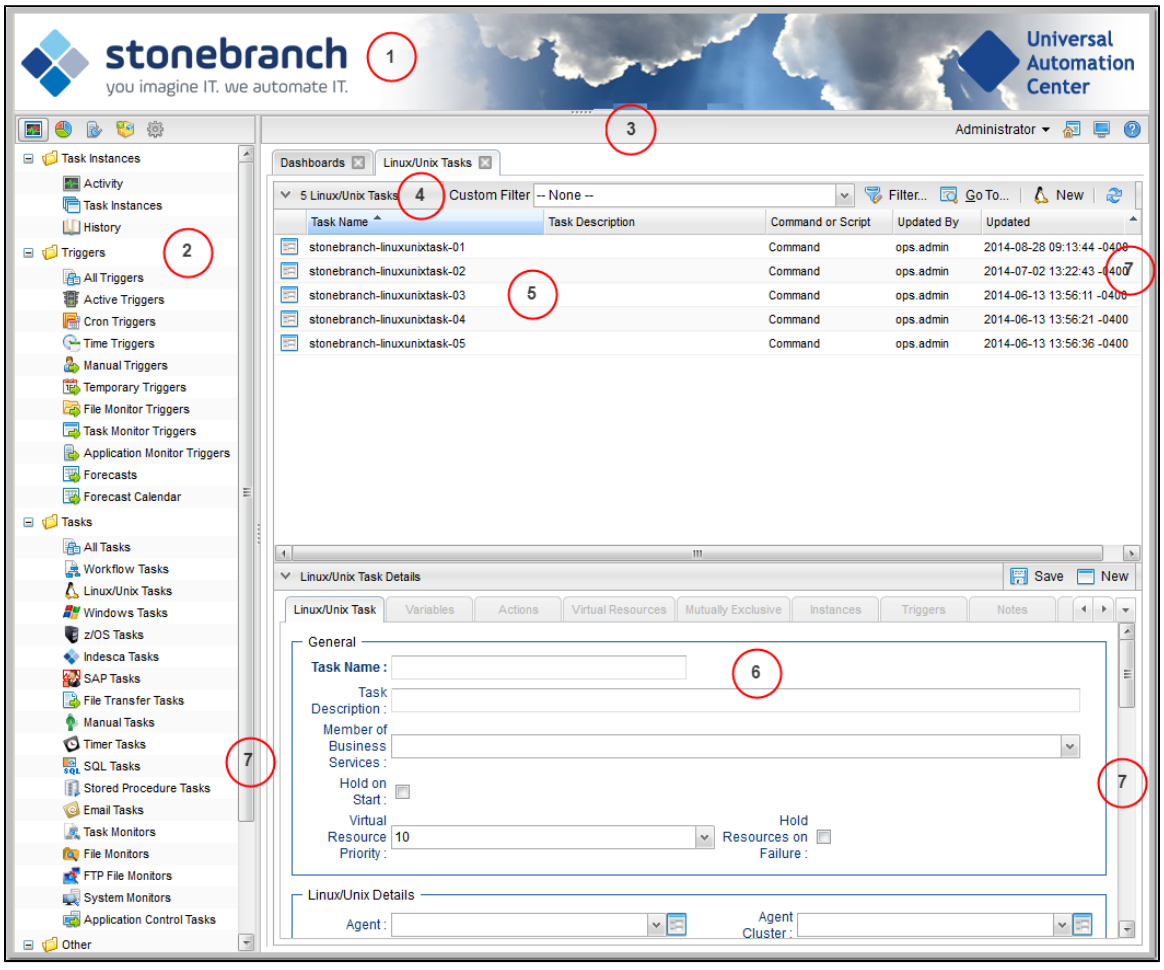
- Overview
- User Task Bar
- User Actions
- Selecting User Preferences
  - User Preferences Field Descriptions
- Adjust User Interface Display
- Drop-Down Lists
- Universal Automation Center Console
  - Universal Automation Center Console Actions
- Tabs
- Additional Information

Overview

The Opswise Controller 6.1.x user interface is comprised of three basic elements:

1. Navigator
2. Record Lists
3. Records

The following illustration identifies these elements and other features of the user interface.



1	Opswise Automation Center banner.
2	Navigator.
3	User task bar.
4	Records List task bar.
5	Records list for the record type selected in the Navigator.
6	Details for a record selected from the records list.
7	Scroll bars that let you scroll through the Navigator, a records list, or record Details.

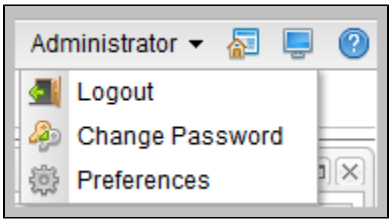
User Task Bar

Below the Opswise Automation Center banner, a user task bar displays.

User Task Bar Elements	Description
Administrator	Displays a list of user actions that can be taken for the logged in user.
	Displays the Opswise Controller user interface Home Dashboard.
	Displays the Universal Automation Center Console.
	Accesses the Opswise Controller documentation.

User Actions

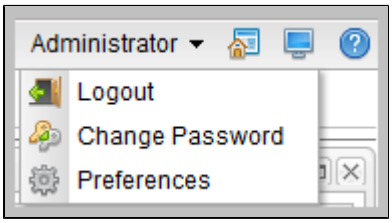
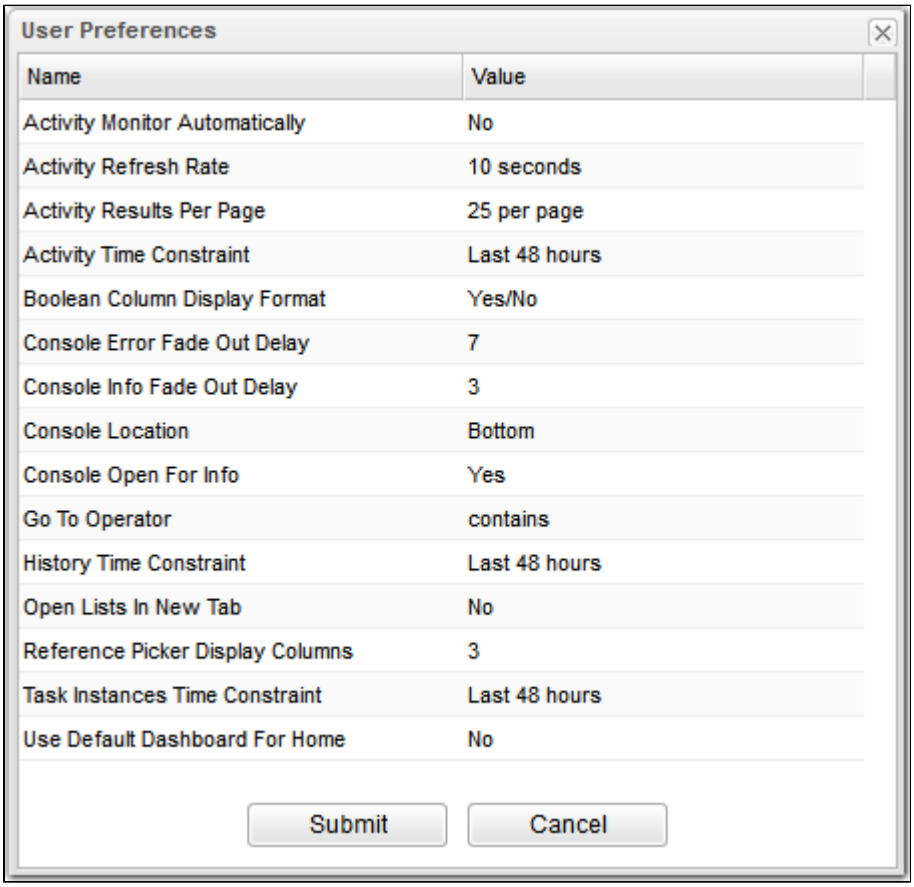
The <User Name> drop-down list on the User Task Bar provides the following actions that you can take for the logged in user.



Selection	Description
Logout	Allows you to log out of this session of the Opswise Controller.
Change Password	Allows you to change your password for logging in to the Opswise Controller.
Preferences	Allows you to select user preferences for the display of information in the Opswise Controller user interface.

Selecting User Preferences

You can select your own preferences for the display of information on the Opswise Controller Activity Monitor and the Universal Automation Center Console.

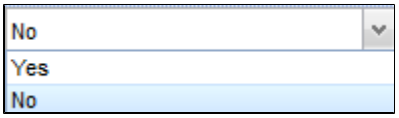
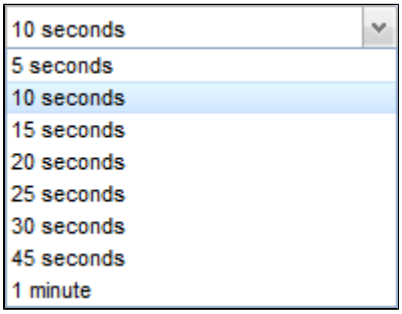
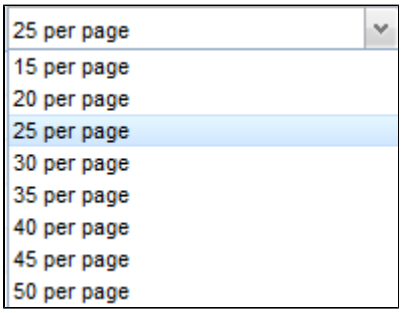
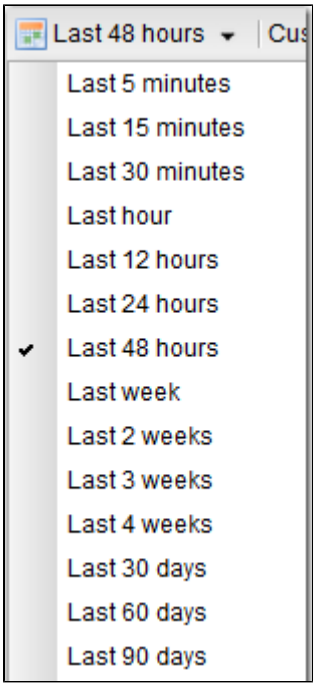
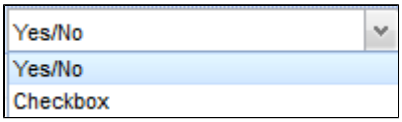
Step 1	On the User task bar, click the User Actions drop-down list arrow to display a menu of user actions. 
Step 2	Click **Preferences**. The **User Preferences** dialog pops up. 
Step 3	Using the field descriptions below as a guide, change any of the User Preferences, as desired.
Step 4	Click the **Submit** button.

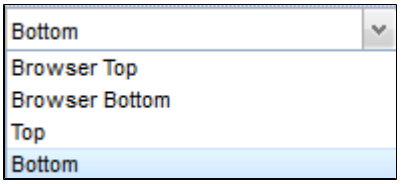
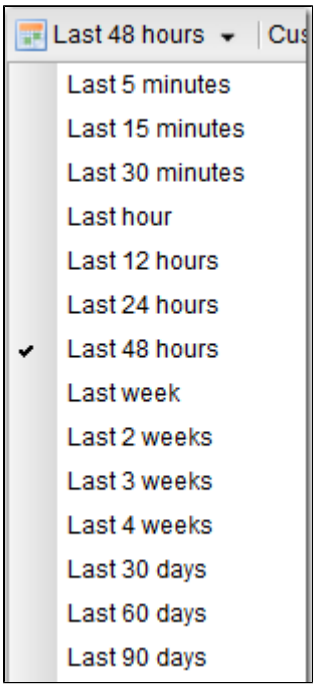
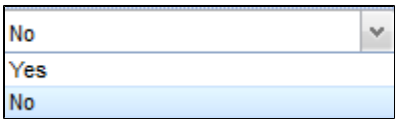
User Preferences Field Descriptions

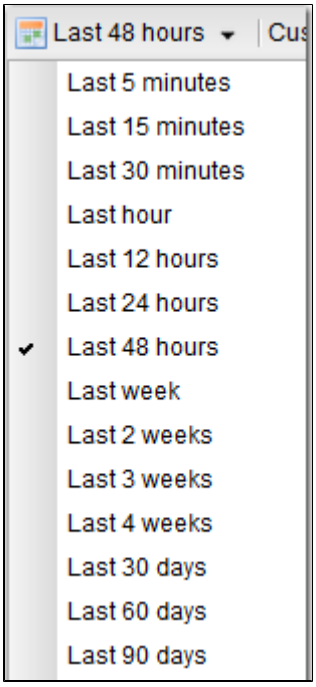
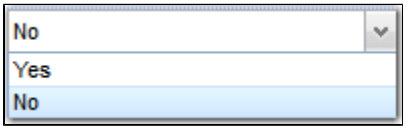
The following table describes the fields that display on the User Preferences pop-up dialog.

Default values are highlighted for every field.

Name	Description	Values

Activity Monitor Automatically	Specifies whether or not the Activity Monitor automatically monitors Controller activity.	
Activity Refresh Rate	Frequency that dynamic data is refreshed on the Activity Monitor.	
Activity Results Per Page	Number of task instances that display on a single page of the Activity Monitor	
Activity Time Constraint	Time frame, starting with the current time, for which activity is listed on the Activity Monitor, Task Instances list, and History list.	
Boolean Column Display Format	Specifies whether Boolean columns on lists will be in Yes/No or enabled/disabled (check box) format.	
Console Error Fade Out Display	Specifies how long the Universal Automation Center Console will stay open after displaying an error message.	
Console Info Fade Out Display	Specifies how long the Universal Automation Center Console will stay open after displaying an informational message.	

Console Location	Location of the Universal Automation Center Console that displays when you click the Universal Automation Center Console icon.	
Console Open For Info	Specifies whether or not the Universal Automation Center Console will open automatically to display informational messages.	
Go To Operator	Specifies the operator for the Go To filter: • contains • starts with	
History Time Constraint	Time frame, starting with the current time, for which activity is listed on the History list	
Open Lists in New Tab	Specifies whether a new tab is opened when you select a new list from the Navigator (**Yes**) or if a tab for the new list replaces the current tab (**No**).	
Reference Picker Display Columns	Where applicable, if additional information is available for Controller records in drop-down lists, the columns of information displayed for each record: • 1 = Record name only. • 2 = Record name and type. • 3 = Record name, type, and ID or Description. • All = (Same as 3.)	

Task Instances Time Constraint	Time frame, starting with the current time, for which activity is listed on the Task Instances list	
Use Default Dashboard For Home	Specifies whether you want to use the currently selected default Dashboard as the Home dashboard for this user (**Yes**) or use the system-defined default Dashboard as the Home dashboard (**No**). **Warning** We strongly encourage you to maintain the system-defined default Dashboard as your Home dashboard. At login, all Widgets on the Home dashboard will be loaded. By keeping the system-defined default Dashboard, you will maintain a more consistent and optimal login process.	

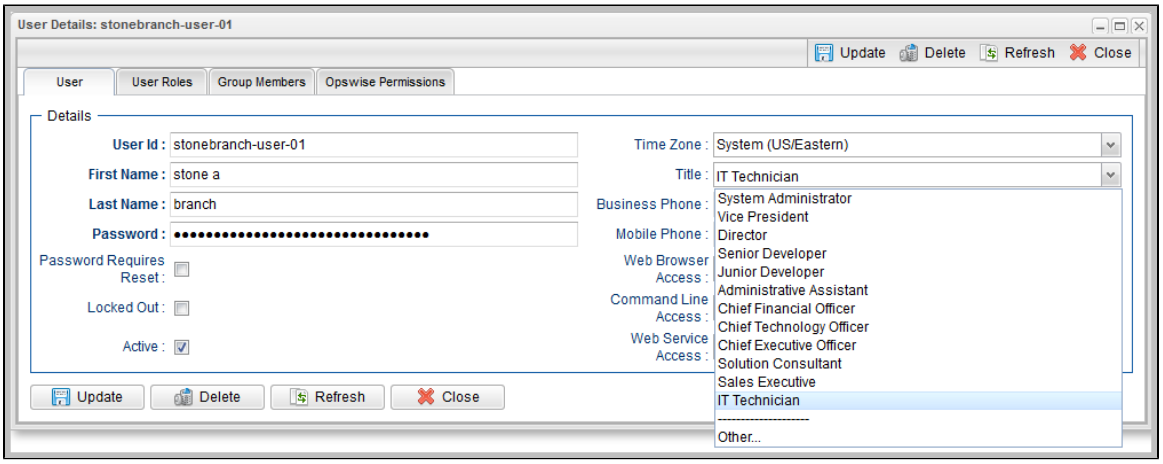
Adjust User Interface Display

Hide Navigator	To hide the Navigator, click the gray border between the Navigator and the data area. To re-display the Navigator, re-click the gray border, which now is at the far left of the screen.
Adjust Widths	To adjust the width of the Navigator and data area, click and hold the gray border between the Navigator and the data area drag it left or right.
Hide Banner	To hide the Opswise Automation Center banner that displays across the top of the page, click the gray border that displays below the banner. To re-display the banner, re-click the gray border, which now is at the top of the screen.
Hide a List	To hide a records list, click the down arrow that displays in the List task bar below to the list name. To re-display a hidden list, click the up arrow that displays below to the list name.
Hide a Record Details	To hide record Details, click the down arrow that displays next to the record type name. To re-display hidden Details, click the up arrow that displays next to the record type name.

Drop-Down Lists

Many record Details contain drop-down lists of available values for specific fields.

For example, the record Details for a User contains a drop-down list of titles that can be assigned to the User:



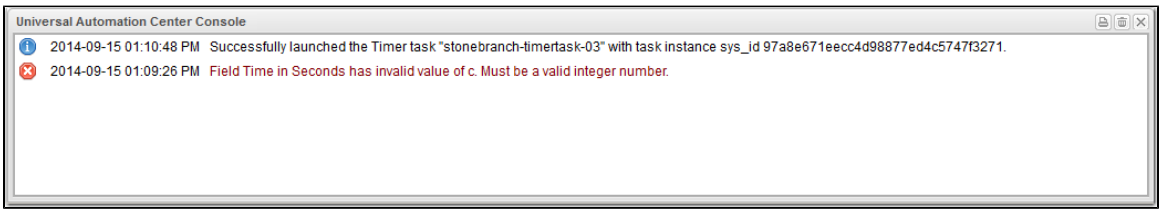
To select a value from a drop-down list, either:

- Click the drop-down list arrow and then click a value.
- Begin entering the name of a value in the drop-down list field. A list of values that match your entry then displays. Click a displayed value.

Universal Automation Center Console

The Universal Automation Center Console contains informational and error messages regarding recent Controller activity.

For example:



The Console opens automatically to display error (**x**) messages, and you can set the Console to open automatically to display information (**i**) messages (via one of four user preferences that allow you to control the Console display).

You also can open the Console manually at any time by clicking the Universal Automation Center Console icon on the User Task Bar.

Universal Automation Center Console Actions

Action	Icon	Description
Select and Copy	n/a	Select message text either of three ways: • Drag your cursor across any of the text. • Double-click a single entry in the text to select only that entry. • Triple-click anywhere in the message text to select all of the text. Use **Ctrl+C** and **Ctrl+V** to copy and paste the selected text. You also can select and copy text this way from the Print Preview pop-up (see **Print** in this table).
Print		Click the Print icon at the top of the Console to display a Print Preview pop-up, and then click the **Print** button.
Trash		Click the Trash icon at the top of the Console to empty the contents of the Console.

Close		Close the Console either by: • Clicking the Close icon at the top of the Console. • Double-clicking the Console header.

Tabs

Every page in the user interface displays under a tab at the top of the page.

When you log in to the Controller, the Home dashboard displays under a **Dashboards** tab. The Home dashboard - as well as the Activity Monitor and Dashboards - remain open throughout your session unless you manually close them by clicking the **x** icon in the tab itself. The tabs for those pages otherwise remain at the top of the screen so that you can quickly return to those pages at any time.

If you select a page in the Navigator while viewing the Home dashboard, Activity Monitor, or Dashboards, a new tab will open for that page. The Home dashboard, Activity Monitor, and Dashboards remain open if you navigate from them, and their tabs remain at the top of the screen.

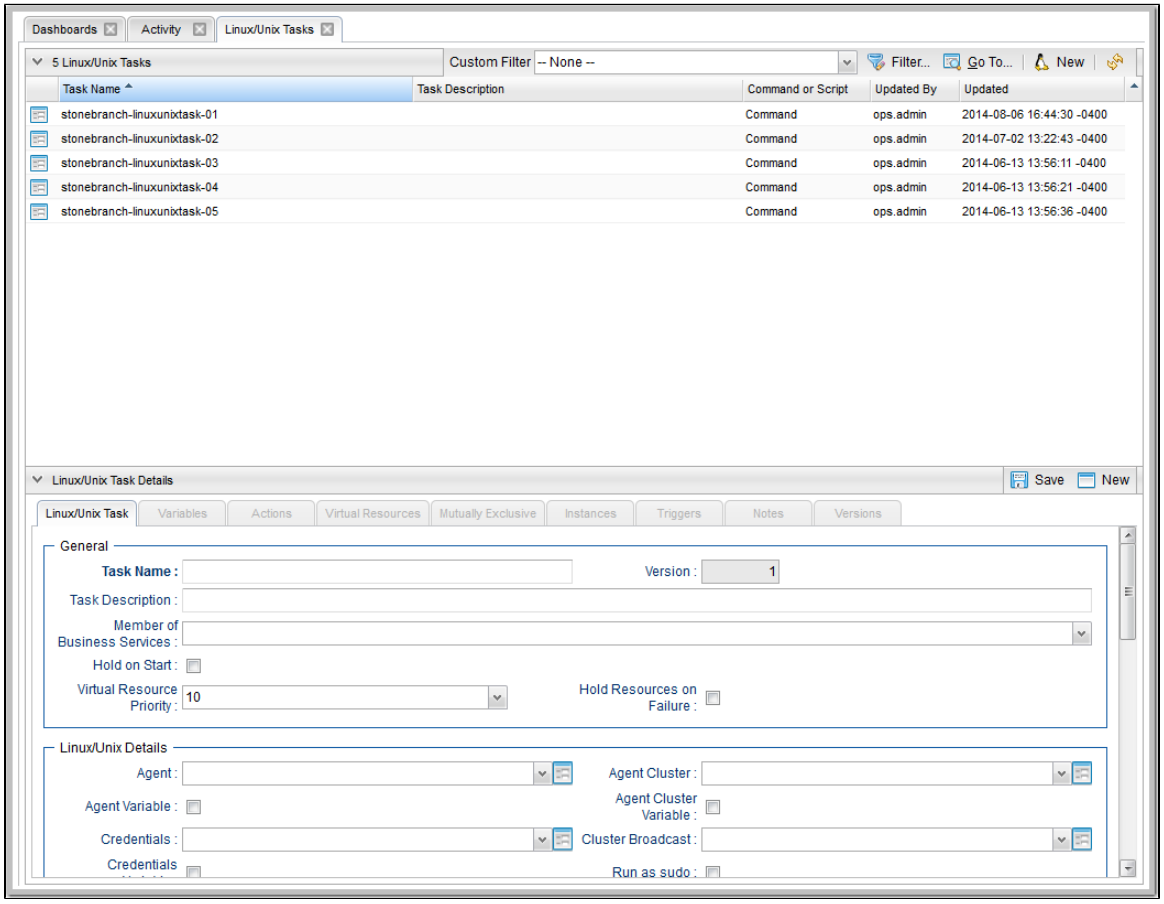
For all other pages, the Open Lists in New Tab user preference lets you select whether to open a page selected from the Navigator (or the Home dashboard) under a new tab or open a page under the current tab.

You also can select whether to open a page under the current tab or a new tab by right-clicking the page in the navigation pane, which display an Action menu containing the following selections:

- **Open**
- **Open in New Tab**

The tab for the page currently being viewed is white; the other tabs are gray.

For example:



Additional Information

The following pages provide additional information for the Opswise Controller user interface:

- Home Dashboard
- Navigator
- Records
- Record Lists
- Filters
- Action Menus
- Wildcards
- Access Keys

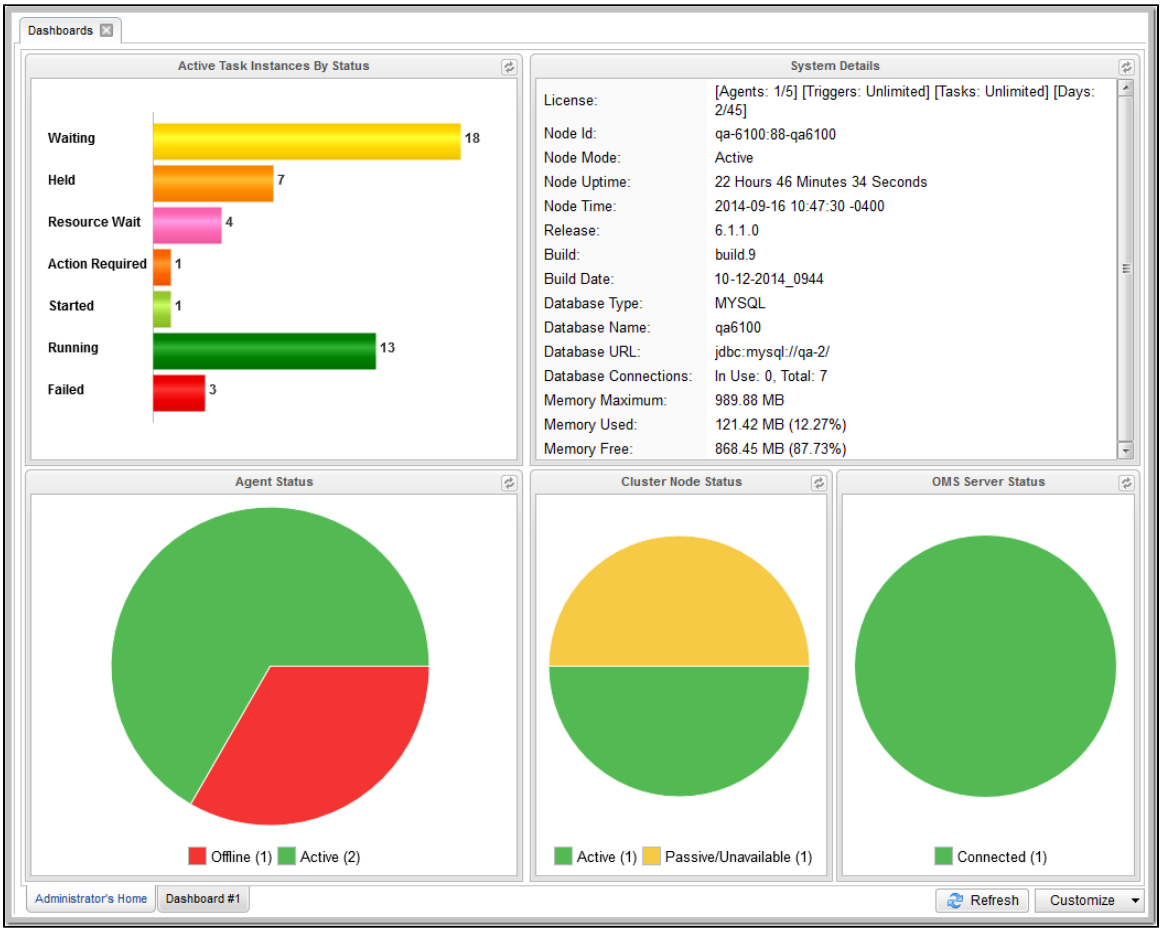
Home Dashboard

- Overview
- Home Dashboard Access

Overview

When you log in to Opswise Controller, the Opswise Controller Home dashboard - which is a system-defined Dashboard - displays.

Warning
Although you can set any Dashboard as your Home dashboard, it is NOT recommended (see the Use Default Dashboard For Home user preference).



The Dashboards tab at the top of the page indicates that you are on the Dashboards page. The tabs at the bottom of the page represent all Dashboards, including the Dashboard currently displayed.

The Dashboards tab, and the tabs for all Dashboards, display for every Dashboard, not just the Home dashboard.

Home Dashboard Access

Dashboards - including the Home dashboard - stay open throughout your Controller session, unless you manually close them by clicking the **x** icon in the Dashboards tab.

No matter which other page(s) you navigate to in the user interface, the **Dashboards** tab always displays at the top of the page, allowing you to return there.

If you close the Dashboards and then re-open them by selecting **Dashboards** in the Reporting navigation pane, the Home dashboard - as the default Dashboard - will re-display. (To select a different Dashboard as the default Dashboard for your current Controller sessions, see Setting a Default Dashboard.)

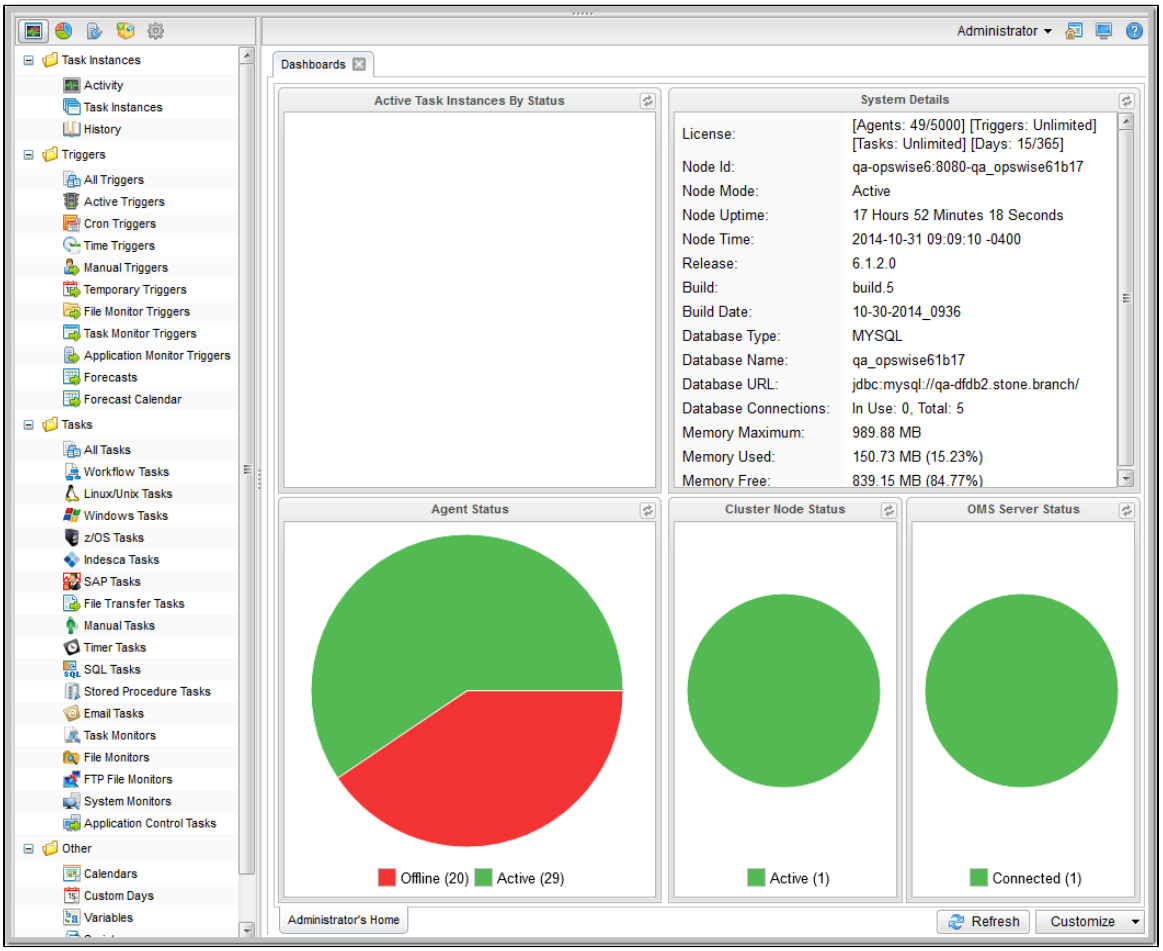
You also can return directly to the Home dashboard - regardless of which Dashboard is the default Dashboard for this sessions - by clicking the Home icon ( ) that displays at the top right corner throughout the user interface.

Navigator

- Overview
- Automation Center Navigation Pane
- Reporting Navigation Pane
- Agents & Connections Navigation Pane
- Bundles & Promotion Navigation Pane
- Administration Navigation Pane

Overview

A user interface Navigator displays on the left-hand side of every page in the Opswise Controller user interface.



The Navigator provides access to all areas of the user interface via five separately displayed navigation panes. Each navigation pane provides links to specific pages in the user interface, such as a record type or list. When you hover you cursor over a link, it is highlighted in gray. When you click a link, the highlight is removed.

Icons at the top of the Navigator let you select which navigation pane to display.

	Automation Center
	Reporting

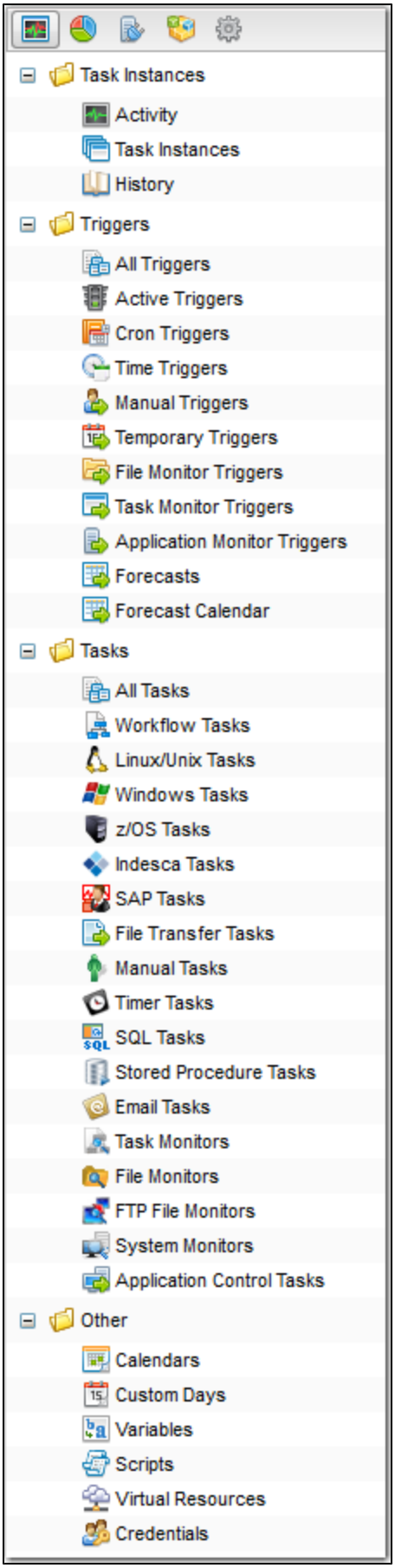
	Agents & Connections
	Bundles & Promotion
	Administration

(When you log in to the Controller, the Automation Center navigation pane displays by default.)

The following tables provide a quick reference and links for each item in the Navigator.

Automation Center Navigation Pane

The Automation Center navigation pane provides access to the following areas:

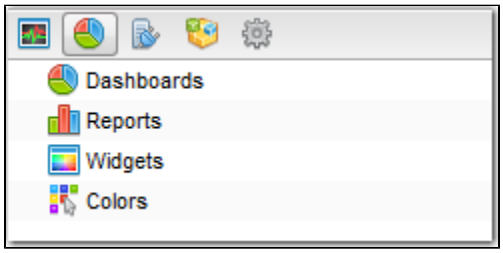

Task Instances
Activity
Task Instances
History
Triggers
All Triggers
Active Triggers
Cron Triggers
Time Triggers
Manual Triggers
Temporary Triggers
File Monitor Triggers
Task Monitor Triggers
Application Monitor Triggers
Forecasts
Forecast Calendar
Tasks
All Tasks
Workflow Tasks
Linux/Unix Tasks
Windows Tasks
z/OS Tasks
Indesca Tasks
SAP Tasks
File Transfer Tasks
Manual Tasks
Timer Tasks
SQL Tasks
Stored Procedure Tasks
Email Tasks
Task Monitors
File Monitors
FTP File Monitors
System Monitors
Application Control Tasks
Other
Calendars
Custom Days
Variables
Scripts
Virtual Resources
Credentials

Area	Menu Option	Description and Links
Task Instances	Activity	Lists all active task instances; the data is automatically refreshed. From this list, you can view and edit any task instance. For non-Workflow task instances, you also can view output or rerun the task.
	All Task Instances	Lists the same task instances as the Activity Monitor, but only for task instances for which there has been a status change or a modification to the task instance record within the last 7 days (an **Updated on Last 7 Days** filter has been pre-selected for this display). Also, unlike the Activity Monitor, the data is not automatically refreshed. Task Instances also allows you to view details about workflow instances – information that is not available from the Activity Monitor.
	History	Lists a history of completed task instances with a status in an "end state" (SUCCESS, FINISHED, FAILED, CANCELLED, START FAILURE, SKIPPED). This allows you to track information about a specific task instance, including multiple runs. For example, Task A may have failed and was then re-run by a user. This task instance will appear twice on the History list, first for the time that it ran and failed and again for the time it was re-run to success. From the History list, you can display read-only details about any task instance on the list.
Triggers	All Triggers	Lists all existing triggers of all types. From this list, you can view and edit any trigger on the list, or create a new trigger of any type.
	Active Triggers	Lists all active (enabled) triggers. From this list, you can view and edit any trigger on the list, or create a new trigger of any type.
	Cron Triggers	Lists all Cron triggers. From this list, you can view or edit any Cron trigger, or create a new Cron trigger.
	Time Triggers	Lists all Time triggers. From this list, you can view or edit any Time trigger, or create a new Time trigger.
	Manual Triggers	Lists all Manual triggers. From this list, you can view or edit any Manual trigger, or create a new Manual trigger.
	Temporary Triggers	Lists all Temporary triggers. From this list, you can view or edit any Temporary trigger, or create a new Temporary trigger.
	File Monitor Triggers	Lists all File Monitor triggers. From this list, you can view or edit any File Monitor trigger, or create a new File Monitor trigger.
	Task Monitor Triggers	Lists all Task Monitor triggers. From this list, you can view or edit any Task Monitor trigger, or create a new Task Monitor trigger.
	Application Monitor Triggers	Lists all Application Monitor triggers. From this list, you can view or edit any Application Monitor trigger, or create a new Application Monitor trigger.
	Forecasts	Lists information about every task in the Forecast Calendar, including tasks within a workflow launched by a trigger. See Forecast List.
	Forecast Calendar	For Time, Temporary and Cron triggers: Lists a Forecast Calendar of all scheduled task instances for the next N days. The number (N) of days displayed in the forecast is specified using the Forecast Period in Days Opswise Controller system property (see Forecast Calendar).
Tasks	All Tasks	Lists all existing tasks of all types. From this list, you can view, edit, or launch any task on the list, or create a new task of any type.
	Workflow Tasks	Lists all Workflow tasks. From this list, you can view, edit, or launch any Workflow, or create a new Workflow.
	Linux/Unix Tasks	Lists all Linux/Unix tasks. From this list, you can view, edit, or launch any Linux/Unix task, or create a new Linux/Unix task.
	Windows Tasks	Lists all Windows tasks. From this list, you can view, edit, or launch any Windows task, or create a new Windows task.
	z/OS Tasks	Lists all z/OS tasks. From this list, you can view, edit, or launch any z/OS task, or create a new z/OS task.
	Indesca Tasks	Lists all Indesca tasks. From this list, you can view, edit, or launch any Indesca task, or create a new Indesca task.
	SAP Tasks	Lists all SAP tasks. From this list, you can view, edit, or launch any SAP task, or create a new SAP task.

	File Transfer Tasks	Lists all File Transfer tasks. From this list, you can view, edit, or launch any File Transfer task, or create a new File Transfer task.
	Manual Tasks	Lists all Manual tasks. From this list, you can view, edit, or launch any Manual task, or create a new Manual task.
	Timer Tasks	Lists all Timer tasks. From this list, you can view, edit, or launch any Timer task, or create a new Timer task.
	SQL Tasks	Lists all SQL tasks. From this list, you can view, edit, or launch any SQL task, or create a new SQL task.
	Stored Procedure Tasks	Lists all Stored Procedure tasks. From this list, you can view, edit, or launch any Stored Procedure task, or create a new Stored Procedure task.
	Email Tasks	Lists all Email tasks. From this list, you can view, edit, or launch any Email task, or create a new Email task.
	Task Monitors	Lists all Task Monitor tasks. From this list, you can view, edit, or launch any Task Monitor task, or create a new Task Monitor task.
	File Monitors	Lists all File Monitor tasks. From this list, you can view, edit, or launch any File Monitor task, or create a new File Monitor task.
	FTP File Monitors	Lists all FTP File Monitor tasks. From this list, you can view, edit, or launch any FTP File Monitor task, or create a new FTP File Monitor task.
	System Monitors	Lists all System Monitor tasks. From this list, you can view, edit, or launch any System Monitor task, or create a new System Monitor task.
	Application Control Tasks	Lists all Application Control tasks. From this list, you can view, edit, or launch any Application Control task, or create a new Application Control task.
Other	Calendars	Lists all Calendars. From this list, you can view or edit any Calendar, create a new Calendar, and assign Custom Days to any Calendar.
	Custom Days	Lists all Custom Days. From this list, you can view or edit any Custom Day, create a new Custom Day, and assign any Custom Day to any Calendar.
	Variables	List all user-defined Global variables. From this list, you can view or edit any Global variable, or create a new Global variable.
	Scripts	Lists all Scripts, which have been stored in the Controller database for execution by Windows, Linux/Unix, and SAP tasks. From this list, you can create and edit Script records containing a script, and specify which tasks can use the script.
	Virtual Resources	Lists all virtual resources defined in your system, which allow you to set up "throttling" schemes that will manage the number of specific tasks that can run at one time. From this list, you can view, edit, and create a virtual resources, as well as assign tasks to a virtual resource.
	Credentials	Lists all Credentials. From this list, you can view or edit any Credential, or create a new Credential.

Reporting Navigation Pane

The Reporting navigation pane provides access to the following areas:

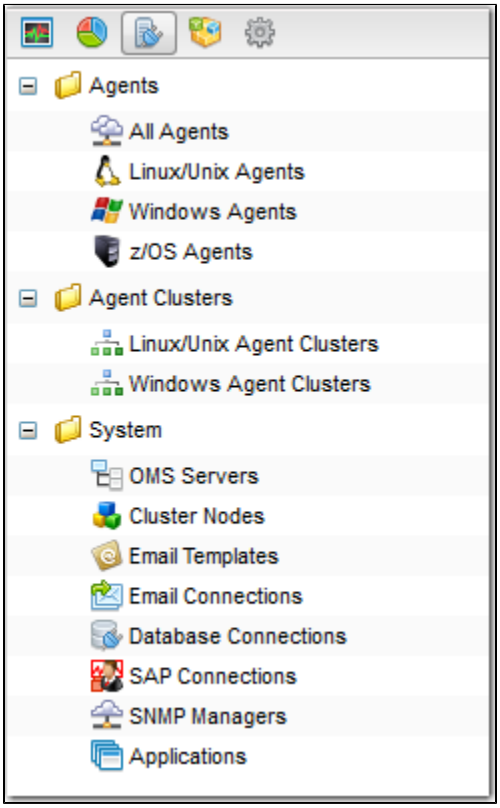


Menu Option	Description and Links
Dashboards	Lists all Dashboards. From this page, you can view or edit any Dashboard, or create a new Dashboard.

Reports	Lists all Reports. From this page, you can view or edit any Report, or create a new Report.
Widgets	Lists all Widgets. From this page, you can view or edit any Widget, or create a new Widget.
Colors	Lists all Colors. From this page, you can view and edit the color assigned by default to any task instance status.

Agents & Connections Navigation Pane

The Agents & Connections navigation pane provides access to the following areas:

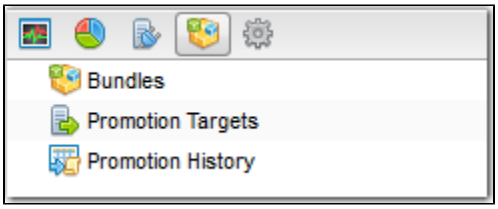


Area	Menu Option	Description and Links
Agents	All Agents	Lists all Agents. From this list, you can view or edit any Agent resource record. You also can suspend/resume any Agent.
	Linux/Unix Agents	Lists all Linux/Unix Agents. From this list, you can view or edit any Linux/Unix Agent resource record, as well as suspend/resume any Linux/Unix Agent.
	Windows Agents	Lists all Windows Agents. From this list, you can view or edit any Windows Agent resource record, as well as suspend/resume any Windows Agent.
	z/OS Agents	Lists all z/OS Agents. From this list, you can view or edit any z/OS Agent resource record, as well as suspend/resume any z/OS Agent.
Agent Clusters	Linux/Unix Agent Clusters	Lists all Linux/Unix agent clusters. From this list, you can view or edit any Linux/Unix agent cluster record, as well as suspend/resume any Linux/Unix agent cluster.
	Windows Agent Clusters	Lists all Windows agent clusters. From this list, you can view or edit any Windows agent cluster record, as well as suspend/resume any Windows agent cluster.
System	OMS Servers	Lists all Opswise Message Service (OMS) servers. From this list, you can create a new OMS Server record and view Details of any existing OMS Server record. From OMS Server Details, you can edit the record and display the list of Agents using this OMS Server.
	Cluster Nodes	Lists all cluster nodes in your system. From this list, you can view Details of any cluster node and create Cluster Node Notifications.

	Email Templates	Lists all Email Templates, which allow you to create commonly-used information that can be referred to in an Email task. From this list, you can view, edit, and create Email Templates.
	Email Connections	Lists all Email Connections, which provide all of the email server information necessary for the Controller to send emails. From this list, you can view, edit, and create Email Connections, as well as specify the Email tasks that will use the server specified in the Email Connection.
	Database Connections	Lists all Database Connections, which provide all the database server information necessary for the Controller to execute a SQL task or Stored Procedure task. From this list, you can view, edit, and create Database Connections, as well as specify the SQL and Stored Procedure tasks that can use this Database Connection.
	SAP Connections	Lists all SAP Connections that have been defined in your system, which provide the SAP server information necessary for the Controller to execute an SAP task on an SAP system.
	SNMP Managers	Lists all SNMP Managers, to which SNMP notifications are sent.
	Applications	Lists all Applications that have been defined in your system and which can be monitored and controlled.

Bundles & Promotion Navigation Pane

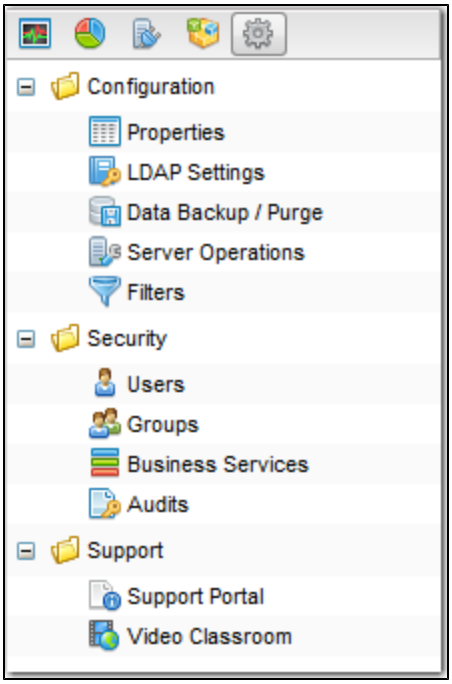
The Bundles & Promotion navigation pane provides access to the the following areas:



Menu Option	Description and Links
Bundles	Lists all Bundles, which are groups of user-selected records that can be promoted from one Controller server to another.
Promotion Targets	Lists all Promotion Targets, which are the cluster nodes to which you can promote a Bundle.
Promotion History	Lists a history of all promoted Bundles.

Administration Navigation Pane

The Administration navigation pane provides access to the the following areas:



Area	Menu Option	Description and Links
Configuration	Properties	Lists all Opswise Controller system .
	LDAP Settings	Allows you to configure Lightweight Directory Access Protocol (LDAP) settings. See LDAP Settings.
	Data Backup/Purge	Lists all Data Backup/Purge records in your system, which specify the automatic back-up and purge of Controller activity data. From this list, you can view, edit, and create Data Backup / Purge records.
	Server Operations	Lists all Server Operations, which you can run to help maintain and administer your Controller installation.
	Filters	Lists all record Filters for which the logged in user has permission. List filters are created using the filtering fields on the record list itself. Note that this feature is used only for record lists, not the Activity Monitor. This feature allows you to update or delete existing filters.
Security	Users	Lists all users that have been defined in your system.
	Groups	Lists all user groups that have been defined in your system.
	Business Services	Lists all Business Services. From this list, you can view or edit any Business Service, or create a new Business Service.
	Audits	Lists all Audits that have been created for user interaction with the Controller.
Support	Support Portal	Links to the Support page on the Stonebranch website.
	Video Classroom	Links to the Opswise Controller Video Classroom, which provides demos of Controller features.

Records

- Introduction
  - Naming Tips
- Creating a Record
- Opening a Record
- Record Details
- Record Details Fields
  - Selecting Field Values
  - Details Icon
  - Field Hints
- Record Details Tabs
- Complete Database Details
- Record Details Metadata
  - Metadata Field Descriptions
- Performing Actions on a Record
  - Updating a Record
  - Copying a Record
  - Printing a Record
  - Deleting a Record
- Hiding Record Details (or a List of Records)
- Record Versioning
  - Viewing Old Versions of Records
  - Restoring Old Versions of Records
  - Purging Old Versions of Records
  - Enabling/Disabling Versioning
- Exporting and Importing Records
- Updating Multiple Records
  - Updating Manually Selected Records
  - Updating Records That Match the Current Filter
  - Update / Update Filtered Dialog Columns
  - Update / Update Filtered Dialog Variable Fields for Tasks

Introduction

A record is an entry in the Opswise Controller database. Most records are created by the user via the user interface, but others (such as Agent records) are created by the Controller.

All system-supplied and/or user-supplied information about a record is contained in the record Details.

Naming Tips

Many functions within Opswise Controller are executed against one or more records.

For example, you can assign a user permission to:

- Change only certain tasks.
- Issue commands against a group of task instances.
- Filter a trigger list to display only certain triggers.

Two methods are available to help you organize your records to facilitate the use of these functions.

Method 1	Develop a naming scheme for records. For example, when naming tasks, you could prepend with **SF** all tasks related to San Francisco operations, or you could prepend with **REPT** all report-related tasks. With such a naming scheme, you can sort and filter lists by selecting records, for example, that begin with "REPT." You can assign permissions and execute commands against records using the same method.
Method 2	Use Business Services, which simply is a method of grouping records. Whenever you create a record, you can assign it to a Business Service. For example, you could have a Business Service called "SF" and a Business Service called "REPT." Using this method, you could then filter or sort a list based on the Business Service. As another example, you could assign permissions to a user, giving the user update permission to all records in the "REPT" Business Service. Business Services allow you to create groups based on business functions and organize all your Controller records according to user-defined categories.

Creating a Record

Step 1	Select a record type from the appropriate navigation pane of the Navigator. The records list for that record type displays.
Step 2	Either: • Enter / select information for a new record in the empty Details that displays below the list. • Click the **New** button that displays above the list to display an empty Details pop-up, and enter / select information for a new record.
Step 3	Click the **Save** button to save the record.

Note
You also can create a record by copying and renaming an existing record.

Opening a Record

Opening a record refers to the displaying of a record Details.

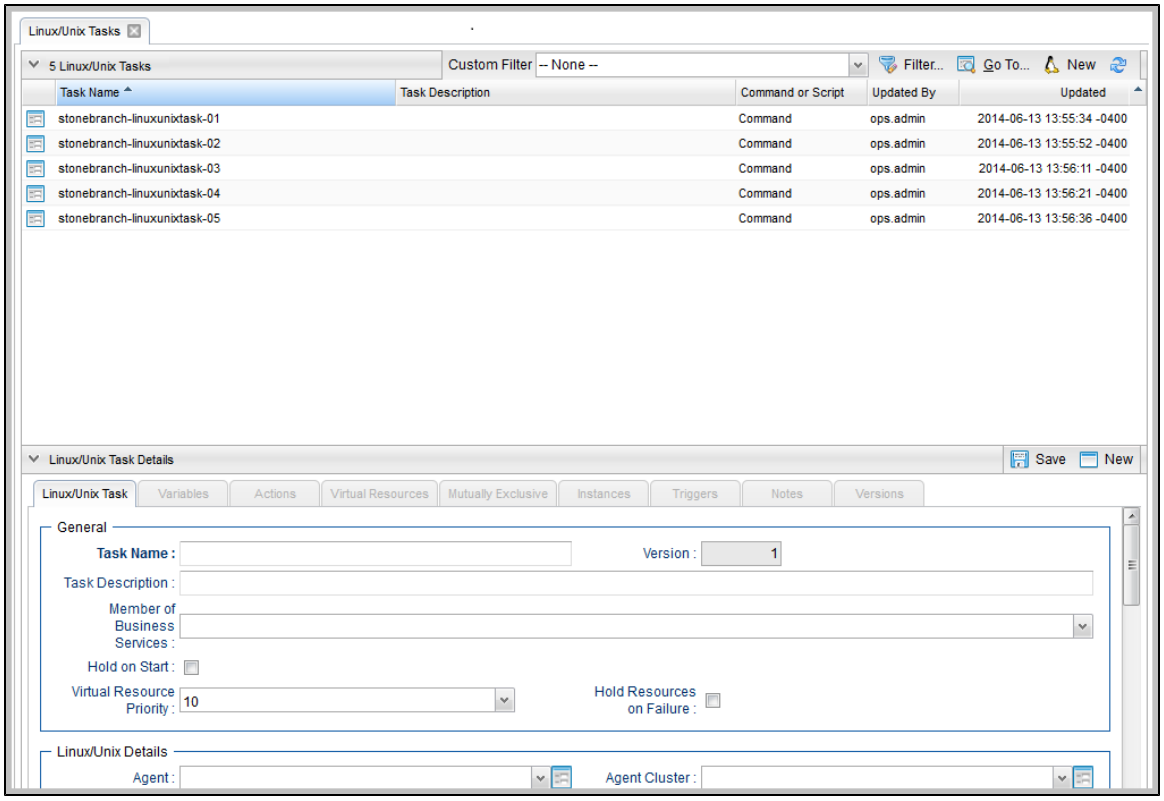
Note
Some actions (such as delete) can be performed on a record without opening the record.

Step 1	Select a record type from the appropriate navigation pane of the Navigator. The records list for that record type displays.
Step 2	Either: • Click a record in the list to display its record Details below the list. • Clicking the Details icon next to a record name in the list, or right-click a record in the list and then click **Open** in the Action menu that displays, to display a pop-up version of the record Details.

Record Details

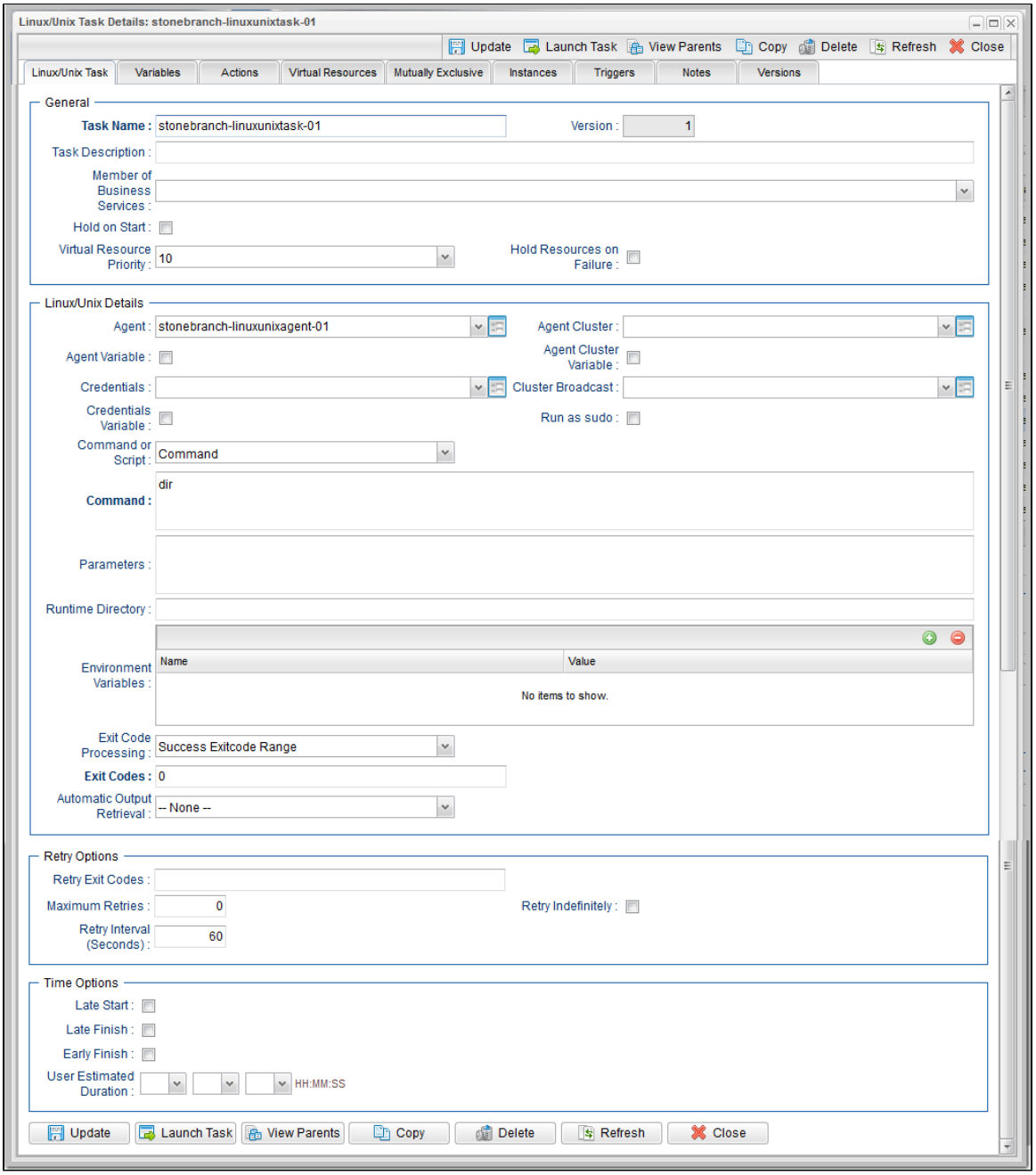
When you select a record type from the Navigator, a list of records for that type displays. Below the list, an empty record Details for a new record of that type displays.

For example:



To see Details of an existing record, open the record.

For example:



Record Details Fields

The following formatting applies to fields for all record types:

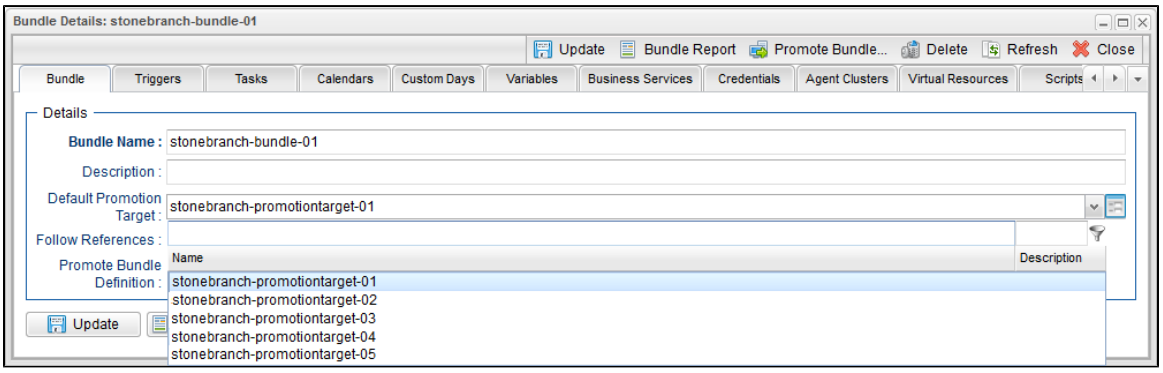
- Bold fields are required.
- Gray fields are read-only.
- White fields are editable. They may accept any value or only values selected from a drop-down list.
- Some fields provide a drop-down list of values, which are the only selections available for that field.
- Some fields contain a default value.
- Some fields provide hints that describe value to be entered/selected for that field.

Selecting Field Values

Many fields provide a drop-down list of values for that field. These fields have a down arrow next to it, which you must click to display the list of values.

Additionally, drop-down list fields whose available values are records (as identified by a Details Icon), provide a filter for only listing records that contain the sequence characters that you enter in any of the provided record fields.

In the following example, the drop-down list for **Default Promotion Target** lets you filter the list of Promotion Target records by **Name** or **Description** field:

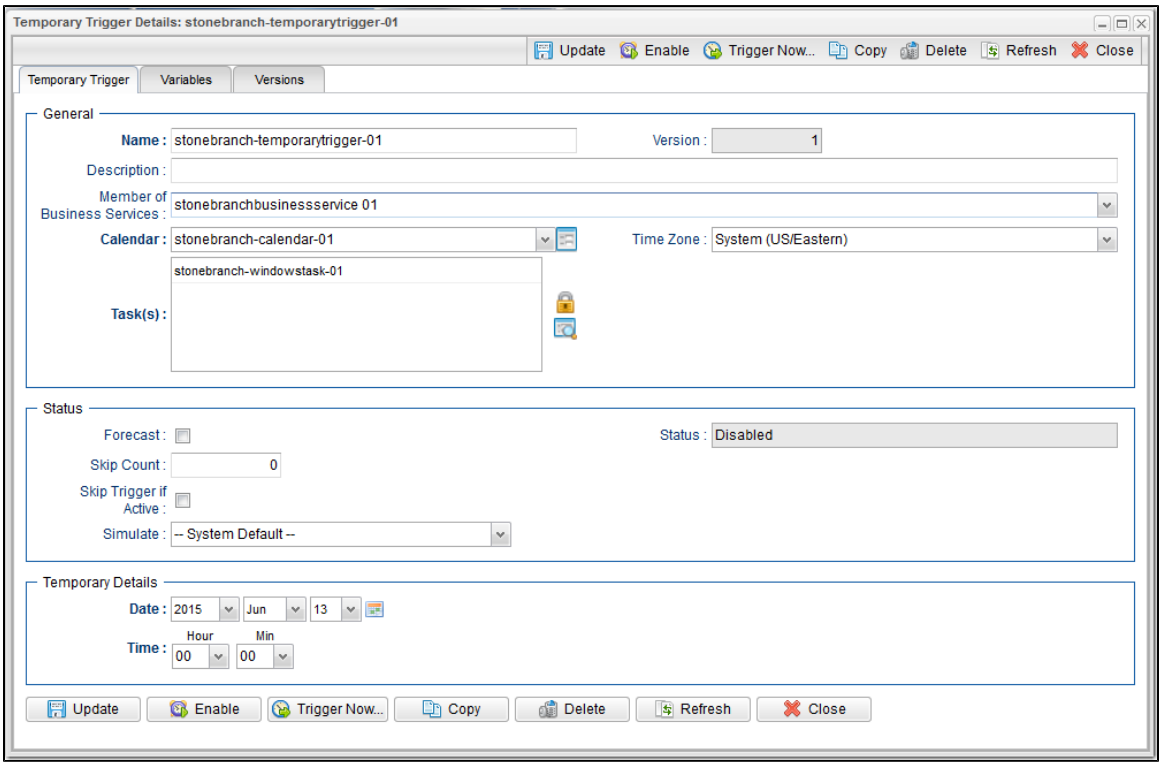


Details Icon

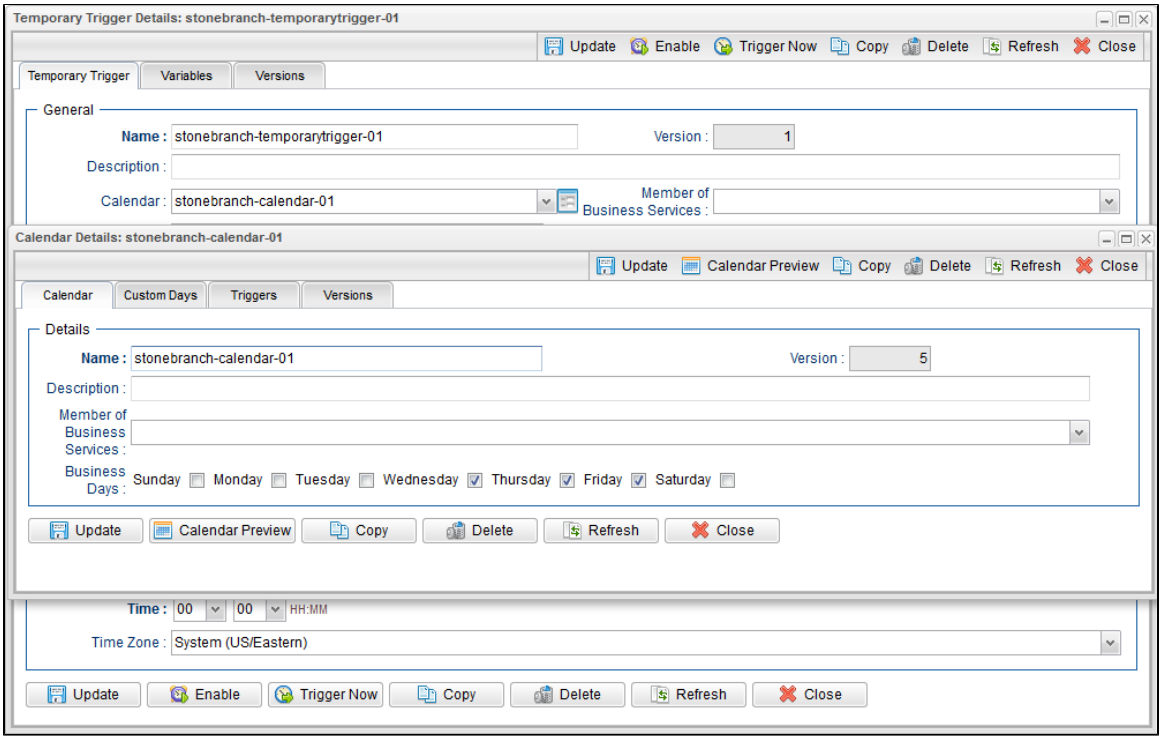
A Details icon displays next to a drop-down list field if the values available for that field are records.

- If the drop-down list field contains a value (a record selected from the list), you can click the Details icon to view (and modify) that record.
- If the drop-down list is empty, you can click the Details icon to create a record of that record type.

For example, every Trigger record contains a Calendar field whose value is the name of a Calendar selected from the drop-down list:



If you click the Details icon next to the Calender field, the Details for that Calendar displays.

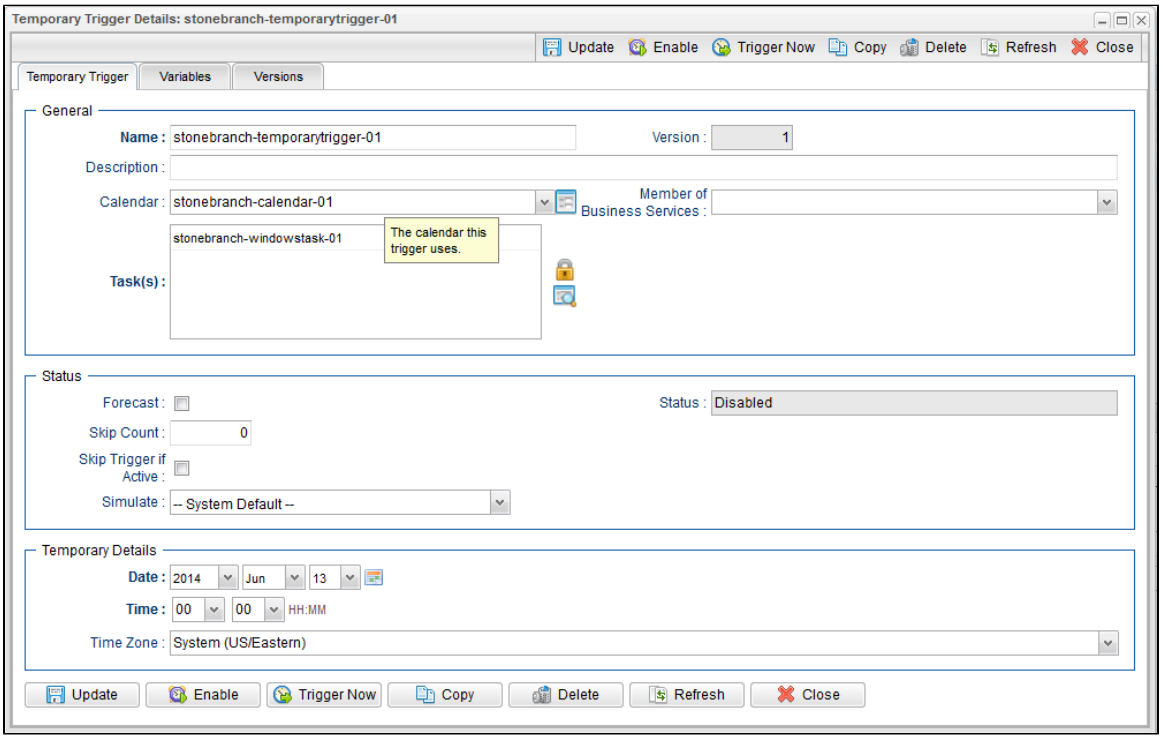


Field Hints

Fields hints describe the value to be entered/selected for that field.

To display a field hint, hover your cursor over the field value.

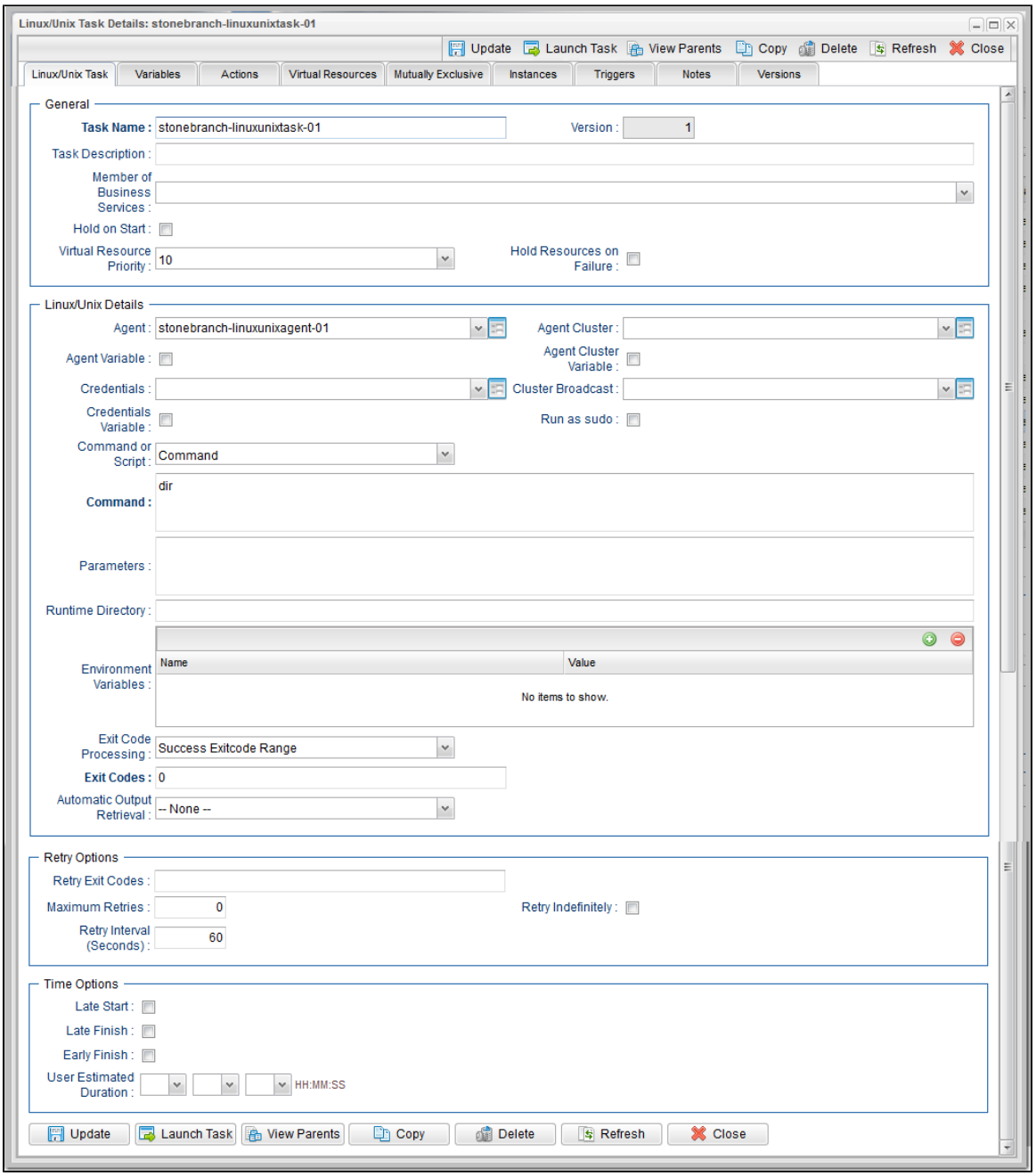
For example:



Record Details Tabs

The record Details for every record contains one or more tabs, including the default **<record type>** tab that provides detailed information about the record.

For example, Details for all tasks (except Workflows) provide eight tabs in addition to the **<record type>** tab. The currently selected tab displays in white. All other tabs display in gray.



Each tab displays a list of records that have been user-defined to be associated with the record. For example, the **Triggers** tab for a task would list any trigger records that specify this task in its trigger Details.

As appropriate for the type of record listed for a tab, the following also is provided:

- **Details** icon that allows you to view and edit Details for that record.
- **New** button that allows you to create a new record of that type and automatically associate it with the record whose Details are displayed in the **<record type>** tab.

When you click a tab to display a list of records associated with the current record, you can:

- View details about each record on the list.

- Create a new record of that type.

Complete Database Details

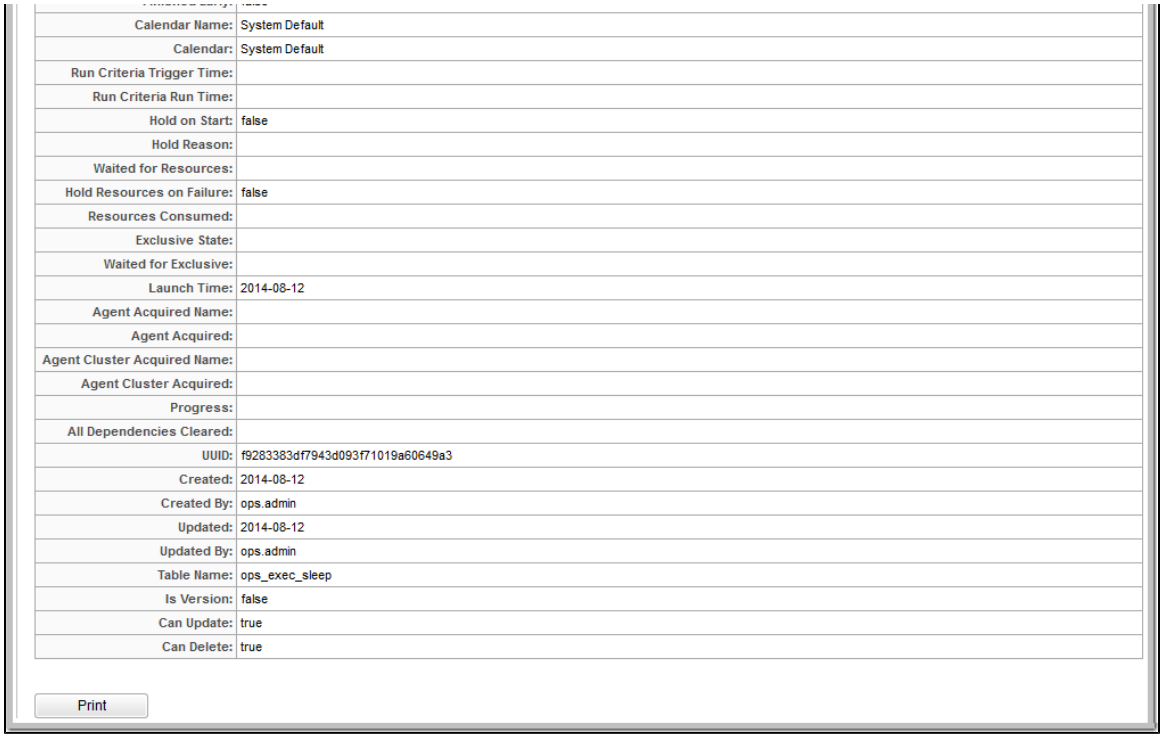
The information displayed in the Details for any record is only a portion of the complete details for that record contained in the Opswise Controller database.

To see the complete details, right-click anywhere in the record Details to display an Action menu and then click **Details > Show Details**.

For example:

Home | Timer1

Timer Type:	Seconds
Time in Seconds:	10
Wait Until Time:	00:00
Duration:	00:00:00
Class:	ops_exec_sleep
Task Name:	Timer1
Task:	Timer1
Instance Name:	Timer1
Task Description:	
Invoked By:	Trigger: Trigger A
Queued Time:	
State Changed Time:	2014-08-12
Start Time:	2014-08-12
End Time:	2014-08-12
CPU Time:	0
IO Reads:	0
IO Writes:	0
IO Other:	0
Memory Used:	0
Memory Peak:	0
Task Priority:	MEDIUM
Exit Code:	0
Status Description:	
Reference Id:	2
Status:	Success
Type:	Timer
Resources State:	
Virtual Resource Priority:	10
Agent Name:	
Agent:	
Workflow Definition Name:	
Workflow Definition:	
Workflow Name:	
Workflow:	
Workflow:	
Workflow Start Time:	
Trigger Name:	Trigger A
Trigger:	Trigger A
Vertex Id:	
Run Called:	
Forced Finished:	
Shortest Estimated End Time:	2014-08-12
Average Estimated End Time:	2014-08-12
Longest Estimated End Time:	2014-08-12
User Estimated End Time:	
Duration:	10 Seconds
Duration In Seconds:	10
Credentials Name:	
Credentials:	
Credentials Unresolved:	
Credentials Variable:	false
Maximum Retries:	0
Current Retry Count:	0
Retry Indefinitely:	false
Retry Interval (Seconds):	60
Attempt:	1
Member of Business Services:	Operations, Tech Support
Member of Business Services:	Operations, Tech Support
Security Name:	Timer1
Execution User:	ops.admin
Late Start:	false
Late Start Type:	Time
Late Start Time:	00:00
Late Start Duration:	
Started Late:	false
Late Finish:	false
Late Finish Type:	Time
Late Finish Time:	00:00
Late Finish Duration:	
Finished Late:	false
Early Finish:	false
Early Finish Type:	Time
Early Finish Time:	00:00
Early Finish Duration:	
Finished Early:	false

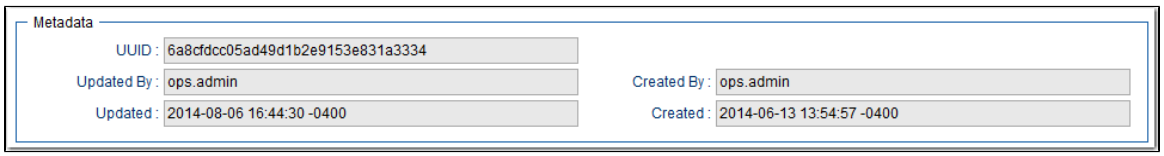


Calendar Name:	System Default
Calendar:	System Default
Run Criteria Trigger Time:	
Run Criteria Run Time:	
Hold on Start:	false
Hold Reason:	
Waited for Resources:	
Hold Resources on Failure:	false
Resources Consumed:	
Exclusive State:	
Waited for Exclusive:	
Launch Time:	2014-08-12
Agent Acquired Name:	
Agent Acquired:	
Agent Cluster Acquired Name:	
Agent Cluster Acquired:	
Progress:	
All Dependencies Cleared:	
UUID:	f9283383df7943d093f71019a60649a3
Created:	2014-08-12
Created By:	ops.admin
Updated:	2014-08-12
Updated By:	ops.admin
Table Name:	ops_exec_sleep
Is Version:	false
Can Update:	true
Can Delete:	true

Print

Record Details Metadata

The Action menu for every record Details contains a Details sub-menu. If you click **Show Metadata** on this sub-menu, a Metadata section displays at the bottom of the Details. (If Metadata is being displayed, the Details sub-menu contains a **Hide Metadata** entry.)



Metadata Field Descriptions

The following table describes the fields that display in the Metadata section of record Details.

Field Name	Description
UUID	Universally Unique Identifier of this record.
Updated By	Name of the user that last updated this record.
Updated	Date and time that this record was last updated.
Created By	Name of the user that created this record.
Created	Date and time that this record was created.

Performing Actions on a Record

You can perform many actions on a record by right-clicking anywhere in the the record Details to display an Action menu of all actions available for that record.

You also can perform many actions on a record (or multiple records) from a records list; that is, without having to open the record (see Performing Actions on a Record from a List).

> **Note**
> The actions available for a record when selecting an Action menu from the record Details may not be the same as the actions available when you select an Action menu from a list.

The following actions can be performed for all user-defined records:

- Updating
- Copying
- Printing
- Deleting

Updating a Record

Step 1	Open the record that you want to update.
Step 2	Make any desired updates to the record and click the **Update** button.

> **Note**
> If you change the name of a task that is part of a Workflow, the Controller automatically changes the name of that task within the Workflow itself.

Copying a Record

Step 1	Open the record that you want to copy.
Step 2	In the **<record> Name** field, enter a new name for the record.
Step 3	Right-click in the Details and then click **Insert** on the Action menu. The displayed record becomes a copy of the record you selected and is added to the list.

> **Caution**
> Do not use **Insert** to copy a task, trigger, or calendar unless it has no associated records, such as Actions, Notes, and Variables. Using **Insert** does not copy any records attached to the record. To copy a task, trigger, or calendar with all of its associated records, use the methods described in Copying Tasks, Copying Triggers, and Copying Calendars.
>
> Also, do not use the **Update** button to copy a record; the **Update** button overwrites the existing record.

Printing a Record

To print a hard copy of the Details of any record:

Step 1	Either: • Right-click the record in the records list and click **Details > Print** in the Action menu. • Open the record, right-click in the record Details, and click **Details > Print** in the Action menu.
Step 2	Select a printer and click **OK**.

Deleting a Record

Deleting a record removes it from the Controller database.

Step 1	Either:
	• Right-click a record in the records list and click **Delete** in the Action menu.
	• Open the record and either:
	  • Click the **Delete** button.
	  • Right-click anywhere in the record Details and click **Delete** in the Action menu.

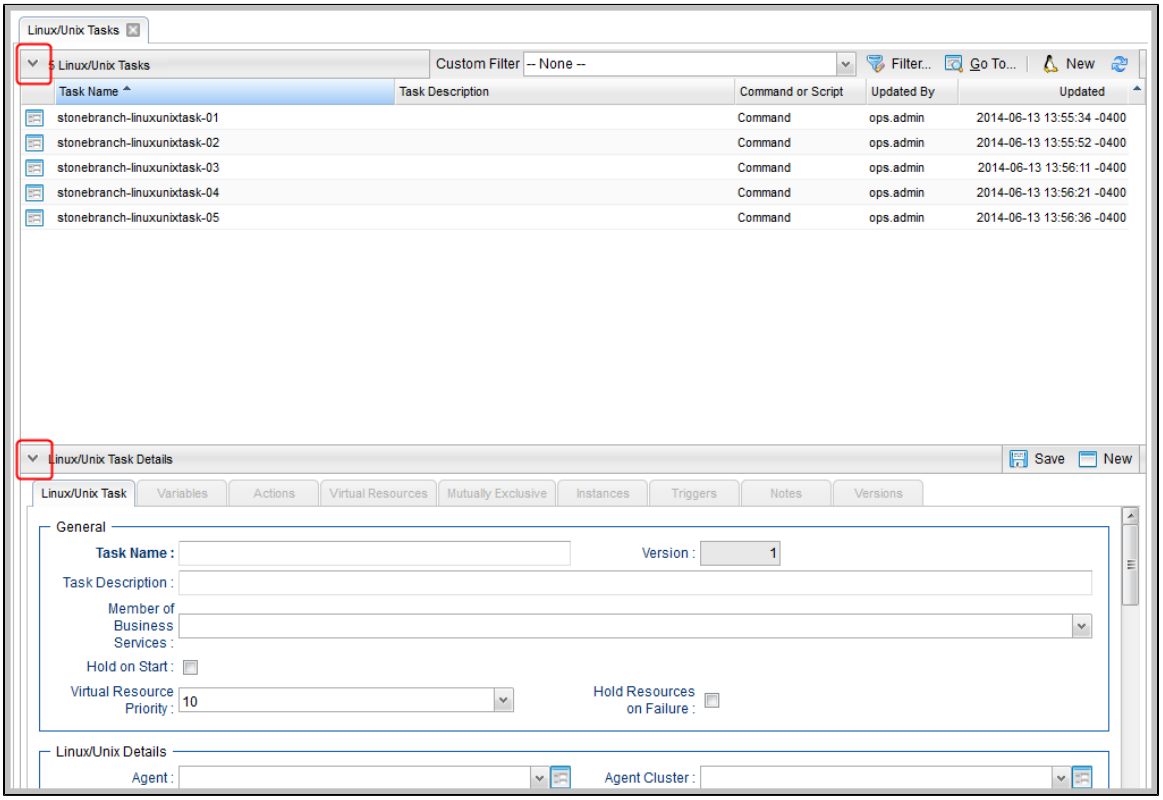
Step 2	On the Confirmation pop-up that displays, click **Yes**.

Hiding Record Details (or a List of Records)

You can temporarily hide record Details (or the list of records displays above the Details).

If you hide the Details, more records in the list can display. If you hide a list, more Details can display on the page.

- To hide the record Details, click the down arrow (**v**) at the top of the Details.
- To hide a list of records, click the down arrow (**v**) at the top of the list.



To redisplay a hidden Details or list, click the up arrow (**^**) that replaced down arrow (**v**) when you hid the Details or list.

Record Versioning

Opswise Controller maintains historical copies of most user-created records in the database. These include tasks and their associated records (virtual resources, variables, actions, notes), calendars and their custom day associations, custom days, variables, credentials, virtual resources, scripts (and associated notes), email templates and connections, database connections, SNMP managers, SAP connections, agent clusters, applications, Business Services, and triggers (and associated variables).

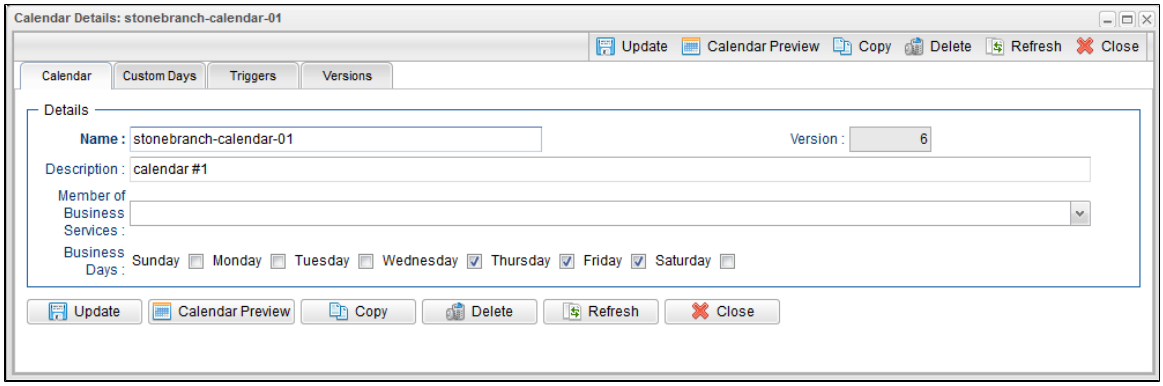
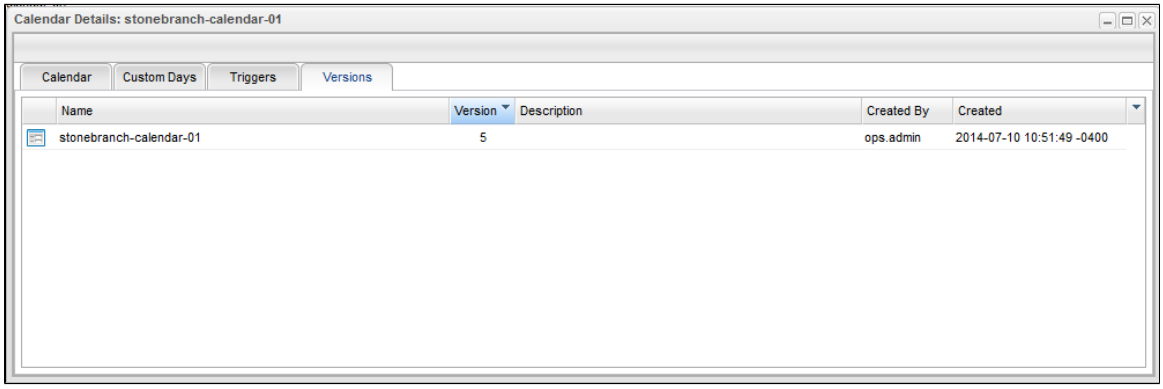
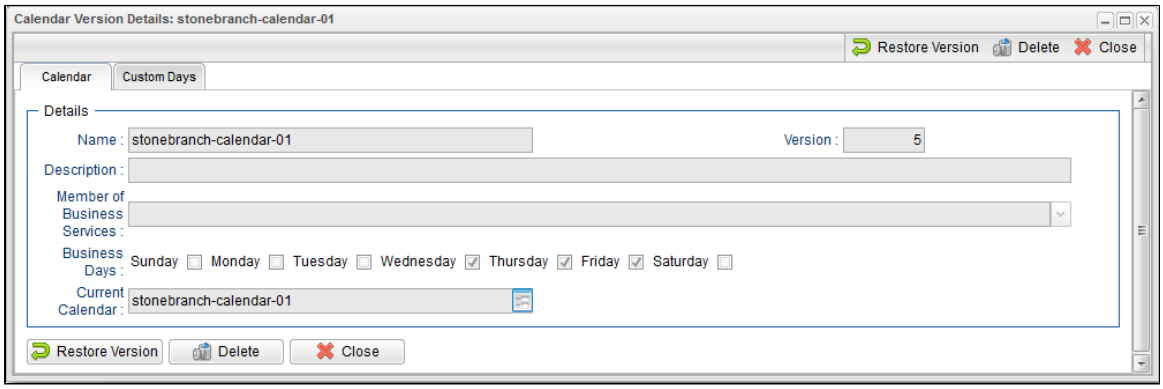
These historical copies - old versions of the current records - are read-only.

When you update any of these records, the Controller creates an image of the old version and stores it in the record's **Versions** tab. It also updates the **Version** field in the current version of the record. For example, if you have updated a task three times, there will be three versions of that task stored in the Versions tab, and the current version will be identified as Version 4.

Although you can purge old versions of records, the **Versions** field in the current record always will show how many versions of the record have been created.

Viewing Old Versions of Records

To view old versions:

Step 1	Open the record Details for which you want to view old versions. The **Version** field indicates how many versions of this record have been made. 
Step 2	Click the **Versions** tab. A list of old versions that exist for this record displays. Y 
Step 3	Click icon next to the **Name** of the version, or double-click anywhere in the version row, to displays Details for that version.  All of the associated records (tabs) contain the data as it existed when this version was the current version. At the top of the Details, the **Name** field contains the name of the record as it existed for this version. At the bottom of the Details, the **Current <record type>** field contains the current name of this record.
Step 4	Click **Close** to return to the version list.

Restoring Old Versions of Records

You can restore old versions to the current version. When you restore an old version, the current version will become the newest old version.

Step 1	Display the version of the record you want to restore.
Step 2	Click the **Restore Version** button.

Purging Old Versions of Records

The Controller provides two methods for purging old versions of records.

> **Note**
> When you purge old versions of records, the version number of the current version remains the same.

Purge Specific Versions

Step 1	Display the Details of the record for which you want to purge versions.
Step 2	Click the **Version** tab to display a list of old versions of that record.
Step 3	Either: • Ctrl-click one or more versions to be purged, right-click in the row of any selected version, and click **Delete**. • Display the Details of a version that you want to delete and click the **Delete** button.

Purge All Outdated Versions

Step 1	From the **Administration** navigation pane, select **Configuration > Server Operations**. The Server Operations list displays.
Step 2	Run the Purge Versions server operation to purge versions that exceed the maximum number of records allowed, as defined by the System Default Maximum Versions Opswise Controller property.

Enabling/Disabling Versioning

Two properties are available that allow you to control if and when the Controller automatically creates a new version of a record (and all its associated records):

- The Automatically Create Versions Opswise Controller system property (true or false) determines whether modifications to the record itself will cause the Controller to create a new version of the record. The default value is true. If this property is set to false, the Controller does not create versions.
- The Create Version On Related List Change Opswise Controller system property (true or false) determines whether changes, deletions, or additions to a related list will cause the Controller to create a new version of the record. For example, if this property is enabled, the Controller will create a new version of the task and all its associated records when the user adds a variable to the task, deletes a Note, or changes an Email Notification. The default value is true. If this property is set to false, and the Automatically Create Versions property is set to true, the Controller creates a new version only if the base record is updated.

To change one or both of these properties:

Step 1	From the **Administration** navigation pane, select **Configuration > Properties.**
Step 2	Locate the property you want to change.
Step 3	Double-click the **Value** and select **true** or **false**.

Exporting and Importing Records

Opswise Controller provides Server Operations (in Controller 5.2.0 and earlier: maintenance scripts) that allow you to perform a bulk export and bulk import of all records in your Controller database.

Normally, you would use bulk export and bulk import to migrate data during a Controller upgrade.

See:

- Run an Import
- Run an Export

You also can perform an export of records selected on a list, or an import of an XML file to any list, for a specific record type.

Important!
It is strongly recommended that you do NOT use the Import and Export functions for modification of Universal Controller records. API functions are available if you need to programmatically update, copy, insert, or otherwise manipulate Universal Controller records.

Updating Multiple Records

You can update multiple records from any of the following lists:

- Tasks list for any task type
- All Tasks list
- Triggers list for any trigger type
- All Triggers list
- Virtual Resources list
- Email Templates list

There are two actions available for updating multiple records:

1. Update - Updates all manually selected records on the list.
2. Update Filtered - Updates all records that match the currently selected filter for the list.

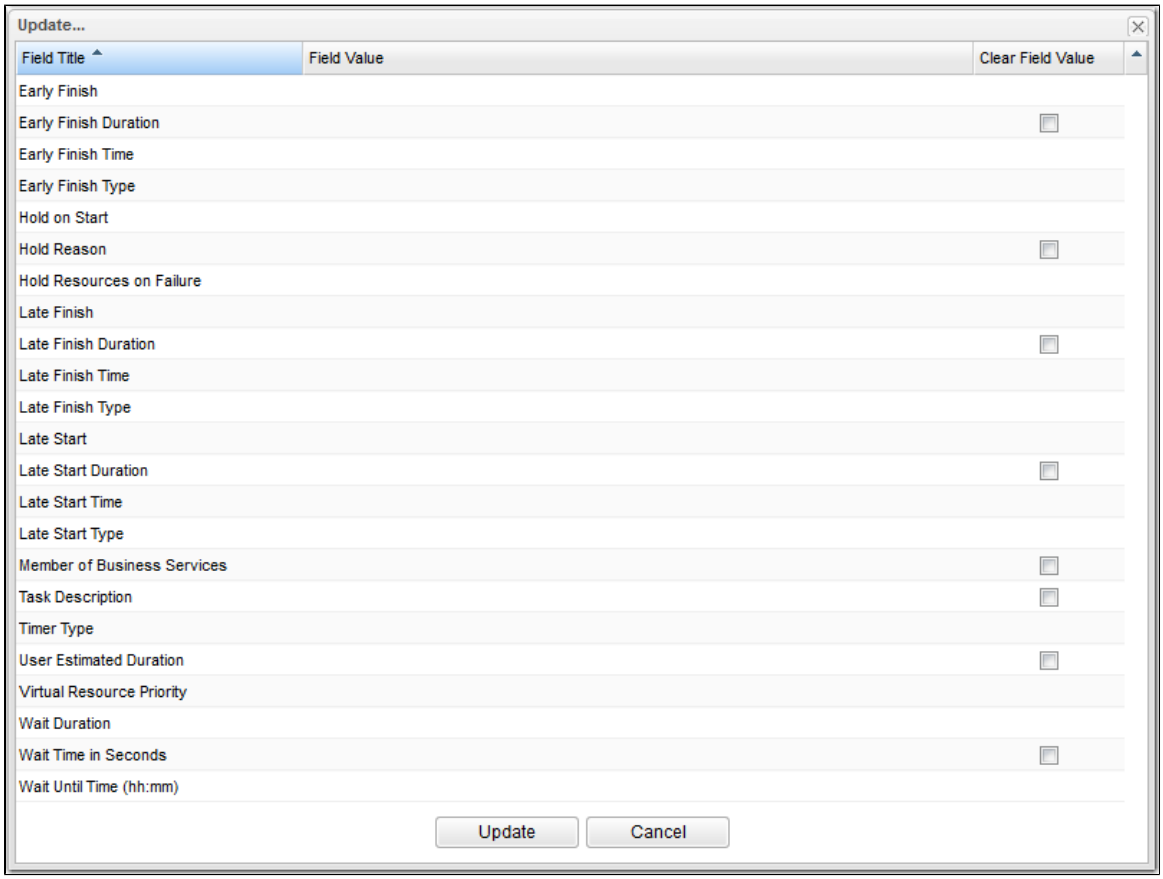
Updates are applied and validated per selected record, since a valid update for one record may not be valid for another. A validation failure for one update does not prevent the update of other records.

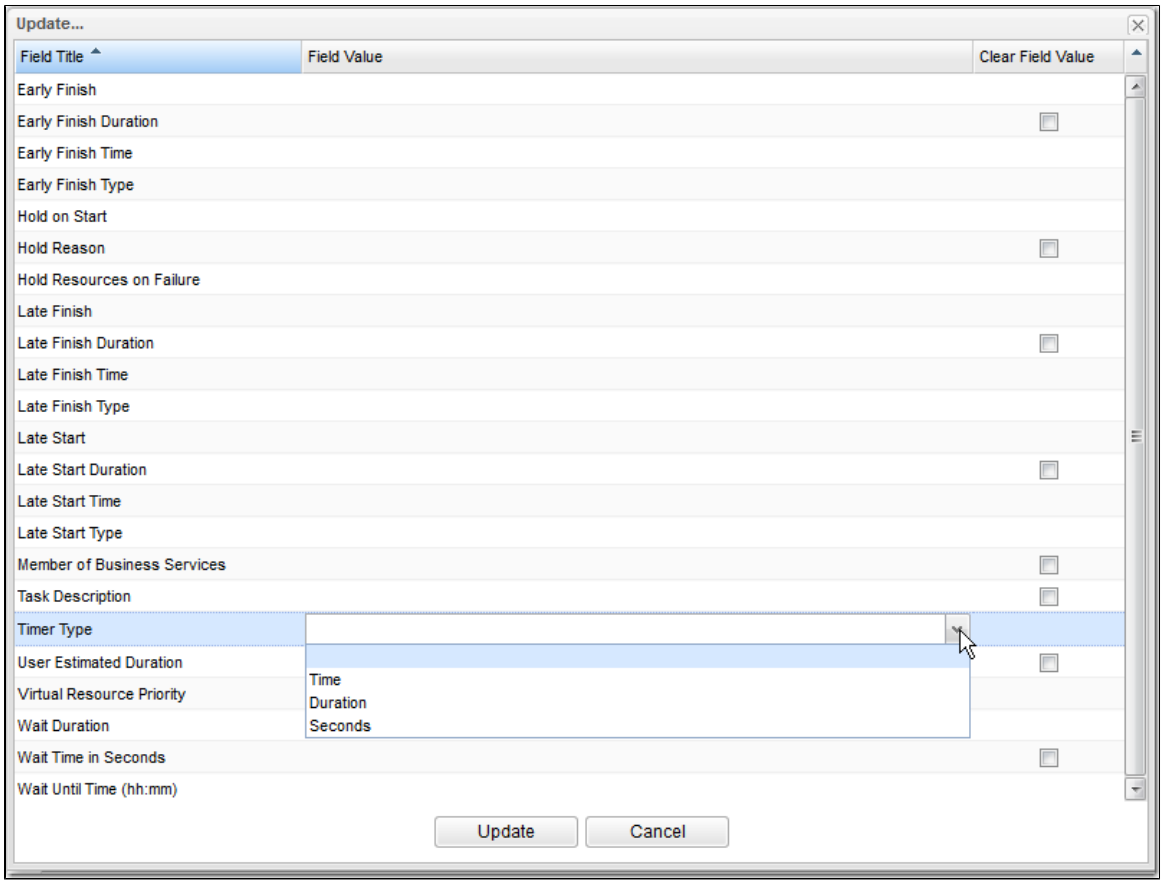
Updating Manually Selected Records

Step 1	Select the list from which you want to update multiple records.
Step 2	Ctrl-click each record on the list that you want to update.
Step 3	Right-click any of the selected records to display an Action menu.

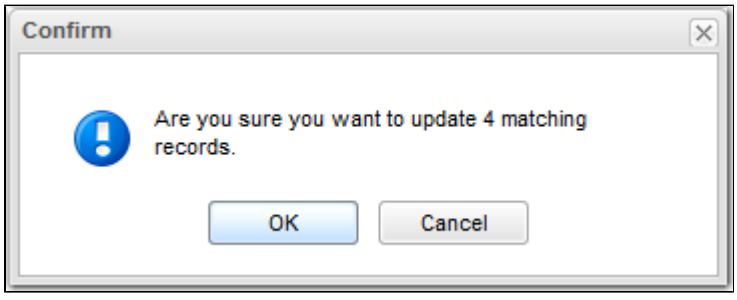
Step 4 Click **Update...** to display the **Update** dialog, which lists every field that can be updated for that record type (since read-only fields cannot be updated, they are not displayed).

For example, the following **Update** dialog displays if you select multiple Timer Task records.



Step 5	For any field, click anywhere in the **Field Value** cell to display an editor where you can enter / select a value. For example, if you click the **Timer Type** row, a drop-down list displays that lets you select any of three valid timer types. 
Step 6	If you want to clear the value of a field for each selected record and not select a new value, click the **Clear Field Value** check box.
Step 7	Click the **Update** button to update all of the fields with the changed values.

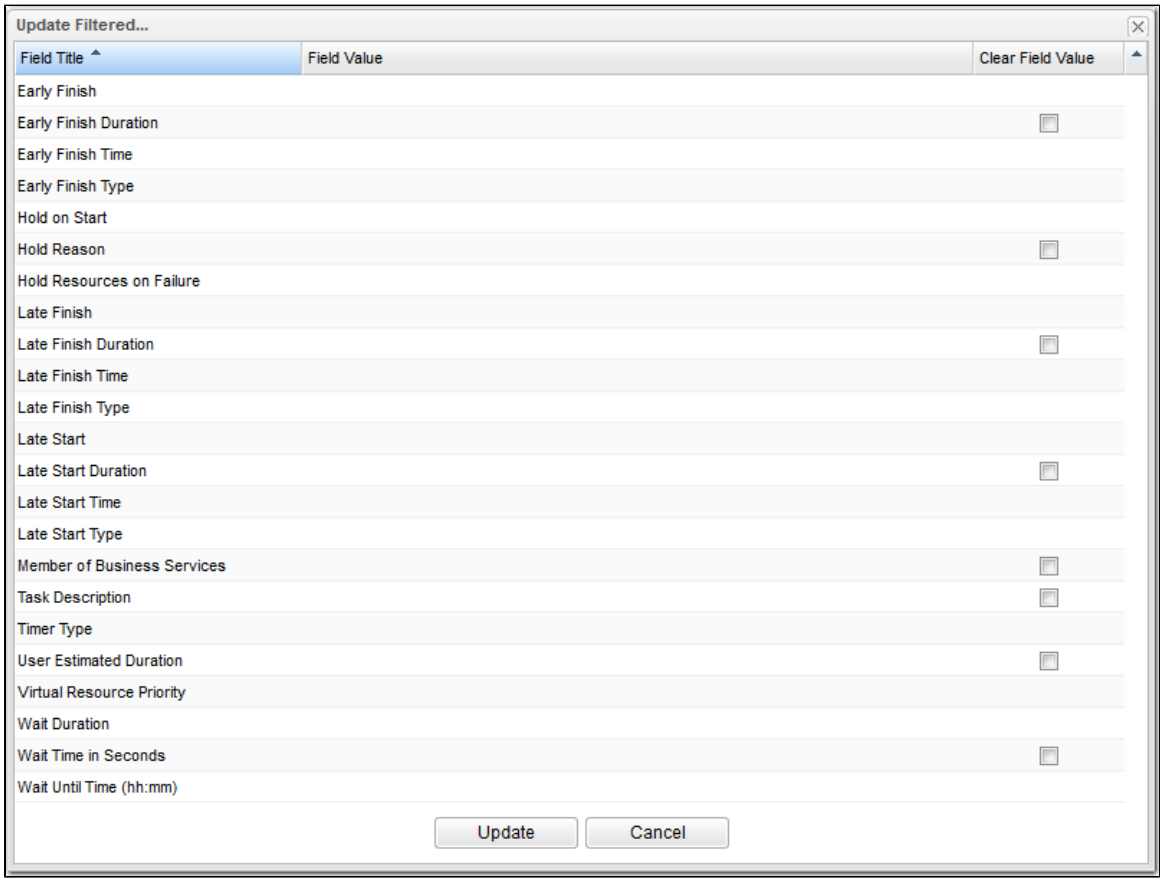
Updating Records That Match the Current Filter

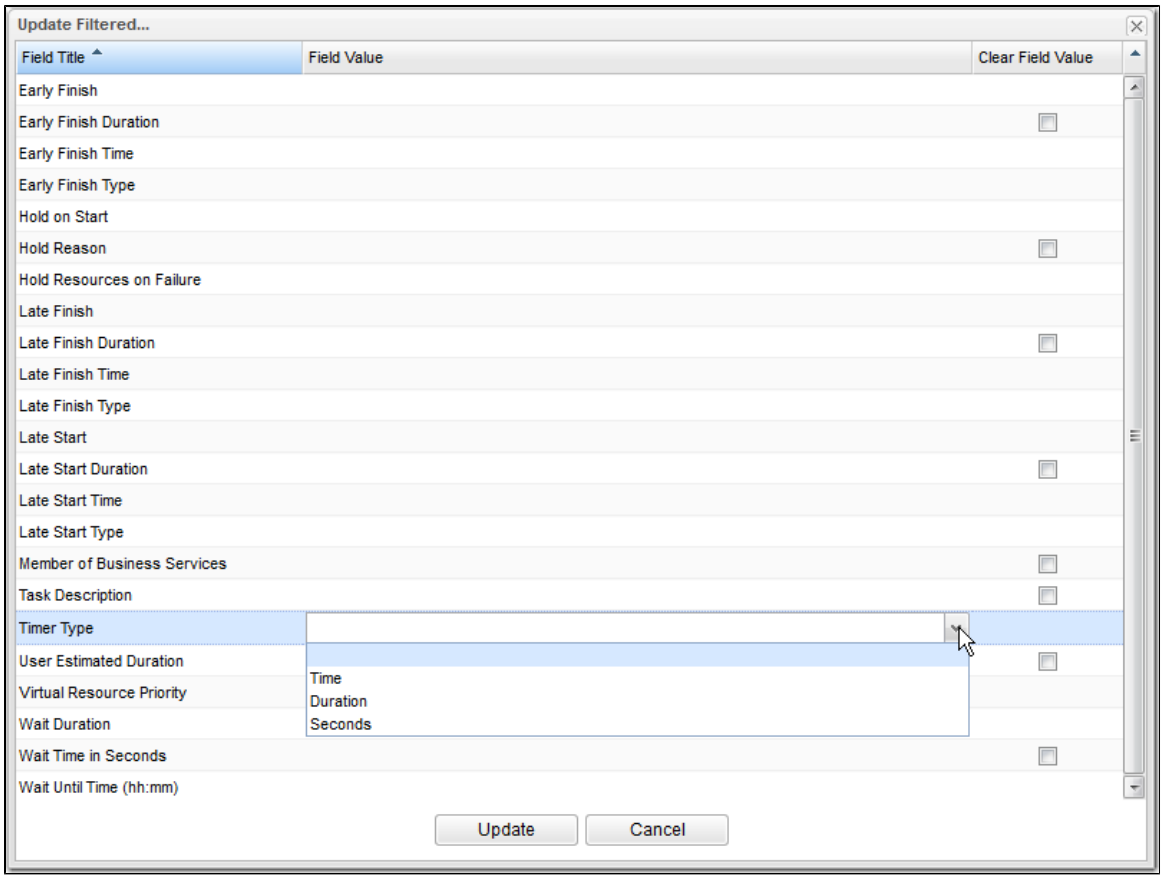
Step 1	Select the list from which you want to update multiple records.
Step 2	Create a Filter to display only those records that you want to update.
Step 3	Right-click the list header to display an Action menu.
Step 4	Click **Update Filtered...**. A Confirm pop-up displays. 

Step 5

Click **OK** to display the **Update Filtered** dialog, which lists every field that can be updated for that record type (since read-only fields cannot be updated, they are not displayed).

For example, the following **Update Filtered** dialog displays if you select multiple Timer Task records.



Step 6	For any field, click anywhere in the **Field Value** cell to display an editor where you can enter / select a value. For example, if you click the **Timer Type** row, a drop-down list displays that lets you select any of three valid timer types. 
Step 7	If you want to clear the current value of a field for each selected record and not select a new value, click the **Clear Field Value** check box.
Step 8	Click the **Update** button to update all of the fields with the changed values.

Update / Update Filtered Dialog Columns

The following columns display on the Update / Update Filtered dialog:

Field Title	Name of the field as displayed in the Record Details.
Field Value	Value that you want to select for this field in all of the selected records.
Clear Field Value	Check box indicating whether or not to clear the value from this field when the record is updated. By default, this column is unselected for all fields. For fields that cannot be blank (for example, fields that demand a **yes** or **no** value), the check box will not be displayed.

Since read-only fields cannot be updated, they are not displayed on the List.

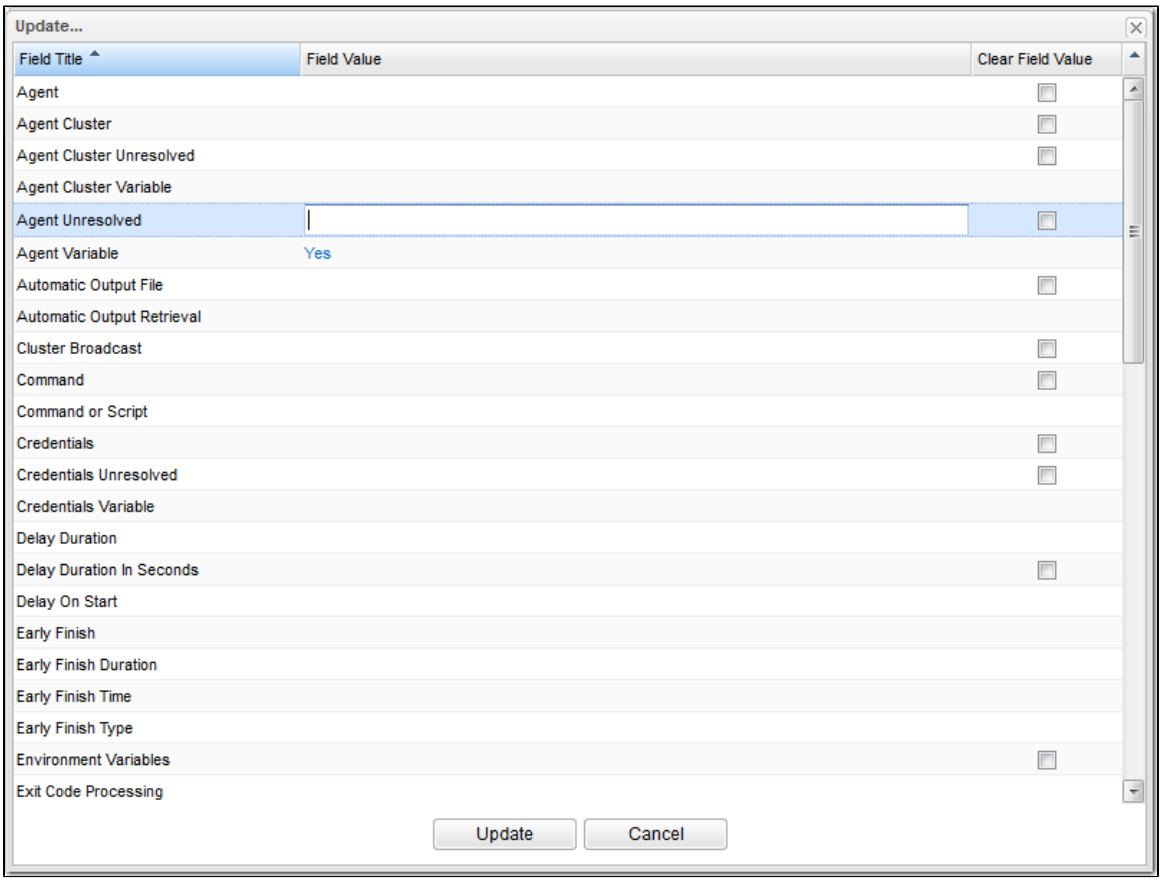
If you are updating multiple records on the All Tasks list or All Triggers list, the Update / Update Filtered dialog contains only fields that are common to all types of tasks or triggers.

Update / Update Filtered Dialog Variable Fields for Tasks

The Record Details for many individual tasks contain one or more Variable fields that allow you enter a variable instead of selecting a record. For example, if you select **Agent Variable** in the Details for a single Linux/Unix task, the **Agent** field converts from a reference field (where you browse and select a record) into a text field that allows you to enter the variable.

In the Update / Update Filtered dialog for multiple tasks, the **Agent** field is not converted into a text field if you select **Agent Variable**. Instead, an additional field - **Agent Unresolved** - is provided, into which you enter a variable, variable and text, or Agent name. The **Agent** field is not used.

For example:



Record Lists

- Introduction
- List Task Bar
- Formatting a List
- Sorting
  - Configure a Multi-Level Sort
- Filtering
- Selecting Columns / Column Locations for a List
- Layouts
- Hiding a List (or Details)
- Adding Records from a List
- Deleting Records from a List
- Updating Multiple Records from a List
- Performing Actions on One or More Records from a List
- Exporting Records to an Output File
  - Exporting Records to CSV, PDF, XLS (Excel), or XLSX
  - Exporting Records to XML, XML (Export References), or Permissions for Group
- Importing Records from a File

Introduction

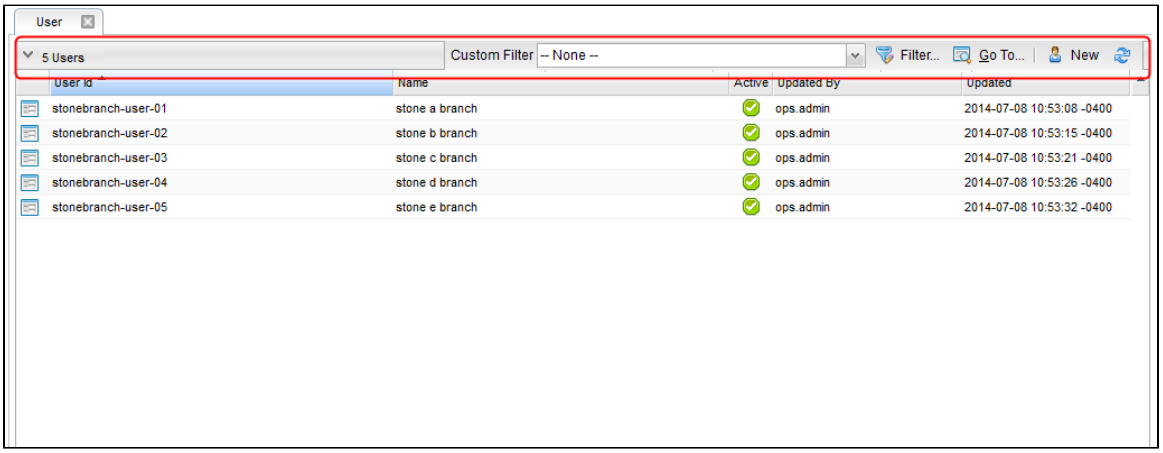
A record list is either a:

- Listing of records of the same type, such as tasks, calendars, or users.
- Listing of all records of the same type or category, such as all tasks or active triggers.

When you click a record type in the Navigator, a list of currently defined records for that record type displays.

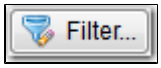
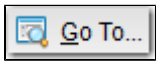
List Task Bar

A task bar displays at the top of every list. For example:



The following table describes the different elements that can appear on a list task bar and the function of each element:

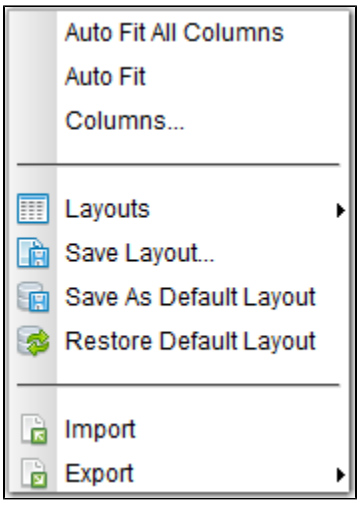
Task Bar Element	Function
	Allows you display or hide the list.
	Allows you to apply an existing filter to the records on the list. The default selection is **-- None --** (no Filter is applied). Click the down arrow to display a list of existing filters.

	Allows you to create a filter that you can save or apply to the records on the list.
	Allows you to create a quick record name filter that you can apply (but not save) to the records on the list.
	Allows you to create a new record of the record type displayed on the list.
	Allows you to refresh any dynamic data displayed on the list.

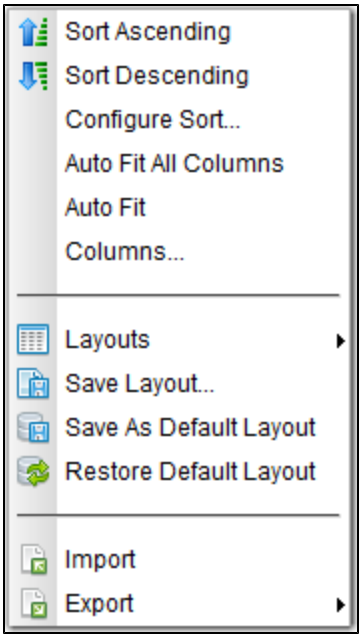
Formatting a List

For every list in the user interface, an Action menu of formatting options is available.

To display the menu for most lists, hover your cursor over the empty gray column header that displays over the Detail icons column, and then click the blue down arrow.



For all lists, you can right-click any column header on the list to display an Action menu of formatting options preceded by sort actions for the selected column.



See Action Menus for a description of these formatting and sort options.

Sorting

By default, lists are sorted by **<record type> Name** in ascending, alphanumeric order (0-9, a-z).

You can sort a list in ascending or descending order of of the entries in any displayed column.

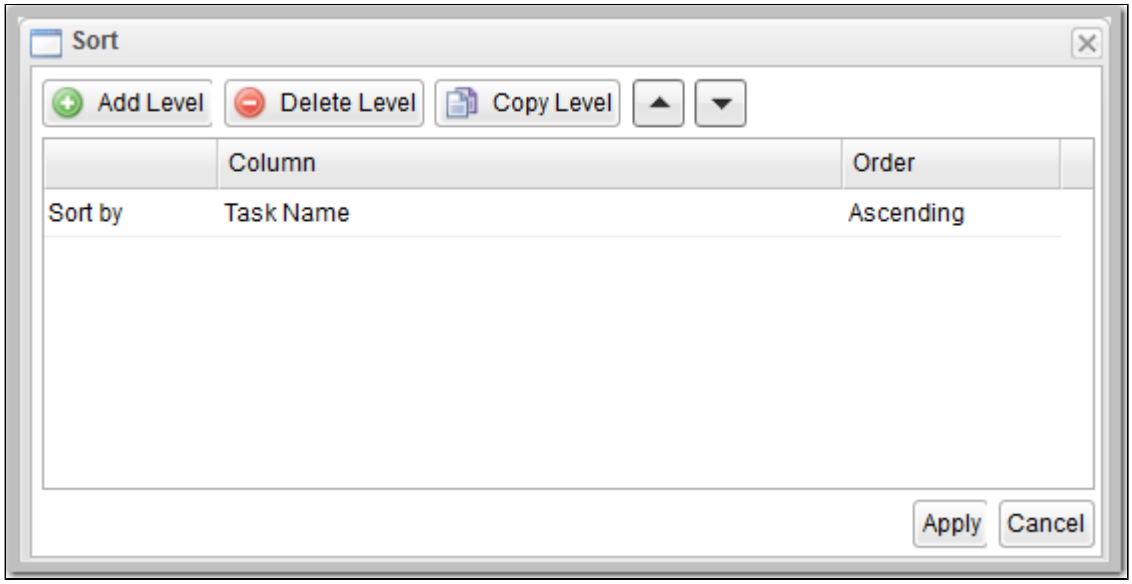
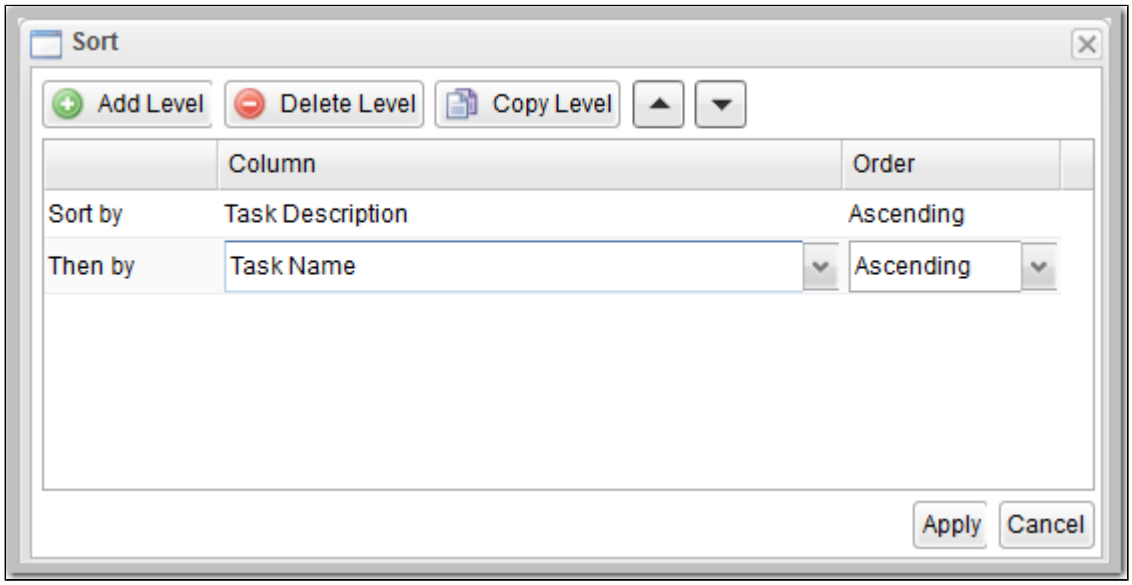
There are two ways to sort a list:

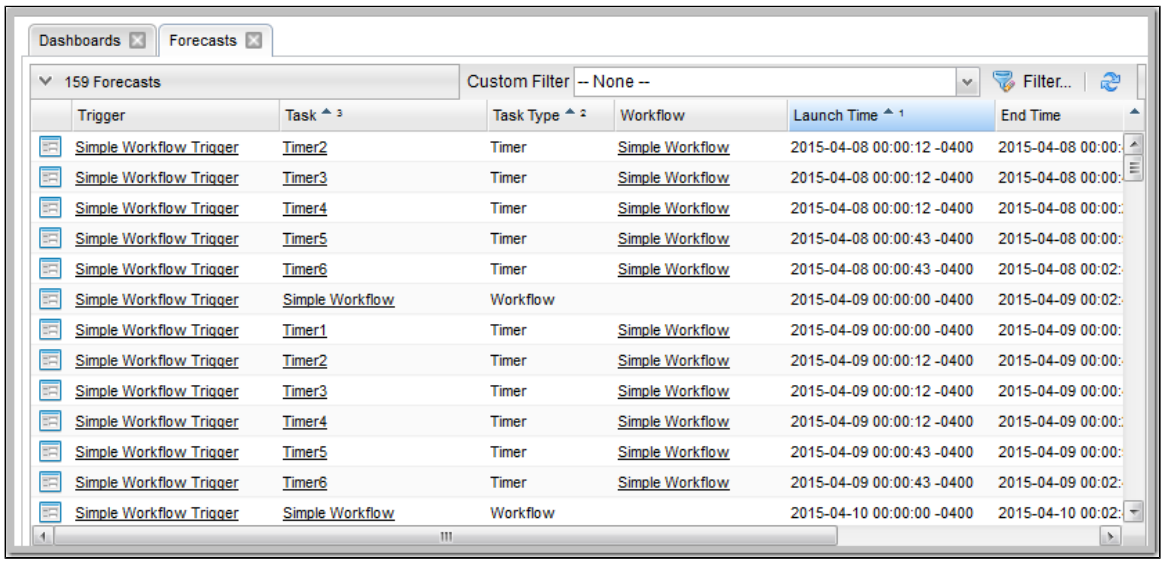
1. Click a column header; the list is sorted in ascending order of the entries in that column. A small arrow appears to the left of the column name to indicate the direction of sort. An up arrow indicates ascending alphanumerical order; a down arrow indicates descending alphanumerical. Re-click the header to reverse the direction of sort.
2. Right-click a column header to display an Action menu and click either:
    - Sort Ascending
    - Sort Descending

Configure a Multi-Level Sort

You can use the Configure Sort action to create a temporary, multi-level sort for any column.

Step 1	Click a column header to sort the list by the currently defined sort level of that column (default is column name in ascending order).
Step 2	Right-click the same column header to display an Action menu.

Step 3	Click **Configure Sort...** to display the Sort dialog.  The **Sort By** row identifies the default **Column** and **Order** by which the list is sorted if you click the column header.
Step 4	Click the **Add Level** or **Copy Level** button to add a **Then by** row to the list. 
Step 5	Select a **Column** and **Order** for **Then by**.
Step 6	Add as many sort levels as desired. To remove a level from the dialog (including the default level), select it and then click **Delete Level** . Use the up and down arrow buttons to re-arrange the order of the levels.

Step 7	Click **Apply**. The list is sorted according to the levels that you have defined. Numbers display next to the column headers, identifying the sort order. For example: 
Step 8	To remove the temporary sort levels for the column, either: • Click anywhere in the list header row. • Right-click the column header of the column you were sorting and click **Clear Sort**.

Filtering

You can apply a filter to a list so that it temporarily displays only records matching the filter criteria, and you can create and save a filter that can be applied at any time to the list.

You also can create a quick filter that will filter a list by full or partial record name.

For detailed information on creating and applying filters, see Filters.

Selecting Columns / Column Locations for a List

Initially, all lists display default columns of information in default locations.

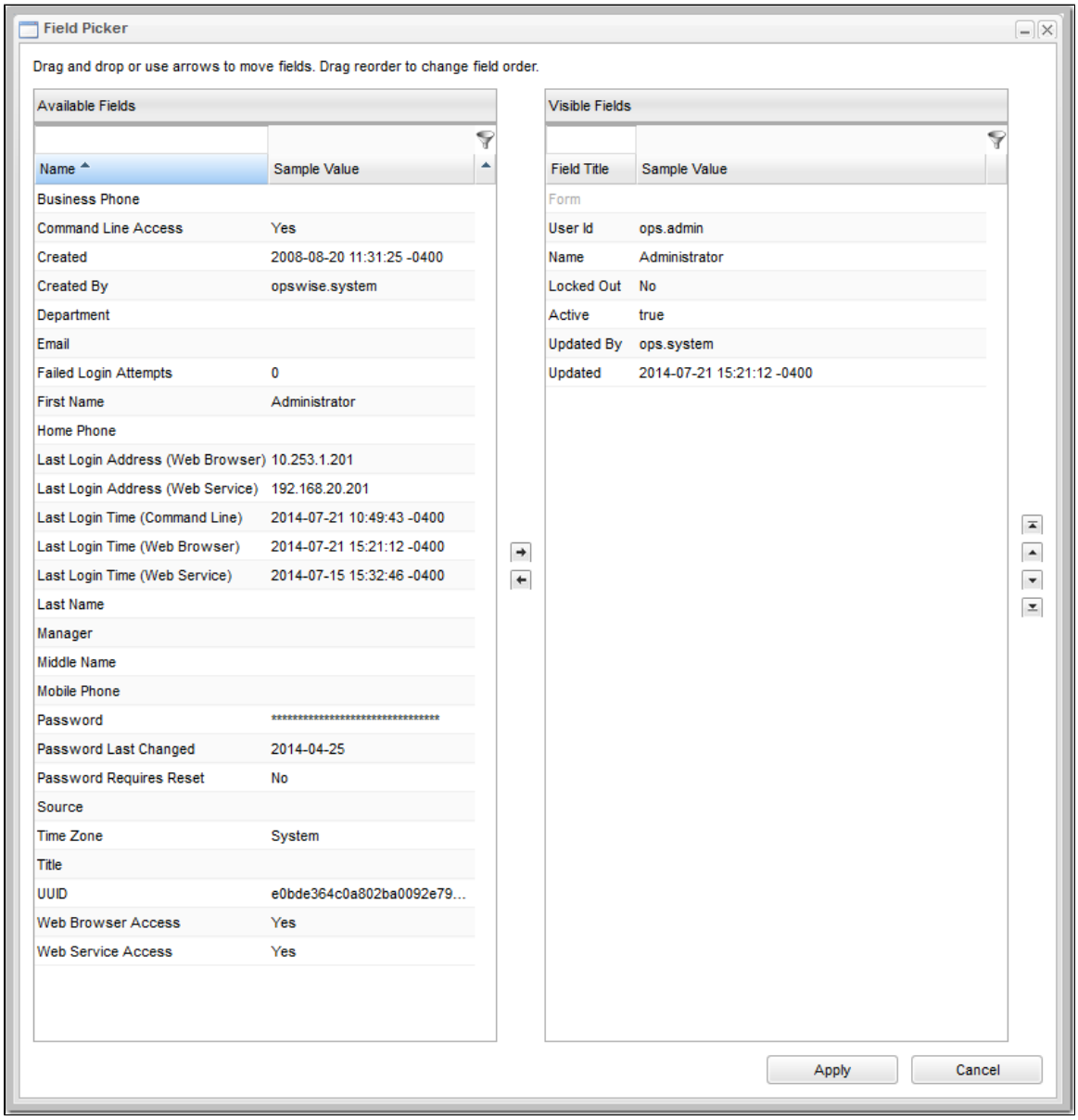
(The columns are based on the fields that exist for the record type in the Controller database; all fields may not appear in the record Details.)

You can change a list to display any available column in any location.

To select which columns you want displayed on a list:

Step 1	Display the list.
Step 2	Access the Action menu of list formatting options.

Step 3 Click **Columns...** to display the Field Picker pop-up dialog. (The following example shows the Field Picker pop-up that displays for the Users list.)



- The **Available Fields** window lists the fields that currently are not displayed on the list but are available for display.
- The **Visible Fields** window lists the fields that currently are displayed on the list (in left-to-right sequence).

Step 4	Drag and drop fields between the Available Fields and Visible Fields windows, as appropriate for whichever fields you want displayed on the list. You can drag and drop a field from the Available Fields window into any location in the Visible Fields window, and you can drag and drop any field in the Visible Fields window to a new location. Fields dragged from the Visible Fields window to the Available Fields are automatically dropped into location based on alphabetical order. **Note** You also can: • Move any field between the Available Fields and Visible Fields windows by clicking the field and then clicking the **>** or **<** arrow. • Relocate any field by dragging and dropping the corresponding column directly on the list.
Step 5	To filter the fields listed in either window, enter characters in the text field above the Name column. Only fields containing that sequence of characters will display in the list.
Step 6	Click the **Apply** button on the Field Picker dialog to save your relocation selections.

Layouts

Every list displays in its default layout when you first log in to the Controller. After you have sorted, filtered, selected columns, and/or relocated columns for a list, you can save your changes as a new Layout.

The following table describes the available selections on the Action menu for formatting a list:

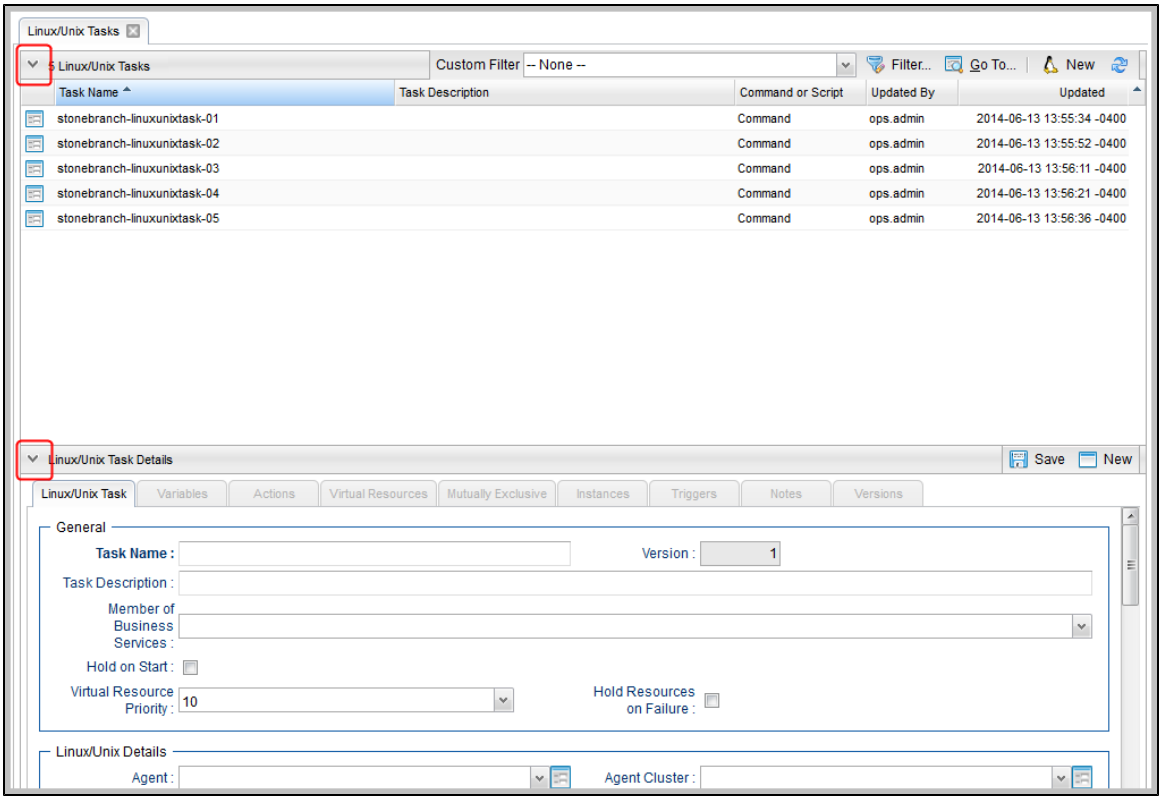
Layouts >	Displays a list of all layouts, including the default layout, that you can apply to this list.
Save Layout...	Save the current configuration of the list as a new layout. It then will be available in the **Layouts >** list.
Save As Default Layout	Save the current configuration of the list as the default layout for this list.
Restore the Default Layout	Restore the default layout of this list to the original default layout.

Hiding a List (or Details)

You can temporarily hide a list of records or the record Details that displays below the list.

If you hide a list, more Details can display on the page; if you hide the Details, more records in the list can display.

- To hide a list of records, click the down arrow (**v**) at the top of the list.
- To hide the record Details, click the down arrow (**v**) at the top of the Details.



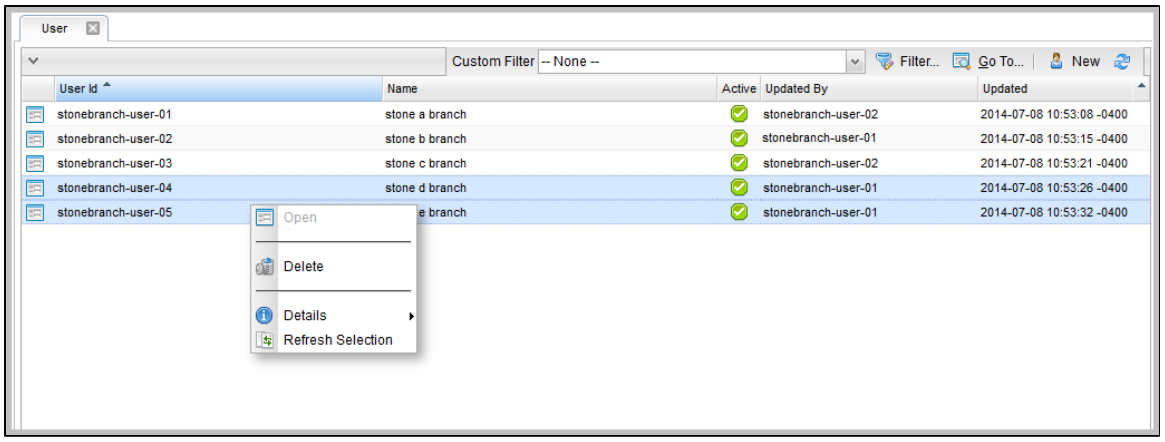
To redisplay a hidden list or Details, click the up arrow (**^**) that replaced down arrow (**v**) when you hid the list or Details.

Adding Records from a List

Adding a new record is a simple uniform procedure through the environment. From any list, click the **New** button.

Deleting Records from a List

To delete one or more records from a list of records:

Step 1	On the records list, Ctrl+right-click the records that you want to delete. Each selected record is highlighted. For example: 
Step 2	On the Action menu that displayed after you made your first selection, click **Delete**.
Step 3	On the Confirmation pop-up that displays, click **OK**.

Note
You also can delete an individual record from its record Details (see Deleting a Record).

Updating Multiple Records from a List

You can update multiple records from any of the following lists:

- Tasks list for any task type
- All Tasks list
- Triggers list for any trigger type
- All Triggers list.
- Virtual Resources list
- Email Templates list

For detailed information on how to perform a multiple record update, see Updating Multiple Records.

Performing Actions on One or More Records from a List

You can perform many actions on one or more records on a list without having to open the record(s).

- For a single record, right-click the record on the list to display an Action menu of all actions available for that record.
- For multiple records, press Ctrl and right-click each record. An Action menu of all actions available for multiple records of that type displays.

Note
The actions available for a record when selecting an Action menu from a list may not be the same as the actions available when you select an Action menu from its record Details.

Exporting Records to an Output File

This feature allows you to export record information for records on a list to any of the following file types:

- CSV (comma-separated values in an Excel file)
- Permissions for Group (XML for User Groups only)
- PDF
- XLS (Excel)
- XLXS
- XML
- XML (Export References)

To export records, you first display the current list of those records. By default, an export contains all records on the list. If you do not want to export all records on the list, use filtering to select the records to be exported.

Note
You cannot select records on a list to indicate which records are to be exported; you must filter the list.

Important!
It is strongly recommended that you do NOT use the Import and Export functions for modification of Universal Controller records. API functions are available if you need to programmatically update, copy, insert, or otherwise manipulate Universal Controller records.

Exporting Records to CSV, PDF, XLS (Excel), or XLSX

When you export to CSV, PDF, XLS (Excel), or XLXS, you export only the columns of information displayed on the list. To select which columns are displayed, see Selecting Columns / Column Locations for a List.

To run the export:

Step 1	Display the list of records.
Step 2	Right-click in any column header of the list to display an Action menu.
Step 3	Select **Export**.
Step 4	Select **CSV**, **PDF**, **XLS (Excel)**, or **XLXS**.
Step 5	When the export is complete, select whether to open or save the file.

Exporting Records to XML, XML (Export References), or Permissions for Group

When you export to XML, XML (Export References), or Permissions for Group (XML for User Groups only), you export the entire record.

To run the export:

Step 1	Display the list of records.
Step 2	Right-click in any column header of the list to display an Action menu.
Step 3	Select **Export**.
Step 4	Select **XML**, **XML (Export References)**, or **Permissions for Group**. • If you select **XML** when exporting a Task record, you will also export local variables, Actions, Notes, and Virtual Resource requirements. • If you select **XML** when exporting a Workflow, you will also export all tasks in the workflow. Each task is exported to a separate XML file. • If you select **XML (Export References)** when exporting a Task record, you will export all of the **XML** export data, plus triggers, global variables, calendars, credentials, and any resources referred to. These "reference" records are saved to separate XML files.
Step 5	When the export is complete, an ***Exported*** message displays above the list,indicating that the export is complete. (The export location is configurable; see the Export Path Opswise Controller system property.)

Importing Records from a File

You can import record information from any valid XML file to a list using the Import action that is available for all lists.

Important!
It is strongly recommended that you do NOT use the Import and Export functions for modification of Universal Controller records. API functions are available if you need to programmatically update, copy, insert, or otherwise manipulate Universal Controller records.

Filters

- Overview
- Creating a Filter
- Applying a Filter
  - Applying a New Filter
  - Applying an Existing Filter
- Saving a Filter
- Pinning a Filter
  - Unpinning a Filter
- Filters List
- Filter Details Field Descriptions
- Unresolved and Variable Fields in a Filter List
  - Examples
- Go To Filter

Overview

Opswise Controller lets you apply filters to lists throughout the user interface.

You can:

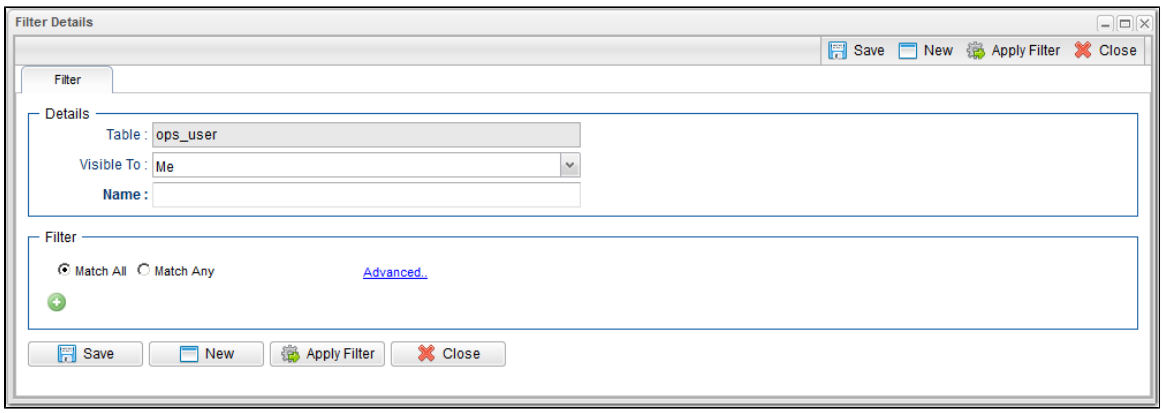
- Apply a Filter only to the list for which it was created.
- Create any number of Filters for a list, and any amount of criteria for each Filter.
- Create a Filter and apply it to a list without saving it; you will not be able to re-apply it to the list.
- Create a Filter and save it; the filter is automatically applied to the list and saved so that you will be able to re-apply it to the list at any time.
- Save a previously saved Filter under a different name. You can edit the re-named Filter and apply it to the same list as the original Filter at any time.

By default, no filtering is applied to a list. This is indicated by the default value (**-- None --**) for the **Custom Filter** field in the List task bar. However, you can pin a saved Filter to a list to make that the default Filter for the list.

You also can create a quick, one-time filter (it is not saved) that allows you to sort a list by record name (see Go To Filter).

Creating a Filter

To create a Filter:

Step 1	From the Navigator, select the record type list for which you want to apply a filter.
Step 2	Click the **Filter...** button in the List task bar that displays at the top of the list. A **Filter Details** pop-up dialog displays. 
Step 3	In the Visible To field, select whether you want the Filter to be visible to only to the logged in user, to any logged in user, or to any logged in user that belongs to the same user group as the logged in user. A user can apply any visible Filter to a list, and can modify any Filter that is visible to that user or that user group. A user may not be able to update a filter that is visible to all users, but can save/modify that filter local to the user.
Step 4	Using the field descriptions below as a guide, select criteria for the Filter.

Step 5	When you have selected the filter criteria, you can: • Apply the filter to the list immediately. • Save the filter to apply it to the list immediately and save it so that it can be applied again at any time. • Apply the filter and then save it. If you want to save the Filter, you must enter a **Name** for it. You do not have to enter a **Name** for a Filter if you only want to apply it.

Note
You also can create a filter by viewing a saved filter on the Filters list and clicking the Save As... button. This new filter applies only to the record type list of the saved filter, but you can change any of its filter criteria.

Applying a Filter

There are two ways to apply a Filter to a list:

1. Apply a new Filter.
2. Apply an existing Filter.
3. Save a new Filter.

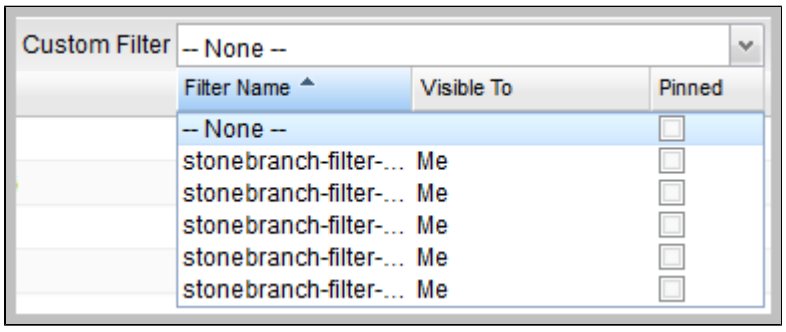
Applying a New Filter

To apply a new Filter to a list:

Step 1	After you have created a Filter, click the **Apply Filter** button. The list then displays only those records that match the selected criteria. The Filter is identified as **--Unsaved 1 --** in the **Custom Filter** field on the List task bar.
Step 2	If you want to save the applied Filter so that it can be re-applied to this list at any time, click the **Save** button. The Filter now is listed on the Filters list. If you do not want to save the applied Filter, click the **Close** button.
Step 3	To remove the Filter from the list and redisplay all records, click **-- None --** in the **Custom Filter** field.

Applying an Existing Filter

To apply an existing Filter to a list:

Step 1	On the List task bar, click the **Custom Filter** drop-down list arrow to display a list of all existing Filters for this list.  The list identifies the name of each Filter, to whom the Filter is visible, and whether or not the Filter is pinned.
Step 2	Click the Filter that you want to apply to the list. The list displays only those records that match the criteria of the selected Filter, which now is identified in the **Custom Filter** field.

Saving a Filter

Saving a Filter applies it to the list immediately and saves it so that is can be applied again at any time.

Also you must save a Filter if you want to pin the Filter to the list so that it replaces **-- None --** as the default Filter for the list.

To save a filter that you have created, click the **Save** button in the Filter Details. The saved Filter:

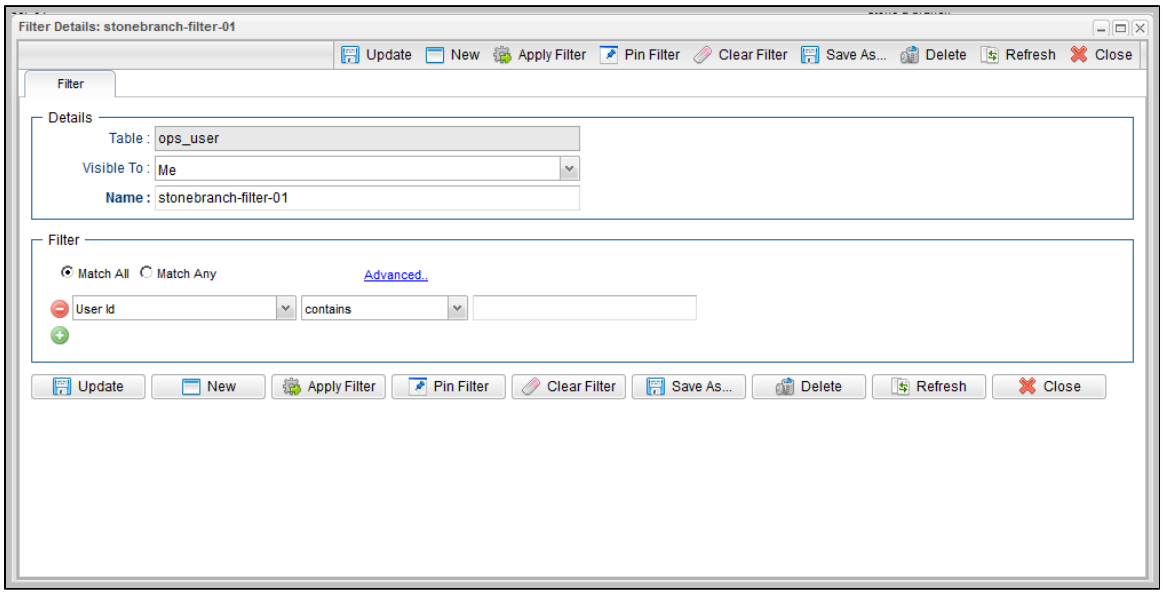
- Is applied to the list.
- Displays in the **Custom Filter** drop-down list in the List task bar.
- Displays in the Filters list of all Filters created for all list.

Pinning a Filter

You can pin a saved Filter to a list so that the pinned Filter replaces **-- None --** as the default Custom Filter for the list. Only records in the list that match the criteria of the pinned Filter will be displayed, by default, on the list.

(Pinning a Filter to a list does not prevent you from selecting other Filters for the list.)

To pin a Filter to a list:

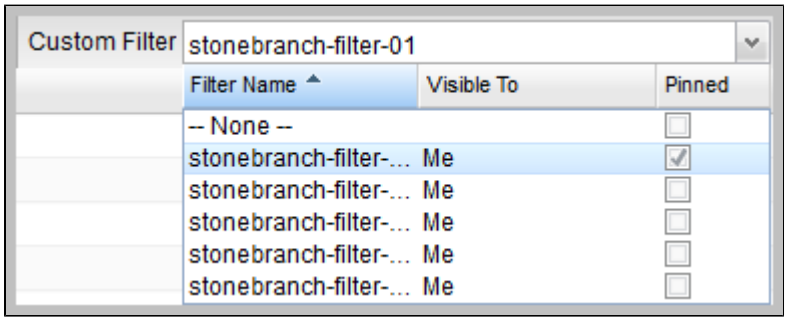
Step 1	Create and save a Filter.
Step 2	Apply the Filter to the list. The **Name** of the Filter is identified in the **Custom Filter** field of the List task bar.
Step 3	Click the **Filter** button in the List task bar to display the Filter Details for the applied Filter. 
Step 4	Click the **Pin Filter** button, and then click the **Close** button. (You do not have to click the **Update** button, as no changes were made to the details.) The pinned Filter has now become the default Filter for this list.

Unpinning a Filter

If you have pinned a saved Filter to a list so that it has become the default Custom Filter for the list, only records in the list that match the pinned Filter criteria are displayed. You must unpin the Filter in order to select **-- None --** as the default Custom Filter, which allows all records in the list to display.

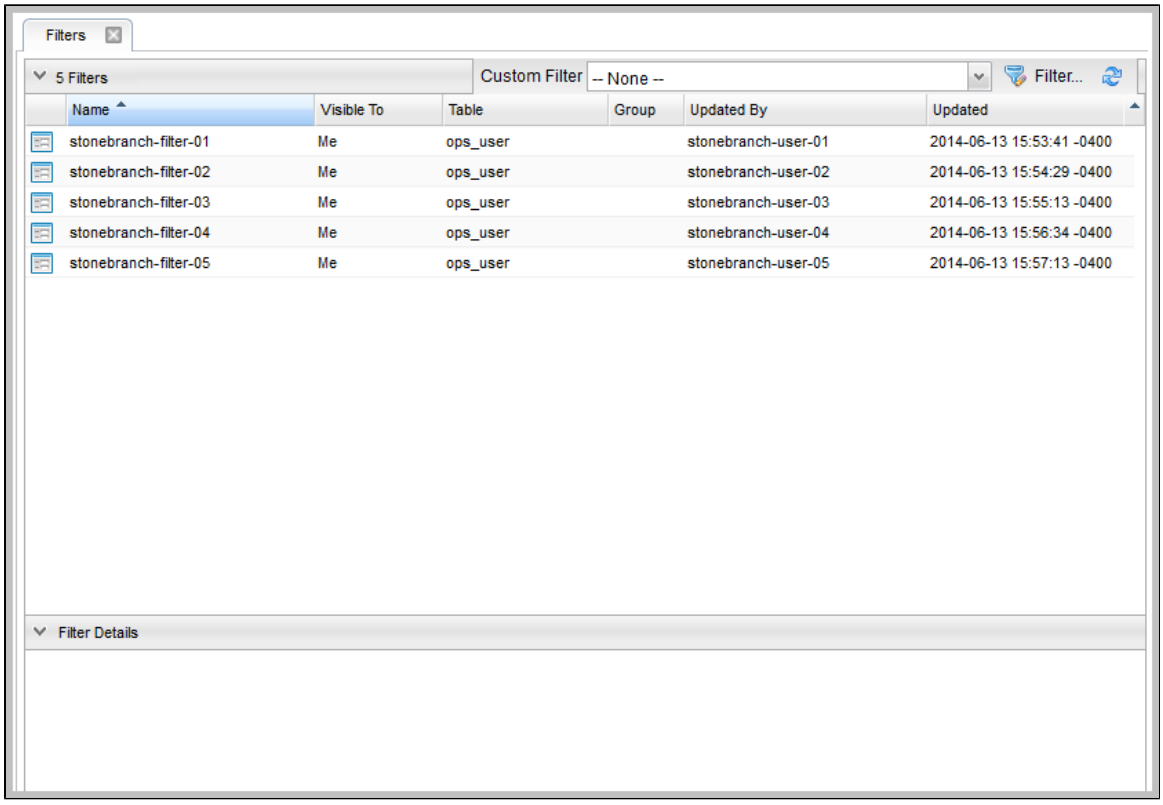
To unpin a Filter to a list:

> **Note**
> If the pinned Filter is the Filter currently applied to the list, skip to Step 3.

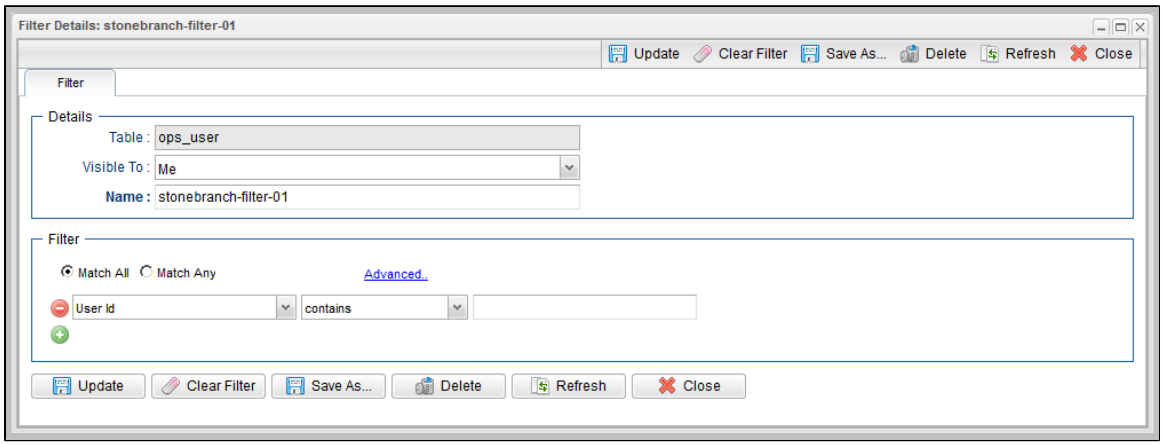
Step 1	Click the **Custom Filter** drop-down list arrow of the List task bar to display the list of all Filters for the list. The pinned Filter is identified with a check mark in the Pinned column. 
Step 2	Click the pinned Filter to apply it to the list.
Step 3	Click the **Filter** button on the List task bar to display the Filter Details for the pinned Filter.
Step 4	Click the **Unpin Filter** button, and then click the **Close** button. (You do not have to click the **Update** button, as no changes were made to the details.) The pinned Filter is no longer the default Filter for this list (although the unpinned Filter remains as the currently selected Filter for the list).

Filters List

The Filters list displays a list of all saved Filters for all lists.

Step 1	From the **Administration** navigation pane, select **Configuration > Filters**. The Filters list displays. 

Step 2 Click the Details icon next to a Filter Name or click anywhere in the Filter row to display Details for that Filter.



See the field descriptions below for a description of the fields and buttons in the Filter Details.

> **Note**
> If you want to apply a Filter to a list, you must select the Filter from the **Custom Filter** field in the List task bar for that list. You cannot apply a Filter from the Filters list or from the Details of a Filter in the Filters list.

Filter Details Field Descriptions

The following table describes the fields and buttons that display in Filter Details.

Field Name	Description
Details	This section contains detailed information about the Filter record.
Table	Opswise Controller table (record type) to which this Filter applies.
Visible To	Users that can see this Filter in the **Custom Filters** drop-down list and apply the Filter to the list. Options: • Me: only the logged in user can see and apply this Filter. • Everyone: all logged in users can see and apply this Filter. • Group: All users belonging to the selected group to which the logged in user belongs can view and apply this Filter.
Name	Name of this Filter.
Filter	This section contains the criteria for the Filter.
Match All	Specifies that when this Filter is applied, the list will displays all records that match all of the criteria.
Match Any	Specifies that when this Filter is applied, the list will displays all records that match any of the criteria.
Add (+) icon (Filter Criteria fields)	Allows you to add three criteria fields for this Filter: 1. Field in the record Details for this record type on which to base the Filter. 2. Comparison operator. 3. Value(s) to compare the Field in the record Details with (not case-sensitive).
Buttons	This section identifies the buttons displayed above and below the Filter Details that let you perform various actions.
Save	For a new Filter; applies the Filter to the list and saves a new Filter record in the Controller database.
Save As...	For saved Filters; Creates a copy of the filter with a different Name and/or Visible To fields.

Apply Filter	For a new, unsaved Filter; applies the filter to the list. For an applied Filter; allows you to see the results of any changes made to the Filter criteria before updating the Filter.
Pin Filter	For an Custom Filter; allows you to pin (select) the Filter as the default Filter for the list.
Unpin Filter	For an Custom Filter; allows you to unpin (de-select) the Filter as the default Filter for the list.
Clear Filter	For saved Filters; clears the Filter of all criteria field values.
Update	Saves updates to the record.
Delete	Deletes the current record.
Refresh	Refreshes any dynamic data displayed in the Details.
Close	For pop-up view only; closes the pop-up view of this Filter.

Unresolved and Variable Fields in a Filter List

For records that have one or more fields in which you can enter a variable instead of selecting a record type, the first of the three Filter Criteria fields includes two selections:

- **<record type>Variable**
- **<record type>Unresolved**

Variable refers to the **Variable** check mark field that is provided for a record type field. If you select **<record type>Variable**, a Comparison Operator, and a Value, and then apply the filter, the list will display only those records that have the **Variable** field check marked and which match the Comparison Operator and Value criteria.

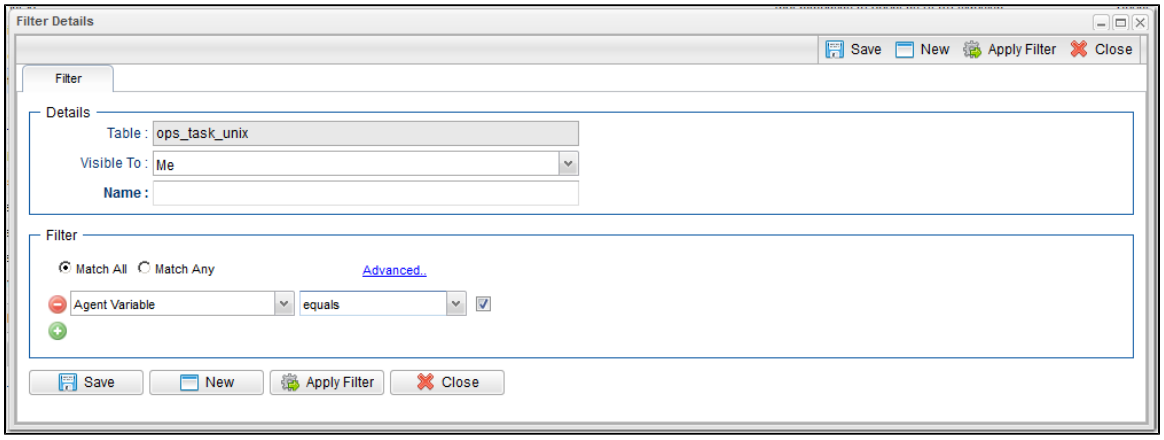
Unresolved refers to the <record type> field itself in which a variable has been entered. If you select **<record type>Unresolved**, a Comparison Operator, and a Value, and then apply the filter, the list will display only those records that have the **Variable** field check marked and which match the Comparison Operator and Value criteria for the <record type> field.

Examples

The following examples illustrate **Variable** and **Unresolved** filter criteria being applied to a task list.

Example 1

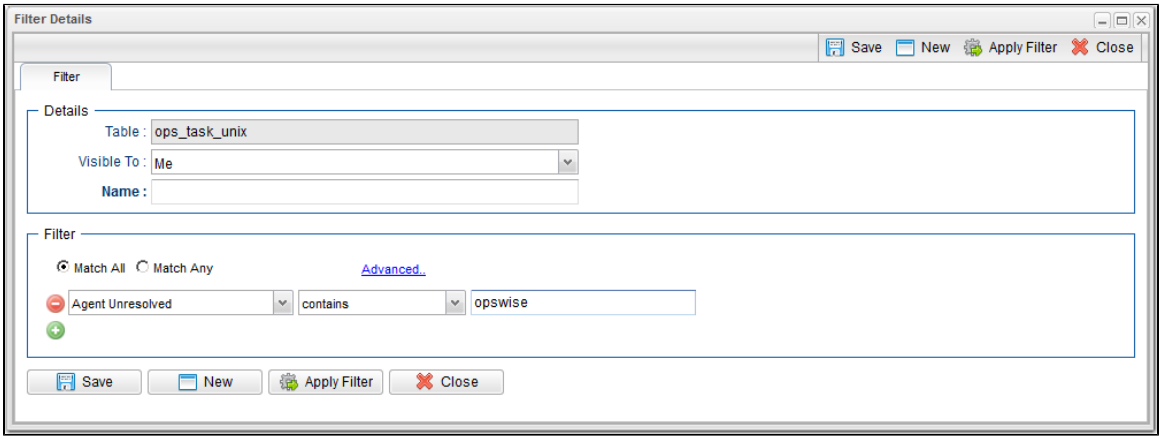
Apply this filter criteria to list all tasks for which the **Agent Variable** field has been check marked.



Example 2

Apply this filter criteria to list all tasks for which the **Agent Variable** field has been check marked and which contain the characters **opswise** in the

Agent field, which identifies and Agent variable.

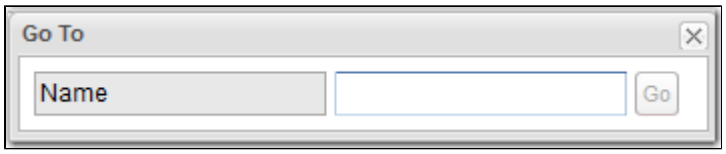


Go To Filter

You can create a quick filter for a list that will filter the list by full or partial record name.

You can filter for a specific record name or for record names matching a Go To Operator user preference: **contains** or **starts with**.

To create a Go To filter:

Step 1	From the Navigator, select the record type list for which you want to apply a filter.
Step 2	Either: • Click the **Go To...** button in the List task bar that displays at the top of the list. • Press the Access Key Combination that is appropriate for your browser / platform to highlight the **Go To...** button, and then press the **Enter** key. A **Go To** pop-up dialog displays. 
Step 3	Enter a full or partial record name and click the **Go** button. The list then will display only records that match your Go To filter according to the currently selected Go To Operator user preference.

Action Menus

- Overview
- Accessing Action Menus
- Actions
- Commands in Action Menus
- Commands in Action Menus for Specific Task Instances

Overview

Action menus contain a set of actions and commands that you can apply to a list of records or one or more individual records. The actions listed on an Action menu are context-sensitive; they appear only as appropriate for the type of list or record (and as allowed by your User Permissions).

This page organizes Action menu items into three categories:

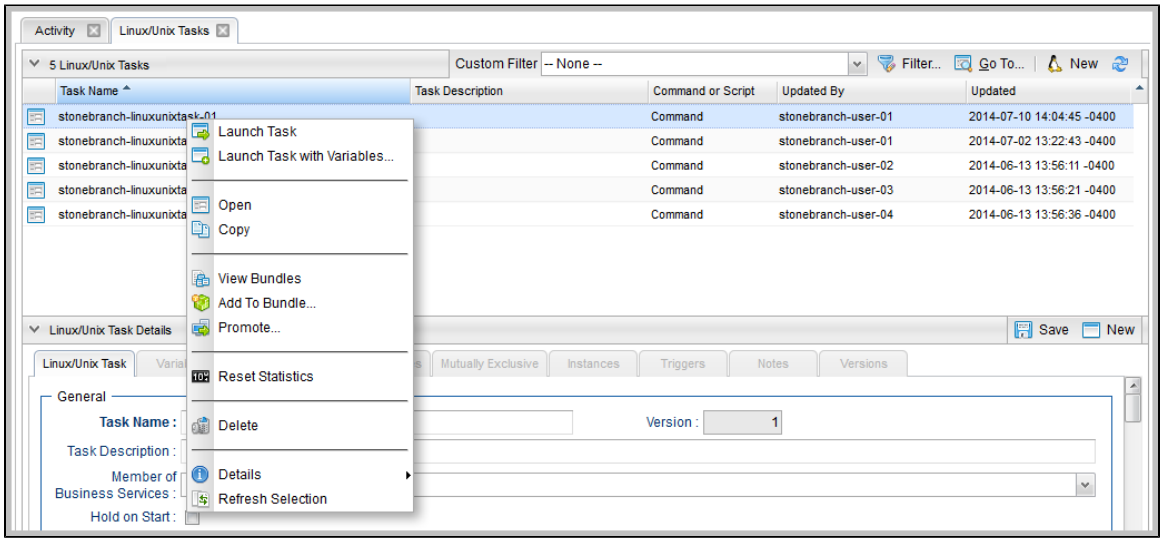
- Actions that be issued against any record.
- Commands that can be issued against any task instance.
- Commands that can be issues against specific task instances.

Accessing Action Menus

To access an Action menu:

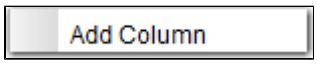
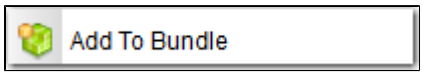
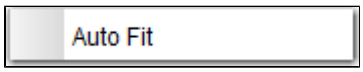
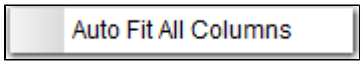
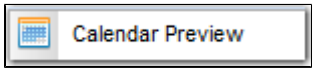
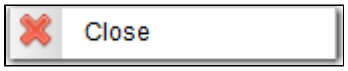
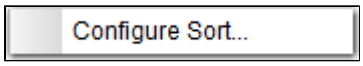
For a List	Right-click a column header to display an Action menu containing a set of actions that you can apply to that column or to the entire list.
For a Record	Either: • Right-click a record on a list. • Right-click anywhere in the record Details. ⚠ The list of actions on an Action menu for a record may differ depending on whether you accessed the menu from the records list or from the record Details.

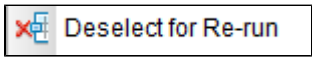
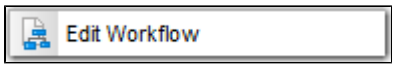
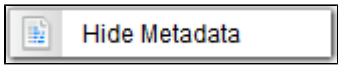
The following is a sample Action menu for an individual record selected on a list:

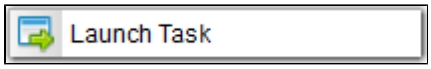
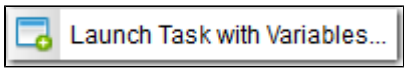
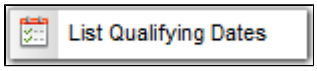
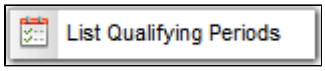


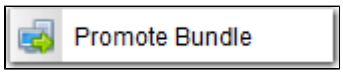
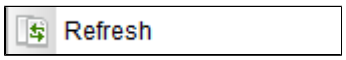
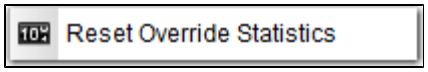
Actions

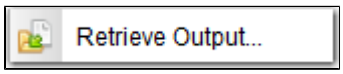
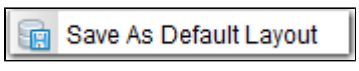
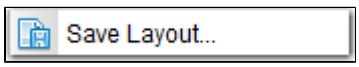
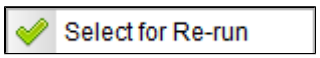
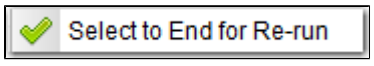
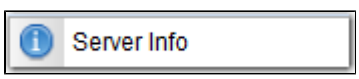
The following table identifies actions that can appear on Action menus throughout the Opswise Controller user interface. The Availability column identifies the location(s) from where each action is available.

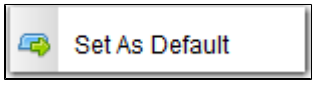
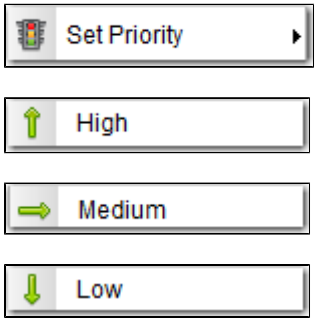
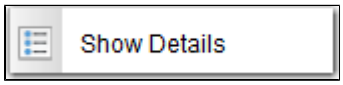
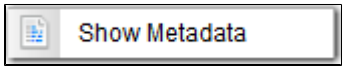
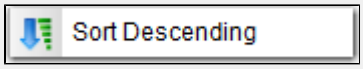
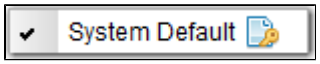
Action	Availability	Description
	• Dashboard	Adds a column to the currently displayed Dashboard.
	• Record on any list • Record Details (except task instances, Agents, OMS Servers, cluster nodes)	Adds this record to any existing Bundle.
	• Lists	Left-adjusts all columns in the list to their smallest size that still displays the full column name and column details for all records in the list.
	• Lists	Adjusts all Auto Fitted columns back to their original size.
	• Bundle on Bundles list	Displays a Bundle Report for this bundle. (Same action as the **Bundle Report** button in Bundle Details.)
	• Calendar on Calendars list • Calendar Details	Provides a month-by-month display of all Custom Days defined for this calendar.
	• Lists	Clears the temporary sort levels that you created via the Configure Sort action.
	• Record Details pop-up	Closes the Details pop-up of any record.
	• Lists	Displays a list of all available columns that can be displayed for this list. Click any column in the list to display / remove it.
	• Lists	Sorts a list according to temporary, user-defined sort levels for a column on the list (see Configure a Multi-Level Sort).
	• Record on any list • Record Details	Creates a copy of the selected record, which you are prompted to rename.
	• Lists	Exports records on a list in CSV (comma-separated values in an Excel file) format (see Exporting Records to an Output File).
	• Record on any list • Record Details	Displays a menu of the following actions: • Show/Hide Metadata • Show Details • Print

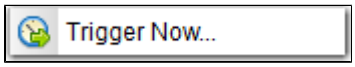
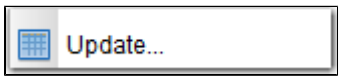
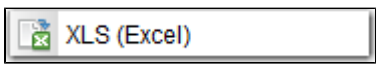
	• Record on any list • Record Details	Deletes the selected record.
	• Restartable Job Step tab of z/OS Task Instance Details	Deselects the selected job step(s) from being included in a z/OS job re-run.
	• Trigger record on Triggers list • Trigger Details • Data Backup/Purge record on Data Backup/Purge list	Disables this trigger or *scheduled* data backup/purge. (Same action as **Disable** button on Details.)
	• Dashboards	Displays the **Column Properties** drop-down list, which allows you to add and removed columns on the currently displayed Dashboard, and the **Show Widget Picker** button, which allows you to add Widgets to the currently displayed Dashboard.
	• Workflow on Workflow list • Workflow Details	Displays the Workflow Editor for this Workflow.
	• Trigger record on Triggers list • Trigger Details • Data Backup/Purge record on Data Backup/Purge list	Enables this trigger or *scheduled* data backup/purge. (Same action as **Enable** button on Details.)
	• Lists	Exports records on a list in either of seven formats (as available for the type of record in the list): • CSV • Permissions For Group • PDF • XLS (Excel) • XLSX • XML • XML (Export References)
	• All record Details	Hide Metadata for these Details.
	• Lists	Imports valid XML files (usually from an Export) from a user-defined location to a list. Import performs a pre-validation on the XML files; if any files are found to be invalid, a warning displays on the Universal Automation Center Console and the import operation is aborted. Any invalid XML files should be fixed or removed from that location.

	• All record Details (except task instances, Agents, cluster nodes)	Creates a copy of the current record, for which which you have just entered a new Name.
	• Task on Tasks list	Launches the task. (Same action as **Launch Task** button in Task Details.)
	• Task Details	Launches this task with one or more variables that you will specify on a Task Variables pop-up dialog.
	• Lists	Displays a menu of available layouts for this list.
	• Custom Day Details	Displays a table of the next 30 dates that match this Custom Day details. (Same action as **List Qualifying Dates** button.)
	• Custom Day Details	Displays a table of the next 30 periods that match this Custom Day details. (Same action as **List Qualifying Periods** button.)
	• Trigger Details	Lets you modify and display a list of qualifying times for this trigger (the next 30 dates and times when this trigger will be satisfied).
	• Any Details	Displays empty Details for you to begin creating a new record.
	• Any record on list	Opens the Details pop-up of a record.
	• Navigator	Opens a page right-clicked in the Navigator under the current tab. (If the current tab is for the Activity Monitor or Dashboards, the page will open in a new tab (see Tabs).
	• Navigator	Opens a page right-clicked in the Navigator under a new tab.
	• Lists	Exports the displayed data (the selected columns) of every record on a list into PDF format (see Exporting Records to an Output File).
	• Groups List	Exports user groups and their permissions (see Exporting Records to an Output File).
	• Record in list • Record Details	Prints the record Details as shown in the user interface.

	• Record on any list (except task instances, Agents, OMS Servers, cluster nodes) • Record Details (except task instances, Agents, OMS Servers, cluster nodes)	Copies this record from this source cluster node to a target cluster node.
	• Bundle on Bundles list	Copies this bundle from this source cluster node to a target cluster node. (Same action as **Promote Bundle** button on Bundle Details.)
	• Application on Applications list	Queries the application (if it is running).
	• Trigger on Triggers list • Trigger Details • Workflow on Workflows list • Workflow Details	Recalculates the forecast data for this trigger / workflow.
	• Record Details	Refreshes all dynamic information in the Details.
	• Records on Lists	Refreshes all dynamic information in the record Details.
	• Promotion Targets list • Promotion Targets Details	Refreshes any Agents on the promotion target server selected in this record.
	• Dashboard	Removes the selected column from the currently displayed Dashboard.
	• Agents list • Agent Details	Resets the Current Task Count field for this Agent to 0.
	• Agent Clusters list • Agent Cluster Details	Resets the Current Task Count field for this Agent Cluster to 0.
	• z/OS Task Details	Reset the override statistics used for automated JCL override clean-up.
	• Task Details	Resets the run-time statistics that the Controller has gathered for this task.

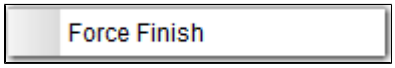
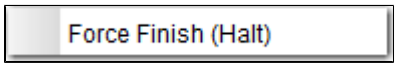
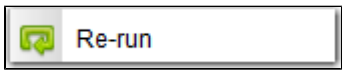
	• Virtual resource Details	Resets the Resource Used value of a renewable virtual resource to accurately reflect the actual number of resources currently in use.
	• Lists	Restores the current layout of the list to its default layout.
	• Agent on Agents list • Agent Details	Resumes the ability to run tasks for suspended Agent. (Same action as **Resume Agent** button on Agent Details.)
	• Agent cluster on Agent Clusters list • Agent Cluster Details	Resumes the ability to run tasks for a suspended cluster of Agents. (Same action as Resume Cluster button on Agent Cluster definition.)
	• Agents in Cluster list	Resumes the membership of this Agent in the selected agent cluster.
		
	• Data Backup/Purge list • Reports list • Reports Details	Run the selected backup, purge, or report. (Same action as **Run** button in Details.)
	• New, unsaved record	Saves this record.
	• Lists	Saves the current layout of the list as the default layout.
	• Lists	Saves the current layout of the list.
	• Restartable Job Steps list in z/OS Task Instance Details. • Restartable Job Steps Details	Selects the selected job step(s) for inclusion in a z/OS job re-run.
	• Restartable Job Steps list in z/OS Task Instance Details	Selects the selected job step and all following job steps for inclusion in a z/OS job re-run.
	• Promotion Targets list • Promotion Targets Details	Displays a Remote Server Information pop-up that lists details about the Automation Center cluster node selected as the promotion target in this record.

	• Dashboards	Selects the currently displayed Dashboard as the Dashboard that will display by default for the current session.
	• Linux/Unix, Windows, and z/OS Task instance on Activity Monitor / Task Instances lists • Linux/Unix, Windows, and z/OS Task instance Details	Displays a menu of run priorities that you can set for this task instance: • **High** = Sets the run priority to High so that it will run before task instances in Low and Medium priorities. • **Medium** = Sets the run priority to Medium so that it will run before task instances in Low priority and after task instances in High priority. • **Low** = Sets the run priority to Low so that it will run after task instances in High and Medium priorities.
	• Record on any list • All record Details.	Displays all details stored in the database for this record in table format.
	• All record Details	Display Metadata for these Details.
	• Lists	Sorts the list in ascending alphabetical order.
	• Lists	Sorts the list in descending alphabetical order.
	• Application on Applications list	Starts the application.
	• Application on Applications list	Stops the application.
	• Agent on Agents list • Agent Details	Suspends the ability to run tasks for this Agent. (Same action as **Suspend Agent** button on Agent definition.)
	• Agent Cluster on Agent Clusters list • Agent Cluster Details	Suspends the ability to run tasks for this cluster of Agents. (Same action as **Suspend Cluster** button on Agent Cluster Details.)
	• Agents in Cluster list	Suspends the membership of this Agent in the selected agent cluster.
	• Lists	Selects the default layout for the list.

	• Email, Database, and SAP Connections lists	Performs a connectivity test to the selected connection. (Same action as **Test Connection** button on Details.)
	• Trigger on Triggers list • Trigger Details	Immediately triggers all the tasks specified in this trigger. (Same action as **Trigger Now** button on Trigger Details.) Optionally, you also can select to: • Launch the task(s) specified in the trigger with one or more variables. • Launch the task(s) specified in the trigger by a specified date and time.
	• Tasks lists • Triggers lists • Virtual Resources list • Email Templates list	Updates all currently selected records in the list.
	• Tasks lists • Triggers lists • Virtual Resources list • Email Templates list	Updates all records in the list that match the current filter.
	• Entries on Edit Members dialogs	Displays detailed information about that entry.
	• Record Details (except task instances, Agents, OMS Servers, cluster nodes)	Displays a list of bundles to which this record belongs.
	• Tasks lists • Task Details	Displays a list of all parent workflows of this task. (Same action as **View Parents** button on Task Details.)
	• Lists	Exports the displayed data (the selected columns) of every record on a list into XLS (Excel) format (see Exporting Records to an Output File).
	• Lists	Exports the displayed data (the selected columns) of every record on a list into XLSX format (see Exporting Records to an Output File).
	• Lists	Exports all data of every record on a list into XML format (see Exporting Records to an Output File).
	• Lists	Exports all data, plus references, of every record on a list into XML format (see Exporting Records to an Output File).

Commands in Action Menus

The following actions are commands that can be issued against any task instance.

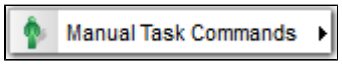
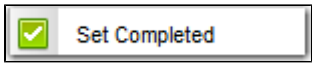
Command	Availability	Description
	• Task instance on Activity Monitor / Task Instances list	Cancels this task instance.
		Displays a menu of the following actions: • Clear All Dependencies • Clear Exclusive • Clear Resources
	• Task instance on Activity Monitor	Clears all dependencies (predecessors, resources, and exclusive) to allow the task instance to run.
	• Task instance on Activity Monitor / Task Instances list	Clears mutually exclusive dependencies of this task instance.
	• Task instance on Activity Monitor / Task Instances list	Clears resource dependencies of this task instance.
	• Task instance on Activity Monitor / Task Instances list	Displays a menu of the following actions: • Force Finish • Force Finish (Halt) • Force Finish/Cancel • Force Finish/Cancel (Halt)
	• Task instance on Activity Monitor / Task Instances list	Places this task into the Finished status.
	• Task instance on Activity Monitor	Places this task into the Finished status without aborting monitoring processes.
	• Task instance on Activity Monitor / Task Instances list	Cancels this task and places it into the Finished status.
	• Task instance on Activity Monitor	Cancels this task and places it into the Finished status without aborting monitoring processes.
	• Task instance on Activity Monitor / Task Instances list	Places this task instance in the Held status
	• Task instance on Activity Monitor / Task Instances list	Releases this task instance from Held status.
	• Task instance (except Workflows) on Activity Monitor / Task Instances list	Re-runs this completed task.

	• Task instance on Activity Monitor / Task Instances list	Places this task in the Skipped status.
	• Task instance on Activity Monitor	Skips this task instance and all of its dependent task instances.
	• Task instance on Activity Monitor / Task Instances list	Removes the Skip status from this task.

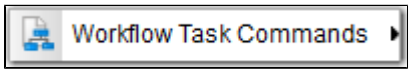
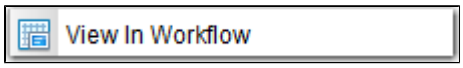
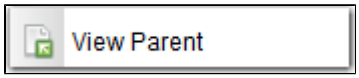
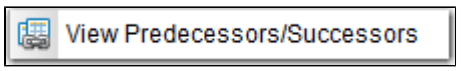
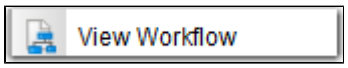
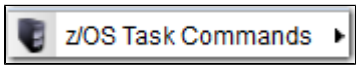
Commands in Action Menus for Specific Task Instances

The Action menus for task instances of the following task types provide a sub-menu of task-related commands:

- Manual
- SAP
- Workflow
- z/OS

Manual Tasks		
	• Manual task instance on Activity Monitor / Task Instances list • Manual task instance Details	Displays a list of actions that can be taken for this Manual task instance.
	• Manual task instance on Activity Monitor / Task Instances list	Sets this task instance to Success status.
	• Manual task instance on Activity Monitor / Task Instances list	Resets the Started Time of this task instance.
SAP Tasks		
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Displays a list of SAP commands that can be issued against this task.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Aborts the SAP job specified in the task instance.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Interrupts the SAP Process Chain.

	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Purges the SAP job specified in the task instance.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Restarts the SAP Process Chain.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves the SAP job definition.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves the SAP job log.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves the SAP job status.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves the specific run information for the SAP Process Chain.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves the "blueprint" information for the SAP Process Chain.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves SAP Process Chain log.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves SAP Process Chain status.
	• SAP task instance on Activity Monitor / Task Instances list • SAP task instance Details	Retrieves SAP spool list.
Workflow Tasks		

	• Workflow on Workflows list • Workflow Details • Trigger on Workflow Triggers tab list	Allows for the forecasting of a Workflow by specific date/time.
	• Workflow task instance on Activity Monitor / and Task Instances list • Workflow task instance Details	Displays a list of Workflow task instance commands: • Release Recursive • View Workflow
	• Workflow task instance on Activity Monitor / Task Instances list	Releases this Workflow, and all of its task instances on Held Status, from Held status.
	• Task Instance Details • Task Instance on Activity Monitor / Task Instances list • Task Instance on View Predecessors/Successors pop-up dialog	Displays the Workflow Monitor for the parent Workflow of a selected task instance and highlights that task instance within the Workflow.
	• Task Instance Details • Task Instance on Activity Monitor / Task Instances list	Displays the parent Workflow of this task instance, if any.
	• Task Instance Details • Task Instance on Activity Monitor / Task Instances list	Displays a dialog identifying the predecessors / successors of this task instance in the Workflow.
	• Workflow task instance on Activity Monitor and Task Instance lists • Workflow task instance Details	Displays the Workflow Monitor for this Workflow task instance. (Same action as **View Workflow** button on Details.)
z/OS Tasks		
	• Task instance on Activity Monitor or Task Instances list	Displays a menu of the following actions: • Confirm JCL Changes
	• Task instance on Activity Monitor or Task Instances list	

list

Wildcards

The Opswise Controller user interface supports two wildcards:

- Asterisk (*)
- Question mark (?)

You can use wildcards in record searches and when applying some rule or command against records. Fields that support wildcards are identified in their field description.

Wildcard	Meaning
Asterisk (*)	Represents a wildcard of any number of characters. For example, a search for string "FEE*SF" returns all records whose name begins with "FEE" and ends with "SF", with any number and type of characters between the two strings.
Question mark (?)	Represents a wildcard of one character in a specific position. For example, a search for string "FEE?SF" returns all records whose name begins with "FEE" and ends with "SF", with any single character between the two strings.
Multiple questions marks	Represent wildcards of multiple characters in a specific position. For example, a search for string "FEE??SF" returns all records whose name begins and ends with "FEE" and "SF", respectively, with any two characters between the two strings.

Access Keys

- Overview
- Access Key Combination
- Access Keys

Overview

In a web browser, access keys allow you to immediately jump to specific sections of a web page using only the keyboard.

To use an access key, press the access key in combination with one or more other keys, as defined by the browser, in order to focus an element on a page.

Access Key Combination

The following access key combinations, which vary for different browsers / platforms, are implemented in Opswise Controller:

Browser	Platforms	Access Key Combination
Internet Explorer	All	Alt + access key
Mozilla Firefox	Windows, Unix	Alt+Shift + access key
Mozilla Firefox	Mac	Ctrl+Opt + access key
Chrome	Windows, Unix	Alt + access key
Chrome	Mac	Ctrl+Opt + access key

Access Keys

The following access keys are pre-defined in Opswise Controller:

Access Key	Description
G	Focuses the **Go To...** button on any list so that the Go To Filter dialog can be displayed by pressing **Enter**.