

# Control Center

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## Release Notes

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# Control Center

VERSION 3.2.6

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## Release Notes

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# Contents

<b>1</b>	<b>WHAT'S NEW IN THE CONTROL CENTER</b>	<b>8</b>
<b>2</b>	<b>ISSUES FIXED IN THIS RELEASE</b>	<b>12</b>
<b>3</b>	<b>ABOUT UPGRADING FROM THE OPERATIONAL CONSOLE TO THE CONTROL CENTER</b>	<b>15</b>
<b>4</b>	<b>HIGHLIGHTS OF NEW FEATURES IN EARLIER VERSIONS</b>	<b>17</b>
	<b>Control Center Version 3.2.5</b>	<b>18</b>
	Control Center Analysis area	18
	Custom Home area views	18
	Other improvements and new features	19
	Issues fixed in this release	19
	<b>Control Center Version 3.2.4</b>	<b>21</b>
	New view in Home area: All jobsets	21
	New icons to indicate delayed status updates	21
	EME version tracking for checked-in graph and plan jobs	21
	Streamlined Jobs area navigation	22
	Changes to the representation of reporters	22
	Ability to delete a host from the operational database	22
	New filter option for child jobs	22
	Ability to monitor and control program task jobs	22
	<b>Control Center Version 3.2.3</b>	<b>24</b>
	Jobsets	24
	Quick links	25
	Simplified use of icons to indicate status and issues	25
	New job functions: Hold and Skip	26
	Ability to use the F8 key to run commands in a configuration environment	26
	Other new features	26
	Package For Support (PFS)	26
	New product types	27
	Resources area	27
	Products area	27
	Home area	27
	Email enhancements	27
	Notification groups	27
	Database support	28
	New configuration parameters	28

New Jobs Analysis area (beta feature)	28
Hostname key bundles	28
Additional enhancements	29
<b>Control Center Version 3.2.2</b>	<b>30</b>
Ability to monitor multiple execution spaces with a single reporter	30
Simplified reporter configuration instructions	30
New diagram representing new product and service relationships	31
New Group by Type option in Daily Jobs and Schedule sub-areas	31
New History view for hosts	32
Improved job history view performance	32
New Package For Support (PFS) options	32
Enhanced navigation from Home area	32
Enhancement to job definition test function	32
<b>Control Center Version 3.2.1</b>	<b>33</b>

# Release Notes

## Summary

These release notes provide late-breaking information about Ab Initio Control Center Version 3.2.6 software.

## Audience

These release notes are for all Control Center users, installers, and administrators who are either working with a new Control Center installation, or upgrading from a previous version of Control Center software.

If you are upgrading to the Control Center from an Operational Console installation, see ["About upgrading from the Operational Console to the Control Center"](#) in these notes, as well as the upgrade documentation in the *Installation Guide*.

## Contacting Ab Initio Support

To contact Ab Initio Support, send email to [support@abinitio.com](mailto:support@abinitio.com) or call +1 781-301-2100.

When reporting a problem, include the following information:

- The version of your Co>Operating System and, if applicable, other Ab Initio product software versions
- The platform (operating system and version) your Co>Operating System is running on
- The complete error message (if any)
- A description of what you were doing when the error message (if any) appeared
- For database issues:
  - The type and version of the database (for example, DB2 EEE version 7.2)
  - The platform the database server is on
  - The JDBC driver version (if applicable)

# 1

## What's new in the Control Center

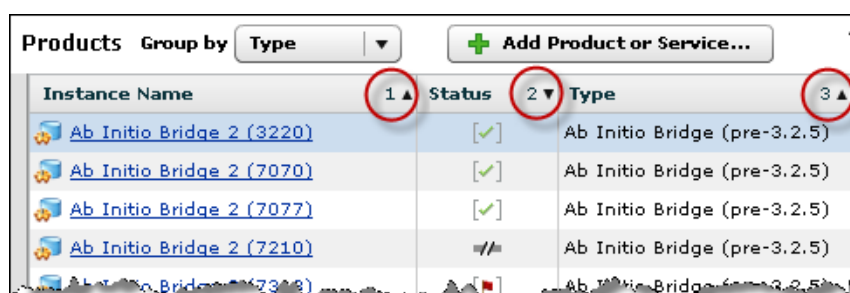
This section describes enhancements and new features in Control Center Version 3.2.6.

For information about features introduced in previous versions of the Control Center, see ["Highlights of new features in earlier versions"](#).

- **New Analysis area role** — The 3.2.6 release introduces the Control Center **Analyst** role. Previously, users with Jobs area and Hosts area roles could access the Analysis area. Starting with Version 3.2.6, however, only users assigned the **Analyst** role will have this access.

**NOTE:** If you are upgrading from Control Center Version 3.2.5, you must edit your existing Control Center user accounts as appropriate to enable Analysis area access.

- **New CPU usage reports** — This release introduces the ability to generate CPU usage reports. For more information, see ["Generating a CPU usage report"](#) in the *Administrator's Guide*.
- **Sort tables by multiple columns** — The tables in many areas of the Control Center UI can now be sorted by multiple columns. To do this, click the column heading that you want to serve as the primary sort criterion, and then Ctrl-click additional column headings in order to specify secondary, tertiary, and subsequent criteria. Ctrl-click the same column multiple times to toggle its sort direction.



Instance Name	Status	Type
Ab Initio Bridge 2 (3220)	[✓]	Ab Initio Bridge (pre-3.2.5)
Ab Initio Bridge 2 (7070)	[✓]	Ab Initio Bridge (pre-3.2.5)
Ab Initio Bridge 2 (7077)	[✓]	Ab Initio Bridge (pre-3.2.5)
Ab Initio Bridge 2 (7210)	[✗]	Ab Initio Bridge (pre-3.2.5)
Ab Initio Bridge 2 (7308)	[✗]	Ab Initio Bridge (pre-3.2.5)

- **Simplified presentation of Control Center authentication methods** — The terminology, documentation, and several parts of the user interface involved with creating and maintaining authentication profiles have been simplified. In addition, the authentication methods themselves have been made easier to understand. For more information, see ["About authentication profiles"](#) in the *Administrator's Guide*.

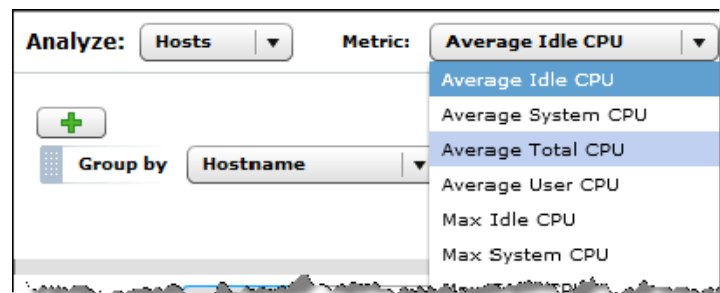


- **Indication of time-consuming operations** — Some Control Center operations involve retrieving large numbers of records from the database. For example, if you are monitoring many products and services, there may be a noticeable delay when you switch from the tabular view to the diagrammatic view in the Products area. When this occurs, the Control Center now indicates it by momentarily displaying the text: **Retrieving and processing data**.
- **Improved performance of Hosts, Products, and Job Definitions tables** — Previously, the Control Center could exhibit sluggish performance when displaying the main tables shown in the Hosts or Products area, as well as the job definitions table in the Schedule for System sub-area. This release introduces performance enhancements that are particularly dramatic when these tables grow to be large — for example, more than 1000 products or 500 job definitions. Displaying these tables is now several times faster due to the improvements introduced in this release.
- **Optimized Job Definition dialog performance** — The read-only Details for Job Definition dialog and its edit mode counterpart now load faster because unnecessary reloading operations have been eliminated.
- **Added support for micrograph job output** — The Details dialog for a micrograph job now includes an **Output** tab that holds job event information. In addition, an **Output** link has been added to the info bubble for a micrograph job to help you navigate to the new tab.
- **Provide the runtime environment of a detected job** — Previously, when a job was monitored by but not scheduled through the Control Center (a “detected” job), the Control Center did not attempt to determine the job’s runtime environment until the user tried to perform an action — for example, looking at output from the detected job. If the attempted action failed, it was not always clear why.

Now, the Control Center uses its “best match” algorithm when needed to populate the **Runtime environment** field on the Operational Settings tab of the job’s Details dialog. This makes it possible to test and troubleshoot the matched runtime environment — or to discover that the Control Center was unable to find a match — before an error occurs.

- **New host CPU metrics are available for analysis** — The Analysis area now provides the following metrics for analyzing hosts:

Average Idle CPU	Average System CPU	Average Total CPU	Average User CPU
Max Idle CPU	Max System CPU	Max Total CPU	Max User CPU
Min Idle CPU	Min System CPU	Min Total CPU	Min User CPU



- **Additional Analysis area support for capacity planning and performance analysis** — You can now adjust the maximum number of days over which the Control Center can perform an analysis (using the `client.analysisArea.maxDays` configuration parameter), as well as the minimum width of a column in the Analysis area Timeline chart

(**client.analysisArea.chart.minColumnWidthSecs**). Increasing the former parameter supports capacity planning by expanding the analysis time horizon. Decreasing both parameters supports performance analysis by providing more detailed metrics over a short time span.

Note however, that increasing the value of **client.analysisArea.maxDays** adversely affects Control Center performance while the Analysis area chart is being loaded, and that decreasing the value of **client.analysisArea.chart.minColumnWidthSecs** may compromise analysis accuracy. Therefore, consider restoring these parameters to their default values after obtaining the information that you need.

**NOTE:** A third parameter, **client.analysisArea.chart.maxColumns**, enables you to increase the number of columns in the Timeline chart. This carries similar risk of performance degradation.

For more information, see ["Browser interface appearance and behavior"](#) in the *Administrator's Guide*.

- **Enhanced security for operational data** — You can now further limit operational database access where more restrictive security is required. Do this by editing configuration parameters as follows:
  - Remove the **SQL Console** utility from the Control Center Administration page by setting **security.adminpage.sqlconsole.enabled** to 0.
  - Remove the **Job Deletion** utility from the Control Center Administration page by setting **security.adminpage.jobdeletion.enabled** to 0.
  - Disable SQL Select access to the operational database through Web Services by setting **security.webservice.sqlselect.enabled** to 0.
  - Disable SQL Update access to the operational database through Web Services by setting **security.webservice.sqlupdate.enabled** to 0.

For more information about these configuration parameters, see ["Security and authentication"](#) in the *Administrator's Guide*.

- **Job activity can now be grouped by job definition for analysis** — A new selection, **JobDefinition**, has been added to the list of attributes by which you can group job activity in an Analysis area attribute strip.
- **"Included" status added to Reporter info bubble** — A reporter's info bubble now includes an indication of whether the reporter is included in the Control Center's calculation of its own status.
- **New dialog tabs for "related items"** — New **Related items** tabs have been added to the Details for Host and Details for Service: Reporter dialogs.
- **Longer Job Definition command-line arguments are now supported** — The maximum allowable length of an argument in the command-line argument field of a Job Definition has increased from 512 to 4096 characters.
- **The Control Center now supports TLS for enhanced security** — The Control Center now supports client-side communications with TLS (transport layer security) version 1.2 on Java 7.
- **Activity bars resized to facilitate job activity comparison between systems** — The overall length of each color-coded activity bar in the Jobs Overview for All Systems sub-area has been adjusted to give a better comparative sense of the job load on each system.

- **Support for changing preauthentication provider** — A new configuration parameter enables you to choose the type of preauthentication you use with the Control Center. For more information, see the description for **security.preauthentication.sso.type** in the *Administrator's Guide* topic ["Security and authentication"](#).

# 2

## Issues fixed in this release

The following list describes issues that have been fixed in Control Center Version 3.2.6:

- **Corrected problems with changing job definition property values** — Previously, several problems could arise when you entered or changed a value in the **Properties** table in the Info tab of the Details for Job Definition dialog (edit mode):
  - Tabbing to a read-only property erroneously made that property editable.
  - The Control Center might change the value of a property other than the one you were editing.
  - An Adobe Flash Player error might appear.All these issues have been fixed.
- **Can now correctly sort queues in the Queues table** — This release corrects issues with sorting the Status, Job Status, Job Issues, and Job Predicted Issues columns in the Queues table.
- **Can now correctly sort sequence dependencies for job definitions** — This release corrects issues with sorting sequence dependencies by Type and Schedule Summary on the Sequence Dependencies tab of the Details for Job Definition dialog.
- **Fixed empty “Group by” drop-down list in the Daily Jobs for System sub-area** — Previously, it was possible to navigate to the Daily Jobs for System sub-area and find that the **Group by** drop-down list was empty. This issue has been fixed.
- **Can now correctly sort the rows of various tables by status** — This release enables you to sort rows by status in tables that appear in various parts of the Control Center, including the Status Details for Control Center dialog, the Package for Support Options dialog, and the Related Items tab of the Details for Product dialog.
- **Improved management of duplicate entries in the “Manage Quick Links” dialog** — Previously, when the Control Center refreshed the entries in the Manage Quick Links dialog, the selection could change to another item with the same name. This issue has been fixed.
- **Additions and deletions of host filesystems now correctly handled** — Previously, the Control Center would not detect when you modified the contents of the Filesystems tab of the Details for Host dialog, and would not allow changes to be saved. This issue has been fixed.

- **Fixed behavior of the horizontal scroll bar** — Previously, if you scrolled to the right in the Daily Jobs table and other tables, the horizontal scroll bar locator control would sometimes “jump” to the left on its own. This has been fixed; the Control Center now properly maintains the horizontal scroll position.
- **Fixed an error that occurred when adding a new system property** — Attempts to add a new property to a Control Center system sometimes failed dramatically, producing a lengthy **Assert failed** Java error message. This has been fixed.
- **Fixed an error that prevented all items from appearing in a view** — Previously, a failure to clear text filters sometimes prevented all items from appearing when you selected one of the following info bubble view links:
  - All Hosts
  - All Products
  - All Services
  - Queues in the same system

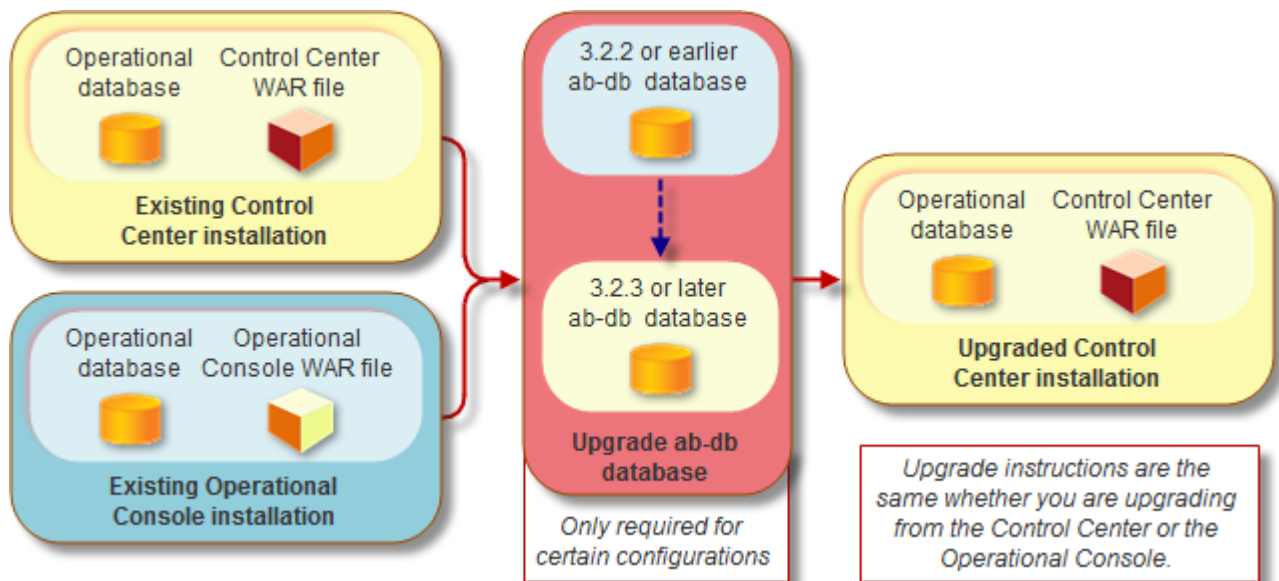
This has been fixed so that each view now shows all the appropriate hosts, products, services, or queues, and does not apply any filtering.
- **The upgrade-database.ksh upgrade script now produces more detailed logs** — Verbose logging is now enabled by default for the **upgrade-database.ksh** script, facilitating troubleshooting of the upgrade process if a problem arises.
- **Fixed an error resulting from manipulating attribute strips in the Analysis area** — Previously, when you performed a specific sequence of actions in which attribute strips in the Analysis area were added and reordered, the Control Center would quit unexpectedly. This issue has been fixed.
- **Leading and trailing spaces are now removed from configuration parameter names** — When you create a new configuration parameter from the Configuration Parameters dialog, the Control Center now removes leading and trailing spaces from the parameter name when the parameter is saved.
- **Clicking the Output tab in the Details for Job dialog twice no longer causes Control Center to become unresponsive** — Previously, the Control Center would become unresponsive after an attempt was made to access logging information from the Output tab in the Details for Job dialog, where a previous attempt to access this information failed with a **Failed to connect** error. This issue has been fixed.
- **“Out of memory” problems associated with many events** — Previously, long-running jobs — especially, dispatcher jobs and continuous plan jobs — were prone to Java “out of memory” errors. When the number of accumulated events reached into the hundreds or thousands, the Control Center would often quit unexpectedly. The memory problems have been resolved.
- **Purging metrics data for some jobs no longer produces “Out of Memory” errors** — Previously, purging metrics data for long-running continuous jobs with hundreds of thousands of associated metric values produced Out of Memory errors, and Control Center would quit unexpectedly. This issue has been fixed.
- **Failure to export jobs with manually edited GUIDs** — Previously, the Control Center would fail to export job definitions that had been edited manually to include spaces. When this happened, the Control Center reported an **HTTP response 500 Internal Server Error** message. This has been fixed.

- **Failure to detect jobs** — Previously, it was possible to run a job from the command line or the GDE but have the Control Center fail to detect it. This happened because of missing information about the EME Technical Repository with which the job had been associated. The problem has been fixed.
- **Glitch in the alignment of the Details for Job Definition dialog** — Rarely, at the start of a session, the Control Center might display the Details for Job Definition dialog at the upper left of the Home area instead of centered within it. This has been fixed.
- **Correct units are now displayed for the left axis in the Analysis area** — Previously, when a host metric was selected in the Analysis area, the units for the left axis were incorrectly displayed. The problem has been fixed.
- **Preventing duplicate start times in job definitions** — Previously, when you scheduled a job with more than one start time, it was possible to specify the same start time more than once. The Control Center now prevents this by disabling the **OK** button in the Add Start Time popup.
- **Selected Analysis area segments now correctly appear as selected** — Previously, a segment that you selected from an Analysis area attribute strip might appear to be deselected. This issue, which would occur only after minimizing and then maximizing the Control Center browser window, has been fixed.
- **Hostnames in metric values for jobs are now correctly derived from the host on which the job ran** — Previously, hostnames in metric values for jobs were incorrectly derived from the host on which the job was started. The hostnames are now derived from the host on which the job ran.
- **All predefined user accounts now allow users to log in to the Control Center** — Previously, certain predefined user accounts such as **productMonitor** and **hostMonitor** did not allow users to log in to the Control Center with default passwords. This issue has been fixed.
- **Improved monitoring of resource requests** — Previously, a resource request with a **Requester** name longer than 256 characters would not be monitored in the Control Center. This issue has been fixed.
- **The Control Center now properly accommodates long stdout and stderr file paths** — Previously, stdout and stderr file paths that were longer than 256 characters caused Control Center performance to slow down. This issue has been fixed.

# 3

## About upgrading from the Operational Console to the Control Center

You can easily upgrade your Operational Console installation to a new Control Center installation. The Control Center upgrade procedure is the same as the procedure for upgrading from one Operational Console version to the next.



When you upgrade an Operational Console installation to a new Control Center installation, your existing Operational Console WAR file is replaced by a new Control Center WAR file, and your existing operational database is updated to use the latest Control Center database schema.

You can continue to use your existing Operational Console operational database with the Control Center. All operational database records from the Operational Console installation are preserved, and no Operational Console operational data is discarded or altered by the Control Center **upgrade\_database** script.

Note the following important considerations about upgrading the operational database:

- **Upgrading on Co>Operating System 3.2.3 or later** — If your existing operational database was created using an **ab-db** version from Co>Operating System Version 3.2.2 or earlier, and if your Co>Operating System was subsequently upgraded to Version 3.2.3 or later, then you need to upgrade your operational database to make it compatible with the installed version of **ab-db** server software. For instructions, see ["Upgrading an ab-db operational database on Co>Operating System 3.2.3 or later"](#) in the *Installation Guide*.
- **Upgrading to Control Center Version 3.2.2 or later** — Because of significant database schema changes that were introduced in Control Center Version 3.2.2, you may want to purge older records from your pre-3.2.2 operational database, if applicable, to prevent an unusually lengthy upgrade process. If you are upgrading from a Control Center version prior to 3.2.2 or from any version of the Operational Console, review the *Installation Guide* topic ["Upgrading the operational database from versions prior to 3.2.2"](#) before you run the Control Center **upgrade\_database.ksh** script.

The Control Center operational database schema extends the Operational Console schema, and includes a number of new tables and columns to accommodate Control Center features that did not exist in the Operational Console. For complete details about the Control Center operational database, see the *Schema Reference* .

For instructions on upgrading an Operational Console installation to a new Control Center installation — as well as a summary of the differences between the features provided by the two products — see the *Installation Guide* .



# 4

## Highlights of new features in earlier versions

This section provides a high-level description of the most significant Control Center changes, by version.

- [Control Center Version 3.2.5](#)
- [Control Center Version 3.2.4](#)
- [Control Center Version 3.2.3](#)
- [Control Center Version 3.2.2](#)
- [Control Center Version 3.2.1](#)

# Control Center Version 3.2.5

This section describes new features, enhancements, and fixes to issues in Control Center Version 3.2.5. It contains the following topics:

- [Control Center Analysis area](#)
- [Custom Home area views](#)
- [Other improvements and new features](#)
- [Issues fixed in this release](#)

## Control Center Analysis area

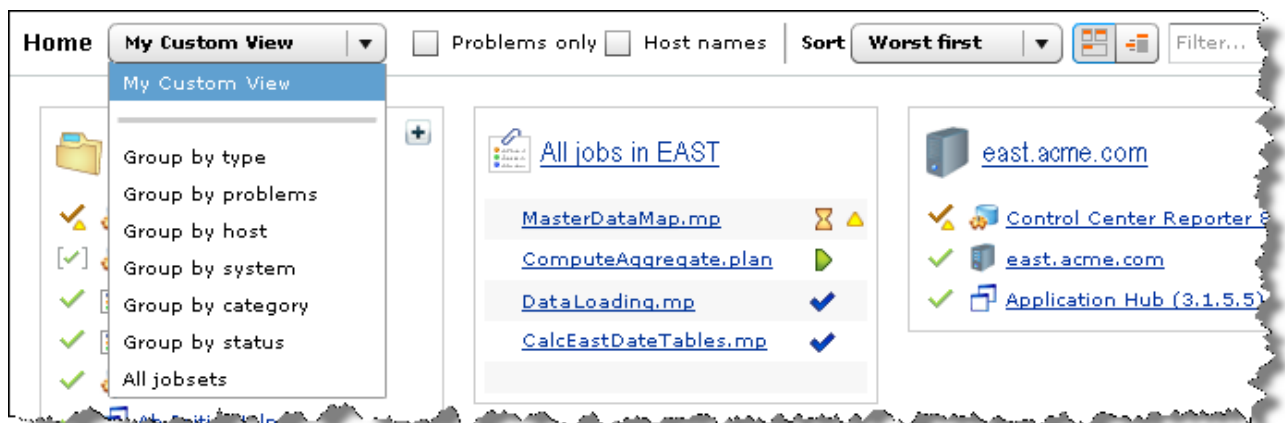
This release introduces a new area — **Analysis** — for exploring the contents of the operational database that the Control Center maintains for the jobs, hosts, and products that you monitor.

In the past, if you wanted to get at combinations of data that were not included in existing Control Center views, then you had to write your own SQL query. With the **Analysis** area, this is no longer necessary. Instead, you explore operational metadata interactively, using a highly flexible graphical interface. Views are assembled on the fly, responding fluidly as you change, expand, and refine your selections. Chart and graph visualizations help you to interpret operations activity, and exportable tables furnish you with the underlying data.

For more information, see [“Analyzing operations”](#) in the *User’s Guide*.

## Custom Home area views

The 3.2.5 release of the Control Center enables you to create and manage your own custom **Home** area views. Users with Control Center Administrator permissions create these views and add them to the top of the drop-down list for all Control Center users to access.



When you assemble a custom view, you determine the number, headings, and order of the boxes in the **Home** area. To do this, you start a new view, give it a name, and build it up incrementally by adding boxes.

For instructions and additional information, see [“Custom Home area views”](#) in the *Administrator’s Guide*.

## Other improvements and new features

This release introduces the following enhancements:

- **Improved scheduling performance** — In the past, the Control Center scheduler process could become unresponsive while waiting for shell-interpreted parameters to be resolved. The Control Center now manages parameter resolution asynchronously using a separate thread, freeing the scheduler process to start new jobs, check for files, and perform other tasks without delay.  
**NOTE:** This feature requires Co>Operating System software version 3.2.5 or later.
- **Improved Graph and Plan views** — The Control Center **Graph** and **Plan** views now access more sophisticated graph and plan viewers. These provide enhanced controls and more detailed information on parameters; as well as on transformations, constituent subplans and subgraphs, components, tasks, and methods.
- **New key server details** — The Details dialog for a key server (Info tab) now includes a **Key bundle type** field that indicates what type of key bundle (user, hostname, or combined user and hostname) is installed on that server.
- **Beta Feature: Job PFS** — If you are having problems with a particular job (or set of jobs), it is now possible to generate a job-specific package for support (PFS). To generate this package, the Control Center gathers information from the operational database — information that is specifically intended to assist in troubleshooting the job in question. For information about using this feature, contact Ab Initio Support.

## Issues fixed in this release

The following list describes issues that have been fixed in Control Center Version 3.25:

- **Spurious job definition editing conflict eliminated** — Previously, when you edited an existing job definition, an error with the **Save and Submit** action could produce a spurious “editing conflict” error and prevent you from saving your changes. This problem, which was seen with some database servers but not others, has been eliminated.
- **Reduced incidence of constraint violations that degrade system performance** — Before storing a host metric value in the database, the Control Center web application now checks whether that value already exists. This reduces the load on the database server and prevents many instances of database constraint violations that in the past degraded overall system performance.
- **Status no longer truncated** — The Control Center sometimes truncated the **Status** information appearing in a jobset’s info bubble. This has been fixed.
- **Bug in jobset dialog “selected group” choices fixed** — Previously, when you created a new jobset in the Daily Jobs for System sub-area, the **Selected group** choices in the **Matching criteria** section of the dialog sometimes were not properly updated. This happened only if you changed the **System** selection and chose **Application** from the **Group by** drop-down menu. Now, the Control Center properly updates the **Selected group** choices.

- **Correct drop-down list appears in New jobset dialog** — Previously, in the Daily Jobs for Host sub-area, the **New Jobset** dialog would erroneously show a **System** drop-down list in the Matching criteria portion of the dialog. The **System** list has been replaced by a **Host** list, and by default this list shows the name of the currently selected host.
- **Better display of “manually generated” job groups** — In the Daily Jobs sub-areas, when you select **Manually generated** for the **Group by** criterion, the Control Center lists all jobs that were not manually generated in a separate **Others** group. In addition, the groups are now sorted in descending order by date, with the **Others** group appearing last.

# Control Center Version 3.2.4

This section highlights the following new features that were introduced in Control Center Version 3.2.4:





- [New view in Home area: All jobsets](#)
- [New icons to indicate delayed status updates](#)
- [EME version tracking for checked-in graph and plan jobs](#)
- [Streamlined Jobs area navigation](#)
- [Changes to the representation of reporters](#)
- [Ability to delete a host from the operational database](#)
- [New filter option for child jobs](#)
- [Ability to monitor and control program task jobs](#)

## New view in Home area: All jobsets

A new **Home** area view enables you to see the contents of all your jobsets at once, including the name and status of constituent jobs. For more information, see ["Individual jobs in the Home area"](#) in the *User's Guide*.

## New icons to indicate delayed status updates

The Control Center typically retrieves information about the status of jobs, hosts, products, and other objects at least every few minutes. However, a slow network or a problem with a reporter service can delay the updates received from different Co>Operating System host computers.

When this happens, the Control Center now adds square brackets to the status icons of affected jobs   and other objects  . When such an icon appears, it means that the status of the monitored object has not been verified recently. Place your mouse pointer over the icon to learn the time of the last update, as well as more detailed status information.

## EME version tracking for checked-in graph and plan jobs

When you use the Control Center to monitor jobs that run Ab Initio graphs and Conduct>It plans, and those graphs and plans are checked in to the technical repository, the Control Center keeps track of which checked-in version of the executable graph or plan actually ran as part of each job. The Control Center displays this version information in the job's **Details** dialog, and also indicates whether the checked-out version of the graph or plan was modified before the job ran.

**NOTE:** The possible status values that a checked-out graph or plan can have with respect to its associated technical repository project include **CURRENT**, **MODIFIED**, and **STALE**, among others. For more detail, see [air sandbox status](#) in the *Technical Repository Command Reference*.

## Streamlined Jobs area navigation

New text links in the **Jobs** area navigation bar facilitate moving between sub-areas.



## Changes to the representation of reporters

Reporters now appear in the Control Center interface as services, and can be accessed from the **Services** box in the **Home** area when the contents of that area are grouped by type.

In addition, reporters now appear among the “related items” listed for a host.

**NOTE:** Reporters also continue to appear in the **Status Details for Control Center** dialog.

## Ability to delete a host from the operational database

A new host action, **Drop Host from Control Center**, enables you to end Control Center monitoring of a Co>Operating System host computer and to eliminate records of it from the operational database.

**NOTE:** If the host that you want to drop had been used to schedule jobs, you must purge the scheduling information from the operational database before you can drop the host. For more information, see [“Managing host status monitoring”](#) in the *Administrator’s Guide*.

## New filter option for child jobs

A new **Jobs** area feature enables you to choose whether to apply the same filter text to child jobs as to the parents. For more information, see [“Filter menu control”](#) in the *User’s Guide*.

## Ability to monitor and control program task jobs

By default, the Control Center does not monitor the program tasks that run as part of a parent plan job. However, starting with this release, you can enable program task job monitoring on a per-host basis by setting the configuration variable **AB\_OPS\_MONITOR\_PROGRAM\_TASKS** on the host.

**TIP:** For instructions, see [“Using configuration parameters to customize Control Center features”](#) in the *Administrator’s Guide*.

Setting this variable causes the Control Center to list program task jobs — in addition to sibling graph task and plan task jobs — below their parent plan jobs.

The info bubble for a program task job includes the same information, views, and actions as those available for top-level program jobs. Among other things, this enables you to stop and start program tasks directly from the Control Center interface.

**CAUTION!** Because it is not unusual for many program tasks to be generated in a short time, turning on program task monitoring can affect the performance of both the Control Center web application and its web client interface, and in addition can add many entries to operational database tables.

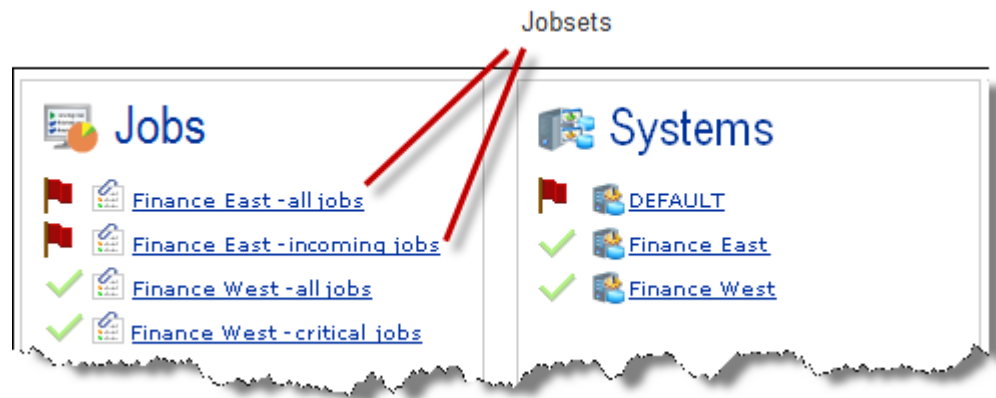
# Control Center Version 3.2.3

This section highlights the following new features that were introduced in Control Center Version 3.2.3:

- [Jobsets](#)
- [Quick links](#)
- [Simplified use of icons to indicate status and issues](#)
- [New job functions: Hold and Skip](#)
- [Ability to use the F8 key to run commands in a configuration environment](#)
- [Other new features](#)

## Jobsets

As you monitor the status of the thousands of jobs running in your systems, you may want to closely monitor a handful that are crucial to meeting your production goals. The new Control Center *jobsets* feature now enables you to do that from the [Home area](#), where you can track the status of a subset of jobs that you have a particular interest in.



Highlights of the jobset feature include the following:

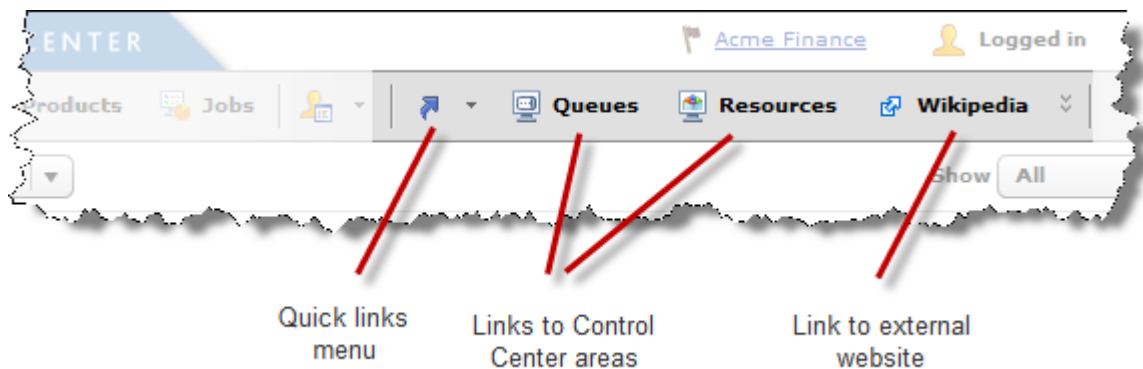
- **Roles** — A user with the [Jobs System Admin](#) role can create a jobset, stop or resume monitoring a jobset, or drop a jobset from being monitored by the Control Center. Users with the Jobs Monitor role, the Jobs Operator role, or any of the other [Jobs area roles](#) can monitor the jobsets that have been created. A user with the Control Center [Administrator](#) role has unrestricted access, and can manage any jobset in any system.
- **Jobsets by system and host** — Jobsets can apply to specific Control Center [job systems](#), and you can create host-specific jobsets from the [Daily Jobs for Host sub-area](#).
- **Jobset status** — There are specific criteria that you can configure the Control Center to use to determine the status of a jobset. That status is indicated by icons that appear next to each jobset that is displayed in the Jobs grouping of the Control Center [Home area](#). Status can be any of the following: **OK**, **OK with issues**, **Not OK**, **Empty**, or **Not monitored**.



For more information, see ["About jobsets"](#) in the *User's Guide* and ["Administering jobsets"](#) in the *Administrator's Guide*.

## Quick links

The Control Center now includes a *quick links* feature to facilitate navigating between locations within and outside of the Control Center interface. Creating a quick link also preserves the settings for the way items are grouped, narrowed, and filtered in the page that you are linking to. And, since the pages of the Control Center browser interface are web-addressable, you can create quick links to reach external websites as easily as Control Center areas.





Users with Control Center [Administrator](#) privileges can use the functions on the new quick links toolbar to create and manage quick links. Users who do not have administrative privileges can access all the menu links, but not the functions.

For more information, see ["Custom toolbar quick links"](#) and ["Managing quick links"](#) in the *Administrator's Guide*.



## Simplified use of icons to indicate status and issues

Previously, separate icons were used to indicate status (running, stopped, and so on) and issues (warning, error) for the monitored objects in the view. Now, there are combination icons that indicate both status *and* issues. For example, the following icons each indicate a different kind of issue associated with an object that has a status of **OK with issues**:


	The several versions of this icon indicate the nature of the issue: error, critical error, predicted error, warning, and predicted warning.
	

For more information about these and related icons, see ["Symbols and status icons"](#) and ["Event and issue icons"](#) in the *User's Guide*.

## New job functions: Hold and Skip

Users assigned the [Jobs Operator](#) role can take individual jobs that are waiting or have yet to reach their start times, and choose either to hold or to skip them. A job cannot be held or skipped once it becomes active and its status indicator is no longer a white circle  or an orange hourglass . You can also reverse the **Hold** and **Skip** actions and restore a job to its previous state.

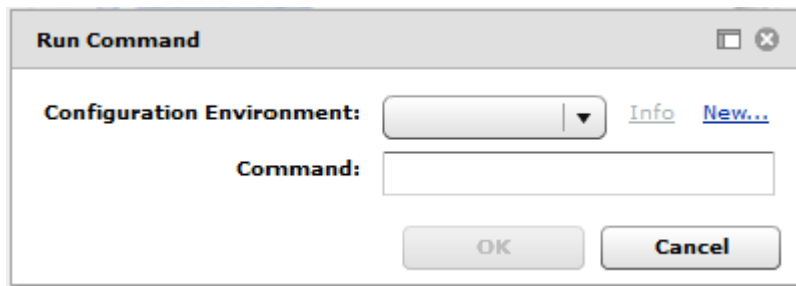
You use those actions as follows:

- **Holding a job** — You put a waiting or unstarted job *on hold* when you need to suspend all pending processing from a sequence of jobs. The **Hold** action suspends not only the target job, but also any subsequent jobs that depend on the target. To reverse this action, click **Release**.
- **Skipping a job** — You *skip* a waiting or unstarted job when you need to forego or delay running a target job, but still allow its dependent jobs to run. When you skip a job, the Control Center marks it with the **Skip** status icon: . Click **Don't Skip** to restore all the original job dependencies.

For more information, see ["Understanding on-hold and skipped jobs"](#) and ["Actions you can perform on jobs"](#) in the *User's Guide*.

## Ability to use the F8 key to run commands in a configuration environment

A user with the privileges of either the Control Center [Administrator](#) or [Environment Administrator](#) role can use the F8 key to display a dialog from which the user can select a configuration environment, run any Korn shell command, and then see the results.



The profile created for that configuration environment determines the host, bridge, and authentication that will be in effect when you run the command. (For more information about configuration environment profiles, see ["Creating a configuration environment profile"](#) in the *Administrator's Guide*.)

## Other new features

The following sections briefly describe other features that are included in Control Center Version 3.2.3.

### Package For Support (PFS)

Enhancements to the PFS include the following:

- Gathers information about Job Definitions, Job Definition Groups, and Calendars.
- Gathers information from multiple reporters, even if on the same host.
- Gathers information about default metrics

These changes allow Ab Initio support to more quickly diagnose issues with the Control Center.

## New product types

Version 3.2.3 of the Control Center supports the following new product types:

- Ab Initio Key Client Daemon
- Resource Server (see next topic)

## Resources area

- The Resources area now reports fixed-pools vs. variable-sized pools.
- Support for new product type: Resource Server, discovered when resource monitoring is on. You can access resource server instances from both the Products and Resources areas.

## Products area

The Products area now distinguishes stopped products from failed products. Stopped products will not be considered problems.

## Home area

- Systems are now displayed separately from Jobs in the Home area. Previously, these two categories appeared in the same item in the Home area.
- You now have the option to make systems appear in the Home area only if there are issues, by using the configuration parameter **client.home.systemSnapshotsVisibleOnlyWhenProblems**.

## Email enhancements

- A new **Test Email Configuration** page is now available from the Control Center Administration page.
- The Control Center can send email when a monitored host has a warning, error, or critical error.
- The Control Center can send email when a product has a critical error. Previously, the Control Center only sent email for warnings and errors on products.

## Notification groups

The following new default notification groups are available for issues, under the control of the configuration parameters:

- `productService.defaultWarningNotificationGroup`
- `productService.defaultErrorNotificationGroup`

- `productService.defaultCriticalErrorNotificationGroup`
- `host.defaultWarningNotificationGroup`
- `host.defaultErrorNotificationGroup`
- `host.defaultCriticalErrorNotificationGroup`

## Database support

- PostgreSQL 9 — Changes in the schema definitions, installation scripts and upgrade scripts allow the Control Center to run on PostgreSQL Version 9.4.3. See the *Installation Guide* for upgrade information.
- Support for Oracle 12c.

## New configuration parameters

New configuration parameters for controlling the visibility of features:

- **`client.home.itemSnapshotsHostnameVisible`** controls whether hostnames are appended to applicable items listed in the Home area. Items can be filtered by hostnames (when visible).  
By default, hostnames are not appended.
- **`client.home.systemSnapshotsVisibleOnlyWhenProblems`** shows system items on the Home area only for systems with problems.  
By default, a system item is hidden until it has a problem.
- **`client.permitBrowseAllIcons`** enables the quick links icon browser for all Control Center icons.  
By default, icons are limited to a useful subset.
- **`client.permitF8`** enables the F8 key to run commands on a host.  
By default, the F8 key is enabled.
- **`client.permitIBStopAndDrop`** enables the **Stop Monitoring** and **Drop From Control Center** actions on the Product, Host and JobSet info bubbles.  
By default, these actions are not present.

## New Jobs Analysis area (beta feature)

Contact Ab Initio Support for more information about the new Jobs Analysis area.

## Hostname key bundles

In addition to using the Key Server to install and administer user keys, you can now use the Key Server to install and administer hostname keys, which activate Ab Initio server software (such as the Co>Operating System) on a particular host.

To administer hostname keys, you must have the Hostname Key Bundle Admin role.

**CAUTION!** When installing a new key bundle on a key server with an existing key bundle, be sure first to check the bundle type of the existing key bundle so that you don't inadvertently overwrite one bundle type with another bundle type. The bundle type is given directly after the bundle ID in the Installed bundle field of the Key Server's info bubble (for example, **1234-5678-90ab-cdef, user**, or **1234-5678-90ab-cdef, hostname**). If the bundle ID is not followed by a type designation, the bundle is a user bundle.

For more information, see [“Managing key servers and keys”](#) in the *Administrator's Guide*.

## Additional enhancements

- Upgraded the example graph for promoting executables. New promotion graph uses a per-system web service, rather than a per-host web service.  
See the **promote-executables.mp** graph in the examples directory of your installation.
- Info bubbles for monitored plans — Where possible, plan tracking shows Job info bubbles for Graph Tasks and Plan Tasks, and CPU seconds and time elapsed for Program Tasks.
- Audit table includes information about changes to account privileges.
- Job CPU calculations include graph startup time — In the Jobs by System sub-area, the values appearing in the CPU and Total CPU columns now reflect the CPU time devoted to starting up graph jobs as well as the CPU time devoted to processing graph data.

# Control Center Version 3.2.2

This section highlights the following new features that were introduced in Control Center Version 3.2.2:

- Ability to monitor multiple execution spaces with a single reporter
- New diagram representing new product and service relationships
- New Group by Type option in Daily Jobs and Schedule sub-areas
- New History view for hosts
- Improved job history view performance
- New Package For Support (PFS) options
- Enhanced navigation from Home area
- Enhancement to job definition test function

## Ability to monitor multiple execution spaces with a single reporter

It is now possible to use a single Version 3.2.2 or later Control Center reporter to monitor multiple graph execution spaces (AB\_DATA\_DIR directories) on one or multiple Co>Operating Systems. Previously, a reporter could monitor only one graph execution space at a time, and if you wanted to monitor multiple execution spaces, you had to run multiple reporters.

To enable a reporter to monitor multiple graph execution spaces, add the following *configuration value array* to the reporter's configuration file (\$AB\_HOME/config/reporter-config.xml):

```
<arrayValue name="AbDataDirs">
  <value>dirname0</value>
  <value>dirname1</value>
  <value>dirname2</value>
</arrayValue>
```

where *dirnameN* is a path to an AB\_DATA\_DIR directory.

## Simplified reporter configuration instructions

This new feature for monitoring multiple AB\_DATA\_DIR directories eliminates the need to perform some of the reporter configuration procedures in the *Administrator's Guide*. In particular, ignore all of the instructions given in the chapter "Monitoring multiple graph execution spaces."

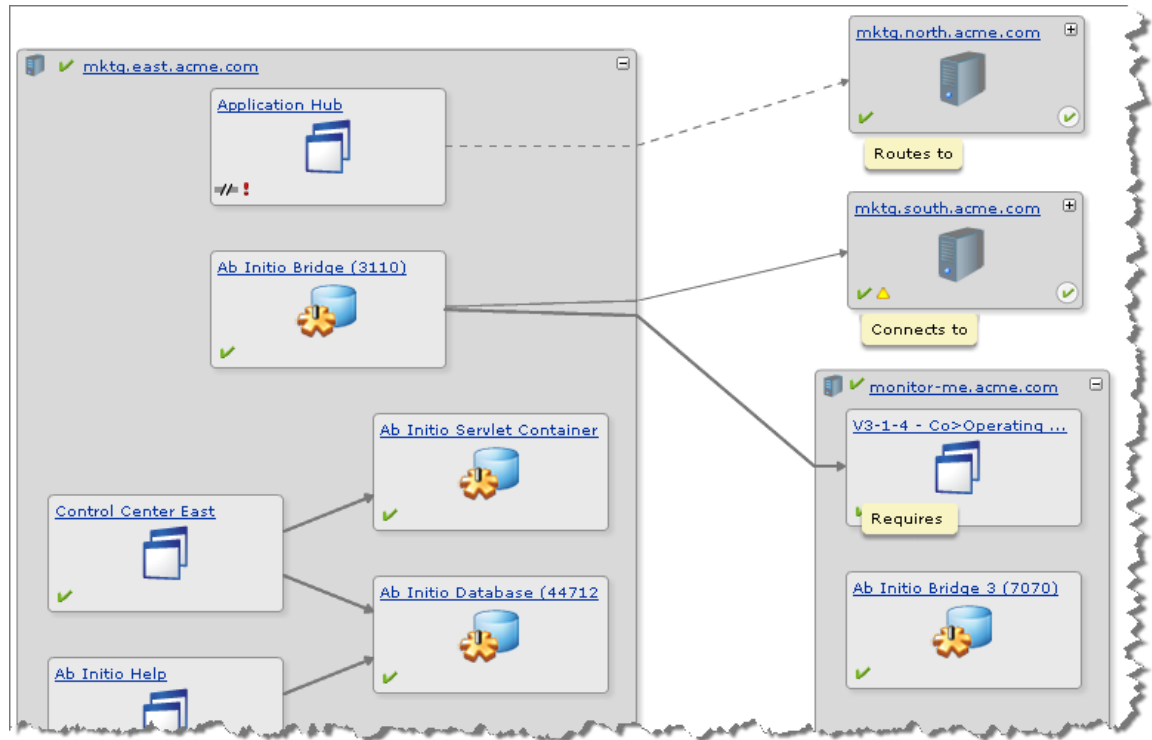
In place of the configuration roadmap in that chapter, do the following:


1. Edit one 3.2.2 or later reporter configuration file — as described above — to include an **AbDataDirs** configuration value array.
2. Start the reporter and bridge as described in "Starting reporter and bridge daemons".
3. Create bridge, authentication, and other profiles as described in "Creating Control Center profiles".

## New diagram representing new product and service relationships

The Control Center is now capable of representing several kinds of relationships between monitored products and services, including *Requires*, *Connects to*, *Routes to*, and *Member of*.

In addition, a new **Products** area relationships view shows all these relationships in a single block diagram.



Click  to switch from the tabular view to the relationships diagram. For more information, see the *User's Guide*.

**NOTE:** Certain administrative users can edit the representation of a product or service's relationships in this diagram. For more information, see the *Administrator's Guide*.

## New Group by Type option in Daily Jobs and Schedule sub-areas

The Control Center now includes a **Group by Type** option in the Daily Jobs and Schedule sub-areas. This new **Group by** option enables you to group jobs and job definitions by executable **Type** (graph, continuous graph, plan, or program) in both tabular and diagram views.

## New History view for hosts

When you click the **History** link from a host info bubble, the Control Center displays a combined view that, depending on the permissions afforded by your role, includes a graph of the value of a host or filesystem metric over time for the selected host (A), as well as a column chart showing processor time consumed on the selected host (B). For more information, see the *User's Guide*.

## Improved job history view performance

The Control Center now precalculates values for a new metric called **OpMetricValue.Bucket**. This new metric identifies for each metric value the exact minute it was measured. These values can then be reported minute by minute, or aggregated into — say, ten-minute intervals, hours, or larger chunks of time. To put it another way, **OpMetricValue.Bucket** enables the Control Center to determine quickly what “time bucket” each metric value belongs in.

## New Package For Support (PFS) options

The Control Center PFS archives include log files and other data gathered from the Control Center web application, the operational database, and the user environment. Now, you can choose to include or exclude information from Co>Operating System hosts that the Control Center is monitoring. Typically, you would selectively exclude hosts if the PFS takes too long to gather data or produces too much information. For details, see the *Administrator's Guide*.

**NOTE:** Previous versions of the Control Center included a **Contingency PFS** function that enabled you to generate a PFS without any host information. In this release, **Contingency PFS** has been eliminated; the new PFS option achieves the same results while providing more flexibility.

## Enhanced navigation from Home area

The titles of some Home area item groups now serve as active links for users with appropriate privileges. Click the title to navigate to the corresponding area or sub-area. For example, clicking the title **Products** takes you to the Products table, where you will find items grouped and narrowed to display only products, not services. Clicking other group name titles — for example, those of custom categories — produces an info bubble.

In addition, the Control Center automatically adds scroll bars to Home area groups when the content makes this necessary.

## Enhancement to job definition test function

Previously, the info bubble of a job definition included a **Test** action; this has been replaced. The new action — **Manually Generate Job** — can be performed by users with the Jobs Operator role as well as the Jobs Scheduler role. For more information, see the *User's Guide*.



# Control Center Version 3.2.1

Version 3.2.1 was the first release of the Control Center product, superseding the Operational Console. For a comparison of Control Center and Operational Console features, see ["Control Center and Operational Console feature comparison"](#) in the Control Center *Installation Guide*.