



User Guide for the Cisco Unified Intelligence Center Reporting Application

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Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0833



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Preface

Purpose

This guide explains the user interface and functionality in the Cisco Unified Intelligence Center reporting application.

Audience

This guide is intended for reporting users, administrators, and developers who use the Cisco Unified Intelligence Center (Unified IC) web server to run and manage reports for the Cisco Unified Contact Center products.

This guide documents the stock objects that are installed or can be imported and used with Unified IC and does not explain customization. Stock objects are Reports, Report Definitions, Data Sources, Categories, Value Lists, and Collections. You can download the necessary Cisco stock reports from the Software Download page on the Cisco WebSite and import these reports into Cisco Unified Intelligence Center.

Organization

This Section	Covers
Chapter 1: Product Overview (page 5)	A high-level description of Unified IC, the Overview drawer, the cluster deployment model, logging in, and authentication.
Chapter 2: Getting Started with Unified IC Reporting (page 13)	First steps to perform when you begin to use Unified IC, basic concepts, User Roles.
Chapter 3: Dashboards (page 27)	The Dashboards interface, creating and viewing dashboards, adding items to a dashboard, the dashboard slideshow.

This Section	Covers
Chapter 4: Data Sources (page 37)	The Data Sources interface, the data sources that are installed with Unified IC, how to create and edit a data source.
Chapter 5: Reports (page 47)	The Reports interface, the stock reports, how to import reports, how to run a report, how to edit a report, working with report views, charts, and gauges.
Chapter 6: Report Definitions (page 107)	The Report Definitions interface that is offered with the Premium license, what is a report definition, the types of queries supported by Unified IC, working with a report definition, the SQL syntax used with Unified IC.
Chapter 7: Value Lists and Collections (page 135)	The Values List and Collections interface, how value lists are associated with report definitions, the types of collections you can create for a value list, the collections that are created by UCCE User Integration.
Chapter 8: Scheduler (page 145)	The Scheduler interface, how to create and maintain a schedule for a report.
Chapter 9: Security (page 153)	The Security interface, the User List, User Group, Permissions, and using Run As.
Chapter 8: System Concepts and Navigation Controls (page 175)	The Unified IC user interface, how to access the Cisco Unified Communications tools, working with categories, the difference between stock and custom objects.
Troubleshooting	<p>Troubleshooting is located online, on a customer-facing Wiki page that can be accessed by anyone who has a Cisco.com account:</p> <p>Troubleshooting tips for the Cisco Unified Intelligence Center¹</p>

Related Documentation

[Guides for the Cisco Unified Intelligence Center](http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html) (http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html)

[The Bill of Materials for the Cisco Unified Intelligence Center](http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html) (http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html)

[Troubleshooting tips for the Cisco Unified Intelligence Center](http://docwiki.cisco.com/wiki/Troubleshooting_Unified_Intelligence_Suite) (http://docwiki.cisco.com/wiki/Troubleshooting_Unified_Intelligence_Suite)

[The Developers' Forum for the Cisco Unified Intelligence Center](http://developer.cisco.com/web/ccr) (<http://developer.cisco.com/web/ccr>)

[Cisco ACE 4700 Series Appliance Server Load-Balancing Configuration Guide](http://www.ciscosystems.com/en/US/docs/app_ntwk_services/data_center_app_services/ace_appliances/vA3_1_0/configuration/slb/guide/preface.html) (http://www.ciscosystems.com/en/US/docs/app_ntwk_services/data_center_app_services/ace_appliances/vA3_1_0/configuration/slb/guide/preface.html)

1) http://docwiki.cisco.com/wiki/Troubleshooting_Unified_Intelligence_Suite

Conventions

This manual uses the following conventions:

Convention	Description
boldface font	<p>Boldface font is used to indicate commands, such as user entries, keys, buttons, and folder and submenu names. For example:</p> <ul style="list-style-type: none">• Choose Edit > Find.• Click Finish.
<i>italic font</i>	<p>Italic font is used to indicate the following:</p> <ul style="list-style-type: none">• To introduce a new term. Example: A <i>skill group</i> is a collection of agents who share similar skills.• For emphasis. Example: <i>Do not</i> use the numerical naming convention.• A syntax value that the user must replace. Example: IF (<i>condition, true-value, false-value</i>)• A book title. Example: See the <i>Cisco CRS Installation Guide</i>.
window font	<p>Window font, such as Courier, is used for the following:</p> <ul style="list-style-type: none">• Text as it appears in code or that the window displays. Example: <code><html><title>Cisco Systems, Inc. </title></html></code>
< >	<p>Angle brackets are used to indicate the following:</p> <ul style="list-style-type: none">• For arguments where the context does not allow italic, such as ASCII output.• A character string that the user enters but that does not appear on the window such as a password.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

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

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

Documentation Feedback

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mailto:ccbu_docfeedback@cisco.com

We appreciate your comments.



Chapter 1

Product Overview

About Cisco Unified Intelligence Center

Cisco Unified Intelligence Center (Unified IC) is a web-based graphical user interface that provides real-time and historical reporting and customizable dashboards. You can "save as" the stock reports and then edit the cloned copies by changing the order and the names of columns and by presenting the information graphically as gauges and charts. You can also import additional templates. The premium version of Unified IC comes with a native Report Designer tool for designing new templates.

Depending on the features enabled by your license (Standard or Premium) and on your User Role and your Unified IC object permissions, you can work in Unified IC to:

- Create, maintain, share, and view dashboards that display reports, report lists, sticky notes, scheduled reports, URLs and widgets.
- Run real-time and historical reports from Cisco stock report templates.
- Copy ("Save As") and modify the stock templates to create custom templates.
- Create views for the custom templates to display them as grids, charts, gauges.
- View the status of the default data source that populates the stock templates.

Create and maintain additional data sources for reports that are populated by databases other than the Unified ICM/CC database.

- Control access to the reports, reporting features, and data that each user can see.
- Manage users and groups.

Note: Cisco Unified Intelligence Center reporting is one of two web-based interfaces for Unified IC. The other is the Administration console. The Administration console has its own user documentation and online help.

See Also

[Stock Report Templates \(page 49\)](#)

[Custom templates \(page 54\)](#)

[Unified IC User Roles \(page 23\)](#)

Deployment Models

Unified IC is added to the Cisco Unified Contact Center environment as a cluster, comprised of at least one and a maximum of eight nodes—one primary "Controller" node and as many as seven secondary "Member" nodes.

Node	Description
Controller (one)	<p>Is present in all deployments.</p> <p>Is installed with both the Administration (OAMP) and Unified IC Reporting applications.</p> <p>Holds the License file, which is replicated to the member nodes. See Licenses (page ?).</p> <p>Allows access, with System Administrator credentials, to Cisco Unified Serviceability, Cisco Unified OS Administration, and the Disaster Recovery System.</p>
Members (maximum of seven)	<p>Are optional. (A deployment can consist of a Controller node only.)</p> <p>Are installed with Unified IC Reporting application only.</p> <p>Allow URL access to the Controller node.</p> <p>Obtain their license from the Controller.</p>

Unified IC is an appliance application similar to Cisco Unified Communications Manager. It must be installed on dedicated servers, which must be Multimedia Communications Servers (MCS) or equivalent hardware.

Refer to the [Cisco Unified Intelligence Center Bill of Materials](http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html) (http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html) for server requirements and version compatibility.

Databases in the Unified IC Cluster

The Informix Dynamic Server (IDS) is installed on all nodes in the cluster.

The installation creates these databases on each node:

- The System database is installed on all nodes. This database is the standard Cisco Call Manager database, modified for the Unified IC.
- The Unified IC database (CUIC). This database holds information on reports, dashboard, users, and other objects maintained on each server. CUIC databases are replicated across the cluster.

The CUIC and System databases are not documented and are not directly accessible for review and management.

You can use the Command Line Interface to perform certain actions and to view database tables and properties. These commands include *run sql*, various *show tech* commands, the *utils dbreplication* and *utils purge* commands.

- Two UCCE databases - UCCE Historical and UCCE Realtime. These databases are used to run the stock reports.

The UCCE database is documented in the [Database Schema Handbook for Cisco Unified ICM/Contact Center Enterprise & Hosted](http://www.cisco.com/en/US/products/sw/custcosw/ps1001/prod_technical_reference_list.html) (http://www.cisco.com/en/US/products/sw/custcosw/ps1001/prod_technical_reference_list.html)

Installation and Configuration

Installation is documented in the [Installation Guide for Cisco Unified Intelligence Center](http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html) (http://www.cisco.com/en/US/products/ps9755/products_user_guide_list.html)

Accessibility

Software

Cisco Unified Intelligence Center software is in compliance with Part 1193 of the United States Federal Telecommunications Act Accessibility Guidelines.

For more information, go to this website for details on the [Cisco Accessibility](http://www.cisco.com/web/about/responsibility/accessibility/index.html) (<http://www.cisco.com/web/about/responsibility/accessibility/index.html>)

User Documentation

The Overview Drawer

Due to technical limitations at this time, documentation groups are unable to fulfill all documentation accessibility design requirements.

Requests for improved accessibility for documentation are handled on a case-by-case basis upon request only.

To request a fully accessible document, please email accessibility_info@cisco.com.

Refer to the [Accessibility Troubleshooting topics for tips about working in the Unified IC interface](http://docwiki.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0) (http://docwiki.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0).

The Overview Drawer

A successful sign in to Unified IC opens the Getting Started page. Each line of blue text on the Getting Started page is a link that opens an online help topic about one of the Unified IC functions.

The Getting Started page is controlled by the Overview drawer. You can always return to Getting Started by clicking the Overview drawer. All users have access to the Overview drawer and to the Getting Started page.

To:	Do This:
Close (hide) the Getting Started page	Click the X on the Overview tab
Reopen the Getting Started page	Click the Overview drawer

User Authentication

The url for the Unified IC reporting application is `http://<HOST>` where HOST is the DNS name or IP Address of a Unified IC node.

Note:

- If you implement server load balancing, use the UP address of the Application Control Engine (ACE) server.
- When a user has logged in to CUIC with http protocol, and any of the resources like dashboard or threshold images are using https protocol, it may not work as there might be a permission denied error for accessing a secured resource from an unsecured session.

Who can log in?

- The individual designated as *Server Application User* during the installation is automatically eligible to log in and is the initial System Administrator for Unified IC. This user appears by default on the [User List Page \(page 155\)](#).
 - This person can sign in to Unified IC with the user name and password he or she defined during the installation.

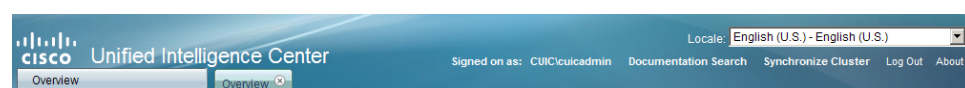
- Any user who has been imported with the Unified CCE User Integration feature.
 - Once integrated (imported), UCCE supervisors can sign in to Unified IC with their Active Directory User ID and Password.
 - They automatically have the User Roles of Dashboard Designer and Report Designer and have Read and Execute permissions to view collections of their (and only their) Agent and Agent teams. They can select these collections when they filter reports.
- All IMS (IP Multimedia Subsystem) users can log in using their IMS username and password. Once they log in, they are added to the CUIC database (cuic_data) and appear in the User List Page.
 - The login for these users is either CUIC\cuicadmin, you can enter *cuicadmin*, *CuicAdmin*, and *CUIC\cuicadmin*.
 - IMS does not perform cross-forest authentication. However, there is a workaround that involves the use of Active Directory proxies. For more information, refer to [How to Configure Unified Communication Manager Directory Integration in a Multi-Forest Environment](http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_configuration_example09186a0080b2b103.shtml) (http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_configuration_example09186a0080b2b103.shtml).
- For all domain (LDAP) users, once the LDAP server is configured in the Administration application, users in that domain can sign in to Unified IC. When they log in, they are added to the cuic database and appear on the [User List Page \(page 155\)](#). The Security Administrator must assign user roles to them. To configure Active Directory in the Administration application, select **Cluster Configuration > Reporting Configuration > Active Directory** tab.
 - The login username format is <FQDN>\<username> or <subDomainName>\<username> where <subDomainName> is the name of the last level of the sub domain. For example, for <FQDN>: cuic.ccbu.cisco.com, the <SubDomainName> is cuic.
 - Domain\user name is case insensitive, but password is case sensitive.

See Also

[Unified IC User Roles \(page 23\)](#)

Links on Unified IC Reporting Pages

Figure 1: Title Bar



Link / Feature	Description
Cisco Logo	Click the Cisco Systems logo icon to open the Cisco Systems web site.
Locale	<p>By default, the Unified IC interface displays in the language that has been established for your operating system and browser. You can change this by clicking the locale dropdown and selecting the language you want.</p> <p>Setting the locale changes the language used on web pages - including the reports and their generated output, as well as the date and time format.</p> <p>Note: If your default browser language is one that Unified IC does not yet support, Unified IC will display the first supported language listed in your browser Language Preference. For example, if your browser Language Preference lists Croatian, Vietnamese, and French Canadian (in that order), Unified IC will default to French Canadian, which is the first language in your preferences that Unified IC supports.</p> <p>Language is session-based. You can open one instance of Unified IC Reporting in French Canadian and another instance in European French.</p> <p>You can select your locale:</p> <ul style="list-style-type: none"> • At the initial log in page. To do this, click the locale dropdown under the Password field. • At the top of each page. <p>Unified IC Reporting interface and online help are available in these languages:</p> <ul style="list-style-type: none"> • Simplified Chinese = zh_CN • Traditional Chinese = zh_TW • Danish = da_DK (Denmark) • Dutch = nl_NL (Netherlands) • US English = en_US • UK English = en_UK <p>Note: If you select UK English as the locale, the system displays all the date formats as dd/mm/yyyy.</p> <ul style="list-style-type: none"> • European French = fr_FR (France)

Link / Feature	Description
	<ul style="list-style-type: none"> • French Canadian = fr_CA (Canada) • German = de_DE (Germany) • Italian = it_IT (Italy) • Japanese = ja_JP (Japan) • Korean = kp_KR • Polish = pl_PL • Portuguese = pt_BR (Brazil) • Russian = ru_RU (Russia) • Spanish = es_ES (Spain) • Swedish = sv_SE (Sweden) • Turkish = tr_TR
Signed On As	Shows the user id for the user who is currently signed in.
Documentation Search	Opens a custom Google search for documentation relevant to Cisco Unified Intelligence Center.
Synchronize Cluster	System Configuration Administrators can click this to clear the local cache. See Caching in Unified IC (page 26) .
Run As	Shows the user id for the user that the Security Administrator is impersonating or "running as". See Run As (page 170) .
Stop Run As	Click to exit Run As mode.
Logout	Asks for confirmation and then logs you out.
About	Shows the version of Unified IC that you are running. Also show the hostname and IP Address of the node.

The timeout for session inactivity is set by default to 14,400 seconds (four hours). It is configurable through the Command Line Interface: *set cuic-properties session-timeout*.

See Also

[System Navigation Controls \(page 175\)](#)



Chapter 2

Getting Started with Unified IC Reporting

The [System Application User \(page 25\)](#) must perform these tasks so that other users can begin working with Unified IC Reporting.

This chapter contains the following topics:

- [Acquire the License File from the License Website, page 13](#)
- [Sign in to the Administration Interface, page 14](#)
- [Set Up Security for a Remote Data Base, page 17](#)
- [Sign in to the Unified IC Reporting Interface, page 18](#)
- [Unified IC Reporting: Basic Concepts, page 20](#)
- [How Do I Create a User?, page 22](#)
- [How Do I Run a Report?, page 23](#)
- [Unified IC Reporting: Unified IC User Roles, page 23](#)
- [Caching in Unified IC, page 26](#)

Acquire the License File from the License Website

Any user in your organization can contact Cisco Systems, Inc. to request a license.

-
- | | |
|---------------|--|
| Step 1 | To acquire the license file, go to the Cisco Product License Registration website at this URL: https://tools.cisco.com/SWIFT/Licensing/PrivateRegistrationServlet |
| Step 2 | If you do not have a PAK, click the available licenses link (https://tools.cisco.com/SWIFT/Licensing/PrivateRegistrationServlet?DemoKeys=Y). |
| Step 3 | Scroll to Voice Products and click Cisco Unified Intelligence Center - v8.0 . |
| Step 4 | Enter your MAC Address, accept the agreement, and enter your Registrant Information. |
| Step 5 | Follow prompts to complete the registration pages. |

Sign in to the Administration Interface

You will receive an email from Cisco Systems that contains your license file as an attachment. The file format is *.lic.

Step 6 Save the license file in a location where the [System Application User \(page 25\)](#) can access it.

Note: As a best practice, save a backup copy of this file. You can open a *.lic. file to look at it, but *do not make any changes to it*. Changing the file invalidates the license.

Sign in to the Administration Interface

The first person who signs in to the Administration application must do so using the User ID and password that were defined for the [System Application User \(page 25\)](#) during the installation. This user is the initial Super User for Unified IC Administration.

To sign in:

1. Enter this URL: **http://<HOST ADDRESS>/oamp** where HOST ADDRESS is the IP Address or Hostname of your Controller node.
2. Enter the application user ID and password that you defined during installation.

Next step: [Upload the License \(page 14\)](#).

Upload the License

As soon as the Super User signs in, he or she must upload the license file. The file is uploaded to the Controller node and, within a minute, is automatically replicated to all nodes in the cluster.

Step 1 Navigate to **Cluster Configuration > License Management** in the Administration application.

Step 2 Click **Upload license file (Browse)**.

Step 3 Navigate to the location where the *.lic file was saved.

Step 4 Click **Apply License** to load the license.

A message displays indicating that the license file was uploaded successfully and will be distributed in the cluster in approximately one minute.

Note: The databases are polled once a minute for changes. The license replication is not immediate but will occur within a minute.

Next step: [Configure the Active Directory Server \(page 15\)](#).

Configure the Active Directory Server

The initial Super User does not need to be authenticated through Active Directory.

Other users, such as Unified CVP reporting users, must be authenticated through Active Directory.

You must configure the Active Directory tab in the Administration console with the credential of Active Directory servers so that supervisors and others can log in to the Unified IC web application with the User Name and password that is defined in their domain.

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|---------------|---|
| Step 1 | In the Administration application, navigate to Cluster Configuration > Reporting Configuration and select the Active Directory tab. |
| Step 2 | Complete all fields on this page, referring to the online help for guidance. |
| Step 3 | Click Test Connection . |
| Step 4 | When the connection is confirmed, click Save . |
-

Next step: [Optionally, Configure Report Scheduler Email Settings \(page 15\)](#).

Optionally, Configure Report Scheduler Email Settings

Perform this step if you intend to schedule reports and to have the scheduled reports delivered by email. You can skip this step and do this at a later time if you are not sure that you will be scheduling reports.

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- | | |
|---------------|--|
| Step 1 | From the Administration application, click Cluster Configuration > Reporting Configuration and select the Report Scheduler Email Settings tab |
| Step 2 | Complete the fields on this tab, referring to online help for guidance. |
| Step 3 | Test the connection. |
| Step 4 | Save. |
-

Next step: [Optionally, Create Another Super User \(page 15\)](#).

Optionally, Create Another Super User

At the initial sign in, the System Application user defined during installation is the *only* Super User recognized by the Administration application.

As a safeguard, set up at least one other Super User.

Sign in to the Administration Interface

-
- Step 1** In the Administration application, select **Admin User Management drawer > Admin User Management** to open the Admin Users page.
- Step 2** Click **Add New** to open the Configure User page.
- Step 3** Complete the General tab to define a user name and a password for the new Super User.
- Step 4** Complete the Credentials tab and the Policy tab, referring to the online help for guidance.
- Step 5** Save the Super User.

Until granted other roles, additional Super Users have the Login User role.

Next step: [Optionally, Enable Unified CCE User Integration \(page 16\)](#).

Optionally, Enable Unified CCE User Integration

Users who are configured as agent supervisors in Unified CCE Configuration Manager and saved in the Unified ICM database can be integrated into Unified IC. If you enable UCCE User Integration in the Administration interface, you can schedule and run a synchronize process that:

- Imports these supervisors and creates them as Report Designer and Dashboard users for Unified IC.
- Updates two stock value lists (Agents and Agent Teams) with collections for all supervisors' agents and agent teams.

Grants team supervisors READ and EXECUTE permissions for those collections.

- Step 1** From the Administration application, click **Cluster Configuration > UCCE User Integration**.
- Step 2** Click **Enable UCCE User Integration**.
- Step 3** Optionally, set the schedule for time of day and days of the week when you want to user integration. (You can return to this page and set the schedule later, after you configure the UCCE Historical Data Source.)
- Step 4** Click **Save**.
- Step 5** *Do not click **Synchronize Now**.* (You must first configure the UCCE Historical data source.)
-

Next step: [Set Up Reporting Data Source Security \(page 17\)](#).

About Unified CCE User Integration

The Unified CCE User Integration feature imports supervisors and their teams from Unified ICM/CCE from the Unified ICM Configuration Manager and database into Unified IC.

Supervisors are automatically given Unified IC user roles and can log in to Unified IC to access collections for - and run reports for - their agent team(s).

Note:

- You cannot run User Integration until you upload the license.
- There are five tasks in the initial setup for Unified CCE User Integration. Some are performed in the Administration interface. Some are performed in the Reporting interface. As the [System Application User \(page 25\)](#) has access to both interfaces, it is efficient for a that user to set up UCCE User Integration.

The tasks are to:

- Enable Unified CCE User Integration in the Administration interface.
- Complete the configuration of the UCCE Historical Data Source in the Reporting Interface.
- Synchronize Users in the Administration Interface.
- Validate Collections of Agents and Agent Teams in the Reporting Interface.
- Set up a synchronization schedule in the Administration Interface.

Results of Unified CCE User Integration:

- Integrated Supervisors can sign in to Unified IC Reporting (provided their Active Directory authentication has been configured).
- Integrated Supervisors are added to the Unified IC Reporting User List with the roles of Login User, Report Designer and Dashboard Designer.
- The Unified IC Value Lists page is updated with *Agents* and *Agent Teams* collections.
- Integrated Supervisors can view their *Agents* and *Agent Teams* collections (**Unified IC Reporting > Value Lists** drawer).
- Integrated Supervisors are granted permissions only to the *Agents* and *Agent Teams* collections that they "own".

Once Unified CCE User Integration schedule is set up, Unified IC is updated with changes to supervisors and their teams every time the synchronization updates.

Set Up Security for a Remote Data Base

All remote databases referred by Unified IC data sources are repositories for data that populates Unified IC report. They must meet these specifications:

- They must be accessible to Unified IC through the network.

Sign in to the Unified IC Reporting Interface

- Their TCP/IP protocol support must be enabled.
- Their remote access must be enabled.
- They must be protected with read-only access.
- Select *SQL Server & Windows Authentication*. *Windows Authentication* is not an option.
- There must be a SQL Authentication User.

Next step: [Sign in to the Unified IC Reporting Interface \(page 18\)](#).

Sign in to the Unified IC Reporting Interface

The [System Application User \(page 25\)](#) is the initial Super User for Administration and is also the initial Security Administrator for the Unified IC Reporting interface. He or she uses the same User ID and password to sign in to the Administration interface and to the Unified IC Reporting interface.

To sign in to the Unified IC Reporting interface:

1. From the home page of the Administration interface, click the Control Center drawer.
2. Locate and double-click the name of the member node you want to access. This opens the Cisco Unified Intelligence Center login page for that member.
3. Enter your User ID and password.

The Overview page displays.

Note: If you implement server load balancing, you need to access the Unified IC reporting interface using *http://<ACE Host>* where *<ACE Host>* is either the DND name or the IP VLAN address of the Application Control Engine (ACE) server.

Next step: [Complete the Configuration of the UCCE Data Source \(page 18\)](#).

Complete the Configuration of the UCCE Data Sources

Placeholders for two UCCE Data Sources appear by default on the Data Sources page. These are the data sources for the data that populates the stock templates. Before you can run reports or can run UCCE User Integration, you must edit the parameters of these data sources to complete the configuration, including Database Host, Database port, Database Name, User ID and Password.

The two data sources - UCCE Historical and UCCE Realtime - contain the same information, but the UCCE Historical data source typically has a lower load volume and is used to gather data for most of the stock value lists and for UCCE User Integration.

Before you can run reports or can run UCCE User Integration, you must edit the UCCE Historical data source to complete the configuration for the Database Host Address, Database Name, IP Address, User ID, and Password.

To do this:

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- | | |
|---------------|---|
| Step 1 | From the Unified IC Reporting application, click the Data Sources drawer in the left panel to open the Data Sources page. |
| Step 2 | Select the UCCE Historical Data Source. |
| Step 3 | Click Edit to open the Data Source Create/Edit page. |
| Step 4 | Complete the fields for this data source, referring to online help for guidance. |
| Step 5 | Test the data source connection. Troubleshoot if necessary. |
| Step 6 | Save the data source. |
| Step 7 | Repeat steps 2 through 6 for the UCCE Realtime data source. |
-

Next step: [Review the User List \(page 19\)](#).

Review the User List and Set up User Roles, Permissions, and Groups

The [System Application User \(page 25\)](#), as the default Security Administrator, needs to review all the users who are on the User List, check their User Roles, assign Permissions, create User Groups and assign users as members of groups.

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|---------------|--|
| Step 1 | <p>From the Unified IC Reporting application, click the Security drawer. Then click User List.</p> <p>The User List is populated with the initial Security Administrator as well as all supervisors who have been imported by UCCE User Integration.</p> |
| Step 2 | <p>Select and edit each user to verify his or her User Roles and to set Permissions. Refer to the online help for details on User Roles and Permissions.</p> <p>The System Application User (page 25) (initial Security Administrator)) has all user roles and is the owner of all stock objects, including stock data sources, stock categories, report definitions, reports, value lists and connections. The Permission preference for this user is set to EXECUTE for both My Group and the All Users group.</p> <p>Unified users who correspond to UCCE supervisors are created by UCCE User Integration and have the Report Designer role and Dashboard Designer roles.</p> |
| Step 3 | From the Unified IC Reporting application, click the Security drawer. Then click User Groups . |

There are two stock groups: *AllUsers*, to which all Unified IC users are automatic members of, and *Administrators* which System Application Users are members of. You can create additional user groups as indicated by your organization's needs.

- Step 4** Assign users to groups. By default, every user's default parent group is *AllUsers*. You can assign each user to a different group as its default parent group, and to as many as other groups as indicated by your organization's needs. Refer to the online help for details on User Groups.

Next step: [Create at Least One Dashboard \(page 20\)](#).

Create at Least One Dashboard

Unified IC Reporting uses dashboards to organize and orient users. The installation does not create a default dashboard. You must create at least one dashboard and set it with EXECUTE permissions for the AllUsers Group. To do this:

-
- Step 1** From the Unified IC Reporting application, click the Dashboards drawer to open the Available Dashboards page.
- Step 2** Right-click the *Dashboards* folder and select **Create Dashboard**.
- This opens a dialog box that asks for a name and user permissions for the new dashboard.
- Step 3** Enter the dashboard name and select EXECUTE permissions for All Users. Then click **OK**.
- You return to the Available Dashboards page. Your new dashboard appears on the list.
- Step 4** Right-click your dashboard and select **View**.
- This opens a page where you can add items to the dashboard.
- Step 5** Design the dashboard, referring to the online help if necessary.
- Step 6** Save the dashboard.
-

Unified IC Reporting: Basic Concepts

Term	Explanation
Dashboards	Dashboards are web pages that can display reports, report lists, scheduled reports, notes, and web-based elements - such as URLs and widgets - that are relevant to specific workflows and responsibilities.
Data Sources	A data source is a connection to a database from which reports are populated. Each data source has a configuration page with the IP Address, username,

Term	Explanation
	password, and database type for a database used by Unified IC.
Drilldowns	Drilldowns allow you to create links from one report to another so that you can launch a second report from a field in the current report window.
Reports	Reports show data that are returned by Report Definitions and that can be displayed in various "views" - as grids, as charts, and as gauges.
Report Definitions	<p>A Report Definition defines the interface for a report. Each Report Definition contains the dataset that is obtained for a report - this includes the SQL query, the fields, the filters, the formulas, the refresh rate, and the key criteria field for the report.</p> <p>Unified IC separates Reports from Report Definitions.</p> <p>Only if the Unified IC deployment has a Premium license, users can view, create, or edit Report Definitions.</p>
Report Templates	Report Templates are well-formed XML files based on Report Definitions.
Report Views	<p>A report view is a layout presentation for the data that is retrieved for the report. Unified IC supports three types of views:</p> <ul style="list-style-type: none"> • Grid Views • Chart Views • Gauge Views <p>All stock reports have a grid view. Some stock reports have a chart view.</p> <p>You can create many views for a report, can define the default view for a report, and can change a report view once the report is generated.</p> <p>You cannot delete all views. Every report must have at least one view.</p>
Value Lists	Value lists contain all reportable items of the same type, for example, all agents or all skill groups.
Collections	Collections are subsets of value lists that can be used to control the amount of data that users can select to populate a report.
Thresholds	You can set a threshold for a field in a report grid to configure that field to display in a distinctive format.

How Do I Create a User?

Term	Explanation
User Groups	<p>User Groups are constructs that allow security administrators to partition Unified IC functionality.</p> <p>Creating User Groups expedites the provisioning process when multiple users need the same access to dashboards and reports, or when users require distinct permissions and features based on regional or organizational requirements.</p>
Object Permissions	<p>Users have permissions associated with the groups in which they are members, and each member of a group has specific permissions in that group.</p> <p>Users need object permissions to perform operations on Unified objects. There are three levels of permissions: READ, EXEC and WRITE. Users may have permissions associated with the groups in which they are direct members or members of their child groups.</p>
User Roles	<p>User Roles confer the actions and capabilities that a user has in Unified IC. There are seven User Roles, and each user can have multiple roles.</p>

How Do I Create a User?

UCCE report users (supervisors) are created automatically when you run UCCE User Integration. These users can log in using their Active Directory credentials and are able to view and run reports and dashboards and to view the collections of Agents and Agent Teams that they supervise. See [About UCCE Integration \(page 16\)](#).

Other report users can sign in only if they exist in the Administration console as Super Users or if Active Directory has been configured in the Unified IC Administration console for their domain.

- Super Users are IMS users and they can sign in using their IMS user credentials.
- Users authenticated through Active Directory are considered to be LDAP users, and they can sign in using their LDAP user credentials.

Both IMS users and LDAP users can log in to Unified IC Reporting and are restricted to the limited Login User role until the Unified IC Reporting security administrator gives them additional roles.

Although you can create a user on the Unified IC User List page, an entry on the User List is not sufficient for that user to be able to sign in to Unified IC. One reason to create users on the User List page is to expedite the assigning of roles to users before they sign in.

Note: CUIC uses LDAP V2 which does not support all Unicode characters that are used in the firstname or surname of LDAP users.

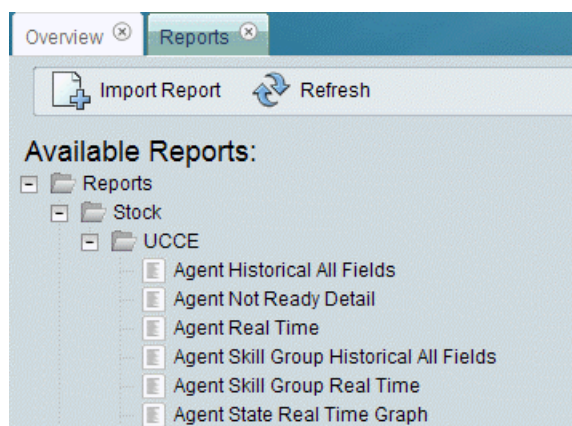
How Do I Run a Report?

To run a report:

1. Sign in to the Unified IC application.
2. Click the Reports drawer.
3. Open Report Category folders until you locate the report you want.

The imported Stock reports are listed under **Reports > Stock > UCCE**.

Figure 2: Stock Templates



4. Double-click the report name, or right-click the name and select **Run**.

Unified IC Reporting: Unified IC User Roles

There are seven User Roles, and a user can be assigned to one, any, or all of them.

Depending on the size, staff, geographical distribution, and security practices of your call center, you might prefer to assign multiple user roles to a few people or to distribute user roles to many people.

These are the User Roles for Unified IC:

- **Login User**

By default, everyone who signs in to Unified IC for the first time is a Login User. Login Users have that role and only that role until the Security Administrator assigns additional roles or deactivates (removes) the Login User role.

Only a Security Administrator can assign additional user roles to a user or remove any role including Login role from any user. If a user does not have the Login Role, he can no longer access the reporting interface..

An active login user can:

- Log in to Unified IC
- Open the Security drawer, access the User List, and edit his own User Information page; for example, to change his alias or phone number.

- **System Configuration Administrator**

This user has all the rights of an active Login User and also:

- Has full access to the Data Sources drawer and its functions.
- Has full access to the Scheduler drawer and its functions.
- Can delete, import, and export stock reports.
- Can click the Synchronize Cluster button to clear the local cache.

- **Security Administrator**

This user has all the rights of an active Login User and also has full access to the Security drawer and its functions.

- **Dashboard Designer**

This user has all the rights of an active Login User and also has full access to the Dashboard drawer.:

- **Report Designer**

This user has all the rights of an active Login User and also:

- Has full access to the Reports drawer.
- Has View (Read) access to the Data Sources and Value Lists drawers
- Can access the Scheduler drawer to work with own reports.

- **Report Definition Designer**

This user has all the rights of an active Login User and also:

- Has full access to the Report Definition drawer.
- Has View (Read) access to the Data Sources and Value Lists drawers

- **Value List Collection Designer**

This user has all the rights of an active Login User and also:

- Has full access to the Value List drawer.

- Has View (Read) access to the Data Sources drawer.

Other Users

In addition to the seven designated Unified IC User Roles, the following individuals have access to Unified IC as follows:

UCCE Supervisors

Supervisors who are imported when UCCE User Integration is enabled. They become Unified IC users and are automatically give these roles. They:

- Are Active Login Users.
- Are Dashboard Designers.
- Are Report Designers and can run and schedule reports for the agents and agent teams they supervise.
- Can view their own Agent and Agent Team collections that are imported during UCCE User Integration.

System Application User

This is not a Unified IC role. This role is defined during installation. You set credentials for this user during the installation of all nodes. As a best practice, use the same Application User credentials for all nodes.

The Application user who is configured during the installation of the *Controller* node is by default the initial Super User for the Administration console and has full rights to all functions in the Administration and Unified IC reporting applications.

This user:

- Is the user who is configured as the Application User during installation.
- Is the initial Super User in the Administration console.
- Can create additional Super Users in the Administration application.
- Can sign in to Unified IC and has full rights to all functions in Unified IC.
- Is the initial Security Administrator user in the Unified IC reporting application
- Can create additional Security Administrator users in the Unified IC reporting application.
- Cannot have any role taken away from him.

- Cannot take any role away from himself.

System Administration User

The System Administrator account User ID and password are configured at installation for each node. It is a best practice to enter the same user name and password for all nodes.

The System Administrator for the *Controller* can access:

- The Cisco Systems tools on the Navigation dropdown in the Administration console: Disaster Recovery System, Cisco Unified Serviceability, and Cisco Unified OS Administration interfaces.
- The CLI for the Controller.

The System Administrator has no access to functions in the Unified IC reporting application.

Note: If you configure unique System Administrator credentials for Member nodes, use those credentials to access the CLI for those Member servers.

Caching in Unified IC

Unified IC uses a cache to optimize access to the local configuration database (CUIC). This cache is built on top of the local configuration database. Using database replication, the contents of every node's CUIC database are kept in synchronization with the other nodes in the cluster.

The Unified IC architecture is designed to provide a highly scalable cluster in which every node manages its own local cache independently of other nodes. Whenever an item stored in the local cache (such as a report template or a dashboard) is modified, a message is sent to other nodes in the cluster indicating that that item has been modified and that their version of that item is stale.

Upon receipt of the message, each node invalidates its own references to the stale item in the local cache. In this manner, all nodes remain synchronized. There are a few exceptional cases where stale data can be re-cached or become out of synch in the cluster. For this reason, the Unified IC System Configuration Administrator has access to a link on the menubar called *Synchronize Cluster*.

Clicking this link and confirming notifies all nodes in the cluster to clear their local cache and synchronizes and empties all caches in the cluster. Clearing the locale cache forces each node to go directly to the database for the requested information.

As each node gets fresh data from the database, the new data is automatically put into the local cache and accessed during future requests. Data will be consistent in the database, and there will be no loss of information.

Note: It is best to perform this action during off-hours.



Chapter 3

Dashboards

The Unified IC interface is organized by *dashboards*.

Dashboards are web pages that can display reports, scheduled reports, sticky notes, and web-based elements such as URLs and web widgets that are relevant to specific workflows and responsibilities.

For example, if your call center team supports a clothing retailer, it might be useful to create a dashboard with several versions of a real-time call activity report (a grid and a chart) as well as the URL for the retailer's web page.

Click the Dashboards drawer in the left panel to open the [Available Dashboards Page \(page 28\)](#). (Only users with the Dashboard Designer user role can open the Dashboards drawer.) The dashboards you see when you open the Dashboards drawer are those you have created and those that other users have created and have given you permission to view.

Note:

- All dashboards must be created by a Dashboard Designer.
- Unified IC is not installed with a default dashboard.
- All actions on the Dashboards interface are based on User Role and on the user's object Permissions for dashboards and for Categories. See [About Permissions \(page 167\)](#).

See also:

[Troubleshooting Dashboards](http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0) (http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0)

This chapter contains the following topics:

- [Available Dashboards Page, page 28](#)
- [Create a Dashboard, page 30](#)
- [View a Dashboard, page 30](#)

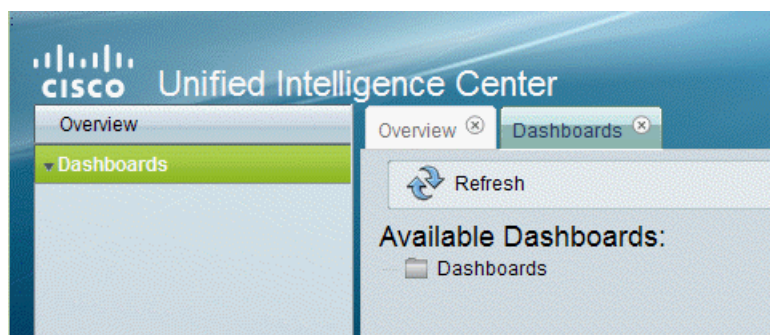
- [Add Dashboard Items](#), page 31
- [Dashboard Slideshow](#), page 35
- [Rename a Dashboard](#), page 35
- [Delete a Dashboard](#), page 36

Available Dashboards Page

You can manage dashboards from the Available Dashboards page - the page that opens when you click the Dashboards drawer.

Dashboards are contained in categories and sub-categories. Unified IC is installed with one default dashboard category named *Dashboards*¹. All dashboards and sub-categories that your organization creates are nested under *Dashboards*. You can rename *Dashboards*. You cannot delete the *Dashboards* category.

Figure 3: Available Dashboards page



Actions from this page

- **Refresh** - updates both the Available Dashboards page and the tree under the Dashboards drawer to reflect changes anyone has made to add, modify, or delete dashboards or dashboard categories.
- **Help** - opens online help for the page.
- **X** on the tab heading - closes the page.
- **Work with Categories**
 - [Create Sub-category \(page 181\)](#) from a category or a sub-category.
 - [Delete Sub-category \(page 182\)](#)
 - [Rename Sub-category \(page 182\)](#)
 - Set permissions for the sub-category. See [About Permissions \(page 167\)](#).
- **Drag and drop** - You can [drag and drop \(page 182\)](#) dashboards and sub-categories.

1) Initially, this category contains no dashboards.

- Copy and use the [dashboard permalink \(page 29\)](#)- To retrieve the permalink, right click on the dashboard for which you want to copy the permalink in dashboards tree and click on **Html Link**.

Timezone considerations for Dashboard

Incase of a report added in a dashboard, all the time specific data in the report is based on timezone of the user. For example a user at GMT + 0 can view the report in a dashboard with information based on the timezone GMT +0. For more information see [Timezone consideration for Report \(page 104\)](#).

Incase of scheduler, all the time specific data in the scheduler filter is based on the timezone of the user who configures the scheduler. Where as all the report data in the dashboard is based on the timezone of the user who runs the dashboard. For example if the timezone of the user who configures the scheduler report is GMT + 0 and the timezone of the user who runs the dashboard is GMT +10, then the scheduler filter will be based on GMT +0 and the report data will be based on GMT + 10.

Dashboard permalink

Unified IC now supports Permalink to a dashboard. To retrieve the permalink, right click on the dashboard in dashboards tree, click on **Html Link** and copy the permalink.

Similar to the other type of permalinks, dashboard permalink can be disabled by unchecking **Enable Links** check box.

Click **Pop Out** to Open the dashboard permalink in a new, separate browser display window. The popout has no Unified IC edit or toolbar functions. Click **x** to close the popout.

Note: If the dashboard has got report widgets, then ensure that the default filter is set for these reports. Filters cannot be saved for stock reports since they are not editable. The recommended option is to make a copy of the stock report, set the default filter, check the **Bypass Filter Dialog** checkbox, save it, and add the report copy to the dashboard.

Timezone considerations for Dashboard permalink

In a dashboard permalink the report information is based on the timezone of the CUIC server. A user at GMT + 0 can view the report in a dashboard permalink with information based on the CUIC server at timezone GMT+ 2.

Incase of a scheduler in a dashboard permalink, the information is based on the timezone of the last modified user. A user at GMT + 0 can view the schedulers in a dashboard permalink with information based on the last modified user at timezone GMT+ 2. For more information see [Timezone considerations for Report permalink. \(page 77\)](#)

Create a Dashboard

To create a dashboard, right-click on *Dashboards* or on a sub-category on the [Available Dashboards Page \(page 28\)](#). Then click **Create Dashboard**.

This opens a dialog box that requests a name and Default Permissions for the dashboard.

1. Enter a name (using a maximum of 50 characters).
2. Define the permissions for My Group and the All Users group. See [About Permissions \(page 167\)](#).
3. Click **OK**. This adds the new dashboard to the Dashboards page.
4. To add content to the new dashboard, right-click its icon and select **View**. See [View a Dashboard \(page 30\)](#).

View a Dashboard

If you have the EXECUTE permission, you can view a dashboard, based on your permission for the dashboard's category. (If you cannot READ the category, you cannot locate the dashboard, even if you have EXECUTE or WRITE permission for the dashboard.)

To access this function, click a dashboard or right-click a dashboard and select **View**.

Actions from this page

- **Add** - opens a dialog where users with the permission to do so can [Add Dashboard Items \(page 31\)](#). By default, the new dashboard is empty (has no items). A user who is a Dashboard Designer but who does not have the WRITE permission can add items to a dashboard but will not be able to save the added items.
- **Auto Refresh** - Allows you to enable or disable auto refresh for data displayed in this window. When the **Auto Refresh** check box is checked, the system refreshes data in this window at real time. If this check box is unchecked the data available when you opened this window remains static unless you refresh it using the Refresh menu button.

While in this window, if you press Refresh or the F5 button, the system refreshes the data in the window but does not alter the checked or unchecked state of the **Auto Refresh** check box.

Note: When you manually refresh the widgets that display a dashboard permalink, the state of the **Auto Refresh** check box returns to the selected state after you refresh. This behavior is only applicable if you open the dashboard permalink in the Dashboard viewer.

- **Save** - saves changes you make to the dashboard.

- **Refresh** - updates the dashboard to reflect changes anyone has made to it.
- **Pop Out** - Opens the dashboard permalink in a new, separate browser display window. The popout has no Unified IC edit or toolbar functions. Click **x** to close the popout.

Note: The **Auto Refresh** checkbox allows you to enable or disable auto refresh for data displayed in this window. When the **Auto Refresh** check box is checked, the system refreshes data in this window at real time. If this check box is unchecked the data available when you opened this window remains static unless you refresh it using the **Refresh** menu button. Note that if the corresponding check box is checked in the parent window, the system checks the box in the pop out window as well. You can modify this by unchecking the box. While in this pop out window, if you press the F5 button, the system refreshes the data in the window but does not alter the checked or unchecked state of the **Auto Refresh** check box.

- **Slideshow** - select this to view the dashboard items as a [Dashboard Slideshow \(page 35\)](#). This is disabled until you have added items to the dashboard.
- **Help** - opens online help.
- **X** on the tab heading - closes the dashboard.

Add Dashboard Items

If you have the EXECUTE permission, you can add content to a new dashboard and can modify the content of an existing dashboard.

You can add the following items to a dashboard: Reports, Scheduled Reports, URLs, Widgets, and Sticky Notes.

After you add an item, move or resize it if necessary. Then click **Save**.

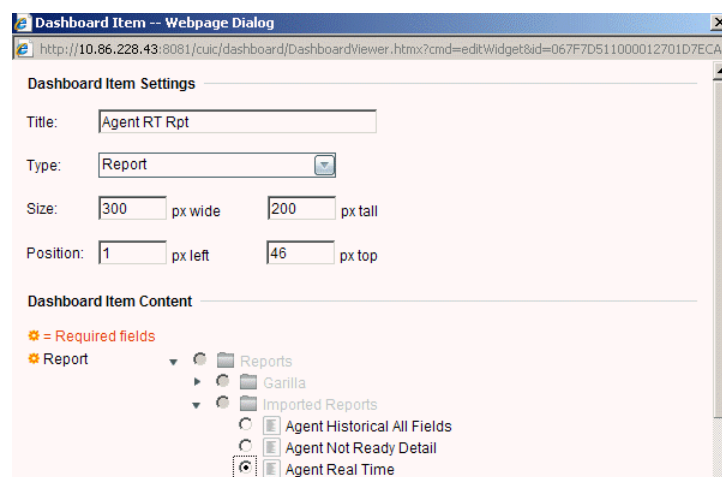
Actions for Dashboard items:

- **Move** - Newly-added items overlap existing items. Click the item titlebar and drag the item so that it does not obscure the item beneath it.
- **Resize** - To resize dashboard items, click the bottom right corner.
- **Display item properties** - Click the pencil (/) image in the item menu to open item settings for editing.
- **Minimize** Click the _ image in the top right corner to minimize an item.
- **Delete** - Click the x image in the top right corner to delete an item.

Add a Report

-
- Step 1** Open the Dashboard and click **Add**.
- Step 2** Enter a title for the report you are adding. You can specify the title as plain text or text within html tags.
- Step 3** Select type *Report*.
- Step 4** Retain the default parameters for size and position or change them to your preferred parameters.
- Step 5** Select a report by clicking the arrow next to the Reports folder and then clicking a radio button for the report name.
- Step 6** Click **OK** to return to the dashboard.
- You might need to collapse the category to see the **OK** button.
- Step 7** If necessary, move the report to a better location on the dashboard.
- Step 8** Click **Save**.
-

Figure 4: Adding a Report to a Dashboard



Reports that you add to a dashboard are refreshed, and you can scroll up and down and can resize them on the dashboard.

Note: If you want a dashboard to display both a grid view and a chart view of the same report, you need to create a SaveAs version of the report with a chart view and select both the grid and the chart for the dashboard display.

Add a Scheduled Report

-
- | | |
|---------------|--|
| Step 1 | Open the Dashboard and click Add . |
| Step 2 | Enter a title for the schedule you are adding. You can specify the title as plain text or text within html tags. |
| Step 3 | Select type <i>Schedule</i> . |
| Step 4 | Retain the default parameters for size and position or change them to your preferred parameters. |
| Step 5 | Select a schedule from the list that displays. |
| Step 6 | Click OK to return to the dashboard. |
| Step 7 | If necessary, move the schedule to a better location on the dashboard. |
| Step 8 | Click Save . |
-

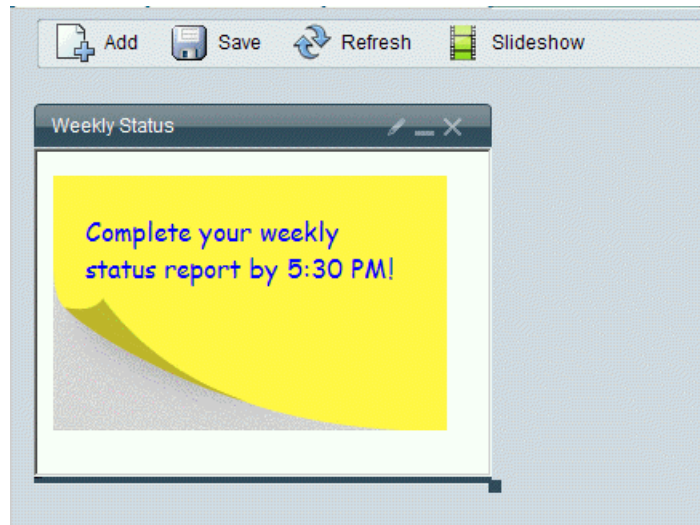
Add a Note

Add a sticky note to a dashboard to post short notes to users who work with that dashboard ("Submit your status report by noon." ... "Company Outing on Saturday!").

-
- | | |
|---------------|--|
| Step 1 | Open the Dashboard and click Add . |
| Step 2 | Enter a title for the item you are adding. You can specify the title as plain text or text within html tags. |
| Step 3 | Select type <i>Sticky Note</i> . |
| Step 4 | Retain the default parameters for size and position or change them to your preferred parameters. |
| Step 5 | Enter the content for the note. |
| Step 6 | Click OK to return to the dashboard. |
| Step 7 | If necessary, move the sticky note to a better location on the dashboard. |
| Step 8 | Click Save . |
-

Add Dashboard Items

Figure 5: Dashbord with Sticky Note



Add a URL

Add a Uniform Resource Locator (URL) to embed a web page that opens from that URL to the dashboard.

-
- Step 1** Open the Dashboard and click **Add**.
- Step 2** Enter a title for the item you are adding. You can specify the title as plain text or text within html tags.
- Step 3** Select type *URL*.
- Note:**
- If you do not begin the URL with http://, the http protocol is assumed.
 - The resulting behavior for an invalid URL depends on the browser.
- Step 4** Retain the default parameters for size and position or change them to your preferred parameters.
- Step 5** Type or paste the URL in the Content field.
- Step 6** Click **OK** to return to the dashboard.
- Step 7** If necessary, move the URL item to a better location on the dashboard.
- Step 8** Click **Save**.
-

Add a Widget

Add a web widget (a Javascript-based widget) to embed an application (such as a video or a calculator) that runs from that widget into the dashboard.

This is an advanced feature that should be used by those familiar with web development. Unified IC is not installed with any canned widgets, but you can copy them from online sources such as www.widgetbox.com.

-
- | | |
|---------------|---|
| Step 1 | Open the Dashboard and click Add . |
| Step 2 | Enter a title for the item you are adding. You can specify the title as plain text or text within html tags. |
| Step 3 | Select type <i>Widget</i> . |
| Step 4 | Retain the default parameters for size and position or change them to your preferred parameters. |
| Step 5 | Copy the code from a widget you have found on the Internet; then paste it in the Content field of the dialog. |
| Step 6 | Click OK to return to the dashboard. |
| Step 7 | If necessary, move the widget item to a better location on the dashboard. |
| Step 8 | Click Save . |
-

Dashboard Slideshow

Use the slideshow mode to cycle through all items on the dashboard.

Note: If a dashboard has only one item, you can run a slideshow, but you will not notice a change.

Actions from this page

- **Pause** - halts the slideshow on current item.
- **Play** - starts the slideshow.
- **Stop** - stops the slideshow and returns you to the dashboard.
- **Set Interval** - opens a field where you can set the interval in seconds for the slideshow cycles. The minimum interval is 1 second. The maximum is 900 seconds.

Rename a Dashboard

With the WRITE permission, you can rename a dashboard.

To rename a dashboard:

1. Right-click its icon and select **Rename**. This opens a dialog box with a Rename To field.

Delete a Dashboard

2. Enter a new name (using a maximum of 50 characters) and click **Rename** to proceed. Click **Cancel** to keep the original name.

Delete a Dashboard

With the **WRITE** permission, you can delete a dashboard.

To delete a dashboard:

- Right-click its icon and select **Delete**.
- Click **Yes** to confirm the deletion. Click **No** to cancel.



Chapter 4

Data Sources

A data source represents a database. Each reporting server requires one data source for each database from which reports are to be populated.

Note:

- This release of Unified IC supports MS SQL Server and Informix databases.
- This release supports Data Source connections across a wide area network.
- This release does not support Windows Authentication to an MS SQL Server database. Use SQL authentication only.

Data Sources Drawer: Click the Data Sources drawer in the left panel to open the [Data Sources Page \(page 38\)](#). (Only users with the System Configuration Administrator user role can access the full functions of this drawer.)

Note: All actions on the Data Source interface are based on User Role and on the user's object Permissions for data sources. See [About Permissions \(page 167\)](#).

See also:

[Troubleshooting Data Sources](http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0) (http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0)

This chapter contains the following topics:

- [Data Sources Page, page 38](#)
- [Create/Edit a Data Source, page 41](#)
- [Delete a Data Source, page 44](#)
- [Mapping to Multiple Databases, page 44](#)

Data Sources Page

This page opens when you click the Data Sources drawer. After a new installation, this page shows the following Data Sources:

- **The Unified IC data source (CUIC).**
 - A Data Source for the Unified IC database is added by the installer. This database holds tables for objects such as reports, dashboards, value lists, and users that are added and maintained on *that* member node. The CUIC data source for each member is replicated across the cluster.
 - You can edit the description for the CUIC data source, but *do not change other fields*. The CUIC data source for each node is configured by default to point to that member.
- **The UCCE Historical data source**
 - This data source is added by default to support the Unified ICM/CC stock historical reports and UCCE User Integration.
 - You need to complete the Database Host, Database Name, and the Database User ID and Password fields for this data source and to make sure it is online before Unified CCE User Synchronization can occur.
- **The UCCE Realtime data source**
 - This data source is added by default to support the Unified ICM/CC stock real time reports.
 - You need to complete the Database Host, Database Name, and the Database User ID and Password fields for this data source.

Depending on your environment, the UCCE Historical and UCCE Realtime data sources can point to the same machine.

Note:

- If you are attempting to import CVP Call Back Reports on the standard datasource (cvp_data), the import fails with the following message:
- **"Import could not be completed: Query validation failed against the selected data source.**
- To correct this issue, you must create a separate datasource to point to the callback database instead of the cvp_data database.

For more information about configuring a CVP datasource, refer to 'Create a Data Source for Unified CVP Report Data' section in [CVP Reporting Guide](http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/customer_voice_portal/cvp8_5/configuration/guide/CVP_Reporting.pdf) (http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/customer_voice_portal/cvp8_5/configuration/guide/CVP_Reporting.pdf).

You have the option to execute a CLI command such that each node points to a unique IP Address for the UCCE Historical or Realtime data source. The command is set cuic-properties host-to-ip. The Command Line Interface is documented in the *Administration Console User Guide for Cisco Unified Intelligence Center*. See [Mapping to Multiple Data Sources \(page 44\)](#).

Figure 6: Data Sources

	Name	Connected Node	Standby Node	Type	Database Host	Database Name	Charset
1	CUIC			Informix	\$(HOSTNAME)	\$(CUIC_DB_NAME)	Charset
2	Test_datasource			Microsoft SQL Server	10.78.90.105	mach2_awdb	ISO-8859-1
3	UCCE Historical			Microsoft SQL Server	10.78.90.105	mach2_awdb	
4	UCCE Realtime			Microsoft SQL Server	10.78.90.105	mach2_awdb	ISO-8859-1

If you plan to import reports that will pull data from databases other than the *aw_hds*, you must add data sources for those databases.

Click the radio button at the left of each row to select and edit that Data Source.

Table 1: Rows on this page

Field	Description
Name	The name of the data source.
Connected Node	Shows the status of the connected data source. The green check mark indicates connectivity. The red x indicates no connectivity. Primary indicates primary data source. Secondary indicates secondary data source.
Standby Node	Shows the status of the standby data source. The green checkmark indicates connectivity. The red x indicates no connectivity. Primary indicates primary data source. Secondary icon indicates secondary data source.
Type	The database type (MS SQL Server or Informix).
Database Host	DNS name or IP address of the database server. Note: The database name must be the AWDB name and not HDS name. The system uses the views from the AW database to get informaion from the HDS database.
Database Name	The name of the database.
Charset	The character set used by the data source.

Actions from this page depend on your permissions and include:

- **Create** - opens the Data Source Create/Edit page with blank fields for defining a new Data Source. (Available only for System Configuration Administrator user.)
- **Edit** - enabled when a row is selected, opens the Data Source Create/Edit page where you can review or modify fields. (Disabled for most users.)

- **Delete** - enabled when a row is selected, prompts for a confirmation and then deletes the Data Source. (Available only for System Configuration Administrator users with WRITE permissions on the data source.)
- **Refresh** - updates the data source page to reflect changes anyone has made to it.
- **Switch Node**- prompts to switch over to the alternate database host.

This button is enabled if the selected data source has a secondary database host configured to it and the user has edit permissions to the data source. See [Automatic Switch Over \(page 40\)](#).

- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Automatic Switch Over

If the connection to the database fails while running a report, Unified Intelligence Center attempts to switch to a standby node if one is available. A switch over is attempted if any of the following conditions occur:

1. Connection Failure (SQL States = 08000, 08002, 08003, 08006, 08S01, 08007, 01002)
2. SQL-client unable to establish SQL-connection (SQL State = 08001)
3. SQL-server rejected establishment of SQL-connection (SQL State = 08004)

If any of these condition occur while running a report, Unified Intelligence Center checks whether the corresponding datasource has a standby node configured. An automatic switch takes place, if a standby node is configured and is reachable. The report execution will be uninterrupted and it will run against the newly connected datasource node.

Data Source Rules

A database must be set up with a SQL user account with a password and read-only permission for the database and minimum OS user privileges (for Informix).

The database server must be set to allow SQL authentication and to enable TCP/IP protocol and remote network connection.

The database port must not be blocked by firewalls, routers, or any other security software (such as Cisco Security Agent).

The following are not supported:

- Windows integrated authentication connection to MS SQL Server.
- Automatic failover to a different database.

- A data source that points to more than one database.

Create/Edit a Data Source

Use this page to add a new data source.

Step 1 Select **Data Sources drawer > Data Sources page > Create** to open the Data Sources create page.

Step 2 Complete fields in the Primary tab as follows to configure the primary data source:

Field	Value
Name	Enter the name of the data source. When users create Report Definitions and Value Lists, they see only the name of the data sources. As a Best Practice, to benefit those users, give a meaningful name to a new Data Source.
Description	Enter a description for this data source.
Type	Select a value from the list. Options are Informix and MS SQL Server. Type is disabled in Edit mode.
Database Host	In a single-node deployment, enter the DNS name or IP address of the database server. In a multinode cluster, use the DNS name. Do not use the IP address. See Mapping to Multiple Data Sources (page 44) .
Port	Enter the port for the database For SQL Server, leave this field blank to use the default port (1433).
Database Name	Enter the database name.
Instance	Required for Informix. Specify the server instance name of the Informix database you are connecting to. The environment INFORMIXSERVER on the Informix database server should contain the instance information. Optional for SQL Server. For the UCCE data source, leave this field blank. The Unified ICM/CC database does not use instance names.
Timezone	Select the correct timezone for the data stored in the database.

Field	Value
Database User ID	Enter the ID for the user who is authorized to access the database.
Password and Confirm Password	Enter and confirm the password for the database user.
Charset	<p>The character set used by the database.</p> <p>The default character set is ISO-8859-1 (Latin 1).</p> <p>If your database uses Non-Latin-1 encoding, select the appropriate character set for your locale from the dropdown.</p> <p>If the character set is not correct, the data source may fail to connect to the database or reports may not be readable.</p> <p>This must be UTF-8 for the Unified CVP Informix database.</p>
Default Permissions	View or edit the permissions for this datasource for MY Group and for the All Users group. See About Permissions (page 167) .

Step 3 Complete the fields on the Secondary tab as follows to configure the secondary data source.

Field	Value
Database Host	<p>In a single-node deployment, enter the DNS name or IP address of the database server.</p> <p>In a multinode cluster, use the DNS name. Do not use the IP address. See Mapping to Multiple Data Sources (page 44).</p>
Port	<p>Enter the port for the database</p> <p>For SQL Server, leave this field blank to use the default port (1433).</p>
Database Name	Enter the database name.
Instance	<p>Required for Informix. Specify the server instance name of the Informix database you are connecting to. The environment INFORMIXSERVER on the Informix database server should contain the instance information.</p> <p>Optional for SQL Server. For the UCCE data source, leave this field blank. The Unified ICM/CC database does not use instance names.</p>
Timezone	Select the correct timezone for the data stored in the database.

Field	Value
Database User ID	Enter the ID for the user who is authorized to access the database.
Password and Confirm Password	Enter and confirm the password for the database user.
Charset	<p>The character set used by the database.</p> <p>The default character set is ISO-8859-1 (Latin 1).</p> <p>If your database uses Non-Latin-1 encoding, select the appropriate character set for your locale from the dropdown.</p> <p>If the character set is not correct, the data source may fail to connect to the database or reports may not be readable.</p> <p>This must be UTF-8 for the Unified CVP Informix database.</p>
Default Permissions	View or edit the permissions for this datasource for MY Group and for the All Users group. See About Permissions (page 167) .

Step 4 Test the database connection before you save the data source.

Actions from this page:

- **Save** - saves your new entry or changes to the fields.
- **Cancel** - cancels your changes and closes the page.
- **Test Connection** - tests that the Data Source is online. If the status is Offline, review the error message to determine the cause and edit the data source accordingly. Repeat the steps until the data source is Online.
 - If the data source is offline or there is a connection issue, an error message button labeled Show Error Details becomes available on the Data Sources page. Click this button to see the error message provided from the database.
 - **Note:** When the database type is Informix, the error message may be a generic one and may not provide detail about why the connection failed.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Delete a Data Source

To delete a data source, click the radio button to the left of the data source name and then click **Delete**.

Click **Yes** to confirm the deletion. Click **No** to cancel.

Both Yes and No generate another dialog box confirming your action to delete or to cancel the deletion. Click **OK** to confirm the deletion.

Note: Data sources are referenced by Report Definitions and Value Lists. When you delete a data source that is used by Report Definitions and/or Value Lists, you see a message that you cannot delete the data source until the dependent value lists or report definitions are deleted or are updated to reference another data source.

Mapping to Multiple Databases

Unified 8.0 is a clustered solution, and for each node you can import and install stock reports that run against the Unified CCE realtime and historical databases.

It might be the case that a single Unified CCE database is unable to support an entire cluster simultaneously. You can distribute the reporting load to several Unified CCE databases using the Command Line Interface and conventional name resolution.

If there is a need to direct a specific Member node to database host other than the one in Data Sources, you can use the *set cuic-properties host-to-ip* command to resolve the data source name differently on each node.

Using this command at each Member node, it is possible to define a unique mapping so that different nodes map the same database name to a different IP Address as follows:

For example, if the Datasource host for the UCCE Historical datasource is *sprhds2.krypton.icm*:

Figure 7: Mapping the Data Source

The screenshot shows the 'Data Sources > Edit' page in the Cisco Unified Intelligence Center. The page has a header with 'Signed on as: CUIC\cucadmin' and 'Documentation'. Below the header are tabs for 'Overview' and 'Data Sources'. The 'Data Sources > Edit' section contains a toolbar with 'Save', 'Cancel', and 'Test Connection' buttons. Below the toolbar, there is a section for 'Required fields' (indicated by orange asterisks). The fields are: 'Name' (UCCE Historical), 'Description' (Datasource UCCE Historical), 'Type' (Microsoft SQL Server), 'Database Host' (sprhds2.krypton.icm), 'Port' (1433), 'Database Name' (sprnt_awdb), 'Instance' (empty), and 'Timezone' (America/New_York). A note next to the 'Description' field states '(At most, 255 ch'.

Then to map the UCCE Historical data source for Member_Node_2 to a unique IP Address, access the CLI from Member_Node_2 and enter the command: *set cuic-properties host-to-ip sprhds2.krypton.icm <hds ip-address>* .

The Command Line Interface is documented in the Administration Console User Guide for Cisco Unified Intelligence Center. With this command, you map the host name with an IP Address.

You can use this method for any data source.

Note: Avoid using DNS. The mapping is from a name to an IP Address, but the name is not necessarily a DNS name.

Mapping to Multiple Databases



Chapter 5

Reports

Reports show data returned by Report Definitions. This data is extracted by database queries and can be displayed in various [Report Views \(page 73\)](#) - as grids, as charts, and as gauges.

Cisco provides stock templates that can be used with Unified IC. You can import the stock reports that you want from the Cisco WebSite and customize it to suit your business requirements. All stock reports have one default grid view. Some stock reports also have a chart view.

Users with the Report Designer User Role can click the Reports drawer to open the [Available Reports Page \(page 48\)](#).

Note: All actions on the Reports interface are based on User Role and on the user's object Permissions for reports and for Categories. See [About Permissions \(page 167\)](#).

See also:

[Troubleshooting Reports](http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0) (http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0)

This chapter contains the following topics:

- [Available Reports Page, page 48](#)
- [Stock Report Templates, page 49](#)
- [Reports and Report Definitions, page 54](#)
- [Manage Reports, page 54](#)
- [Importing Stock Reports and Other Reports, page 55](#)
- [Running a Report, page 60](#)
- [Filtering Reports, page 61](#)
- [The Report Viewer, page 65](#)
- [Report Editor, page 68](#)
- [Creating Reports, page 70](#)
- [Renaming a Report, page 71](#)
- [Exporting a Report, page 71](#)
- [Deleting a Report, page 72](#)

- [Report Views, page 73](#)
- [Views Editor, page 77](#)
- [Export to Excel, page 101](#)
- [Print, page 102](#)
- [Reports and TimeZones, page 103](#)

Available Reports Page

The Available Reports page opens when you click the Reports drawer.

If you have the Report Designer user role, you can access this page to create reports and report categories, and you can [Manage Reports \(page 54\)](#), using the context menu that appears when you right-click a report.

Reports are contained in categories and sub-categories, which represented by folder icons. The reports within the categories are represented by page icons. Unified IC is installed with one root report category (folder) named *Reports*. After installing the stock report, you can see the Audit Trail report under Reports-->Stock-->Intelligence center Admin. You can rename the *Reports* category. You can delete a report only if you are a member of the **System Configuration Administrator** user role.

After importing the stock reports, the system places a folder of stock templates on the Unified IC Available Reports page, in a sub-category named UCCE:

Figure 8: Stock Templates



Actions from the Available Reports page:

- **Import Report** - opens the [Import Report \(page 55\)](#) page.
- **Refresh** - updates both the page and the tree under the Reports drawer to reflect changes anyone has made to add, modify, import, or delete reports or report categories.
- **Work with Categories**

Possible actions are:

- [Create Sub-category \(page 181\)](#) from a category or a sub-category.

- [Delete Sub-category \(page 182\)](#)
- [Rename Sub-category \(page 182\)](#)
- Set Permissions for the sub-category. See [About Permissions \(page 167\)](#).
- **Drag and drop** - You can [drag and drop \(page 182\)](#) reports and sub-categories.
- **Create** reports - See [Creating Reports \(page 70\)](#).
- **Manage** reports with right-click functions. These include running the report, editing the report, and creating new views for the report. See [Manage Reports \(page 54\)](#).
- **Help** - opens online help for the page.

See also [Stock Report Templates \(page 49\)](#)

[Custom templates \(page 54\)](#)

Stock Report Templates

Stock report templates display data that has been saved in the Unified ICM/CC database. After installing CUIC, you can import stock templates using the Import functionality and customize the stock reports based on your requirement. It is also possible to import other report templates that are populated by other databases and to set a data source for those templates, but the stock templates are designed to present Unified ICM/CC data.

As a best practice, make [Save As \(page 69\)](#) copies of the installed stock templates and work with your Save As copies.

This is what you *cannot* do with the installed stock templates:

- Change the data source.
- Edit the report definition, using Report Editor.
- Delete the default grid view.
- Edit (using Report Editor).
- Create additional views (grids, charts, and gauges).
- Set thresholds for fields.
- Set drilldowns for fields (Premium license only).
- Hide, move, rename, or in any way modify fields that display by default in the grid view.

This is what you *can* do with stock templates, based on your User Role and Permissions:

Stock Report Templates

- Save As
- Run
- Schedule
- Edit
- Import (requires *System Configuration Administrator* privilege)
- Export (requires *System Configuration Administrator* privilege)
- Delete (requires *System Configuration Administrator* privilege)

See also:

[List of Stock Templates \(page 50\)](#)

[Custom templates \(page 54\)](#)

List of Stock Templates

These are the stock report templates that can be imported and customized for the current release. This includes templates from Unified CCE Release 7.x , 8.x, and Audit Trail template.

Report Template	Shows
Agent Historical All Fields	All data for the agents in the selected skill groups for the selected interval. Default grid view.
Agent Not Ready Detail	Agent availability in a logon session. Default grid view.
Agent Real Time	Each agent's currently active skill group, state, and call direction within each media routing domain into which the agent is logged. Default grid view.
Agent Skill Group Historical All Fields	Activity for selected agents for a selected interval, sorted by skill group. Default grid view.
Agent Skill Group Real Time All Fields	Current agent status within the specified skill group(s). Default grid view.
Agent State Real Time Graph	A pie chart showing the current total count of agents in different agent states.

Report Template	Shows
	Default pie chart view only.
Agent Team Historical All Fields	<p>All the available report team data from the Agent_Skill_Group_Interval database table for each selected team during the time period selected.</p> <p>Default grid view.</p>
Agent Team Real Time	<p>The current status of the selected agent team(s) and the current agent states of each agent within the selected agent team(s).</p> <p>Default grid view.</p>
Agent Team State Counts Real Time	<p>Real-time agent team information on number of agents assigned to a team, number of agents logged on, number of agents in different states, and number of agents available to receive incoming tasks.</p> <p>Default grid view.</p>
Call Type Abandon/Answer Distribution Historical	<p>The number of answered and abandoned calls for separate intervals for the report's time period, broken out into summaries.</p> <p>Default grid view.</p>
Call Type Historical All Fields	<p>The status of call types for the selected time period.</p> <p>Default grid and pie chart views.</p>
Call Type Skill Group Historical All Fields	Shows the interval status of skill groups by call type for the selected time period.
Call Type Real Time All Fields	<p>The current status of call types.</p> <p>Default Grid and Gauge views.</p>
Enterprise Service Historical All Fields	<p>All the available Enterprise Service Historical All Fields report data in the Service_Interval database table so that you can select which data you want for a customized enterprise-service historical report.</p> <p>Default grid view.</p>
Peripheral Service Historical All Fields	<p>Peripheral service historical report data.</p> <p>Default grid view.</p>
Peripheral Service Real Time All Fields	<p>Available peripheral-service real-time data.</p> <p>Default grid view.</p>

Report Template	Shows
Enterprise Skill Group Historical All Fields	All selected enterprise skill groups, listing all the available skill-group historical report data for the selected interval. Default grid view.
Enterprise Skill Group Real Time All Fields	The current status of the selected enterprise skill groups. Default grid view.
Peripheral Skill Group Historical All Fields	A Consolidated call and skill group statistics, gathered in interval increments. Default Grid and chart views.
Peripheral Skill Group Real Time All Fields	The current status of the selected skill groups. Default grid view.
IVR Ports Performance Historical	The performance of IVR ports for the selected time period. It presents a table of half-hour counts of IVR ports in-service, ports idle, and the time HH:MM:SS (hours, minutes, seconds) that all ports were busy. Default grid view.
Audit Trail	This feature allows you to view the sequence of audit records of each of the transaction or action that is performed on a Cisco Unified Intelligence Center server.

Creating a Save As Version of a Stock Template

After you have downloaded and imported the necessary stock templates into CUIC, you can create a Save As Version of the stock template for further customizations. To know more about importing Stock templates, see [Importing Stock Templates and Other Templates \(page 55\)](#). Once you have imported the necessary templates into CUIC, create a Report Category for your Save As versions:

1. From the Available Reports page, right-click the Reports folder and select **Create Sub-Category**.
2. Name the new category and set permissions. At a minimum, set READ permissions.

Next, create a Save As copy of the report:

1. Locate the report, right-click, and select **Edit**.

This opens the Report Editor page.

2. Enter a description for the report and click **Save As**.
3. On the Save As page:
 - Enter a report name and description.
 - Click the arrow next to the Reports folder and navigate to, and select, the sub-category folder you created.
4. Set permissions.
5. Click **OK**.
6. Return to the Available Reports page and click **Refresh**.

The right-click options are now extended and include **Edit Views**, which opens the [Views Editor \(page 77\)](#).

Select the Grid and click **Edit** to open the [Grid Editor \(page 81\)](#), where you can move, rename, and set thresholds for report fields.

Historical and Real Time Templates

The stock Unified ICM/CC templates that are used with Unified IC are either Historical or Real Time "All Fields" templates.

All Fields refers to the fact that, for the databases that are queried to populate the template, every field in the database is available to be included in the grid view or to be charted or gauged.

These Available fields are listed in the [Grid Editor \(page 81\)](#).

An historical report template:

- Receives data from the *UCCE Historical* data source. See [Data Sources Page \(page 38\)](#).
- Is populated with interval data. The interval at which the database tables are refreshed can be a 15-minute or a 30-minute interval. This interval is set in the Unified ICM Configuration Manager.
- Has a default refresh rate of 15 minutes. Refresh Rate is configurable in the Report Definition Properties page in a Save As version of the report.
- Has an upper limit of 8,000 rows. Row limit is not configurable. The Report Viewer indicates when the row limit has been reached and when more data is available. You can adjust the filter and rerun the report to see additional data.

A real time report template:

- Receives data from the *UCCE Realtime* Data Source. See [Data Sources Page \(page 38\)](#).

- Is populated with current data that is passed by the Peripheral Gateways to the Unified ICM Router and then saved to real-time database tables. By default, real time data is forwarded to the router every 15 seconds. Old real-time data is constantly overwritten by new real-time data.
- Has a default refresh rate of 15 seconds. Refresh Rate is configurable in the Report Definition Properties page in a Save As version of the report.
- Has an upper limit of 3,000 rows. Row limit is not configurable. The Report Viewer indicates when the row limit has been reached and when more data is available. You can adjust the filter and rerun the report to see additional data.

Custom Templates

A custom template is:

- A new template that Report Designer users have created.
- A Save As version of a stock template.
- An imported template.

Note: Your Cisco Support provider cannot assist you with custom report issues.

See Also

[Stock Report Templates \(page 49\)](#)

[Stock and Custom Objects \(page 186\)](#)

Reports and Report Definitions

All reports are based on [Report Definitions \(page 107\)](#).

Report Definitions contain the dataset that is obtained for a report. This includes the query type (stored procedure, anonymous block, SQL query), the fields, the filters, the formulas, the refresh rate, and the key criteria field for the report

Only users who have a Premium license can view, create, or edit Report Definitions.

Manage Reports

To manage reports from the [Available Reports Page \(page 48\)](#), use the context menu that appears when you right-click a report.

The options available to you depend on your User Role and permissions.

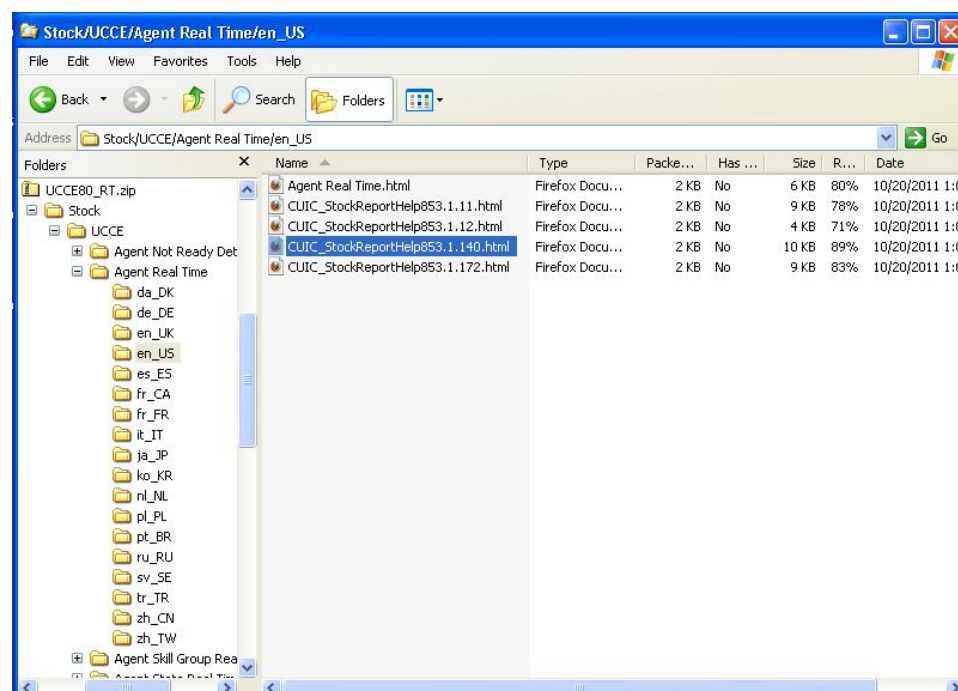
Use this option:	To:
Run	Click this to filter the report (see Filtering Reports (page 61)) and then run it so that it opens in the Report Viewer (page 65) .
Schedule	Click this to create a Schedule for running a report and displaying it on a Dashboard or sending it in an email. See Scheduler (page 145) . Note: This option is available only for Report Designers who have Execute permission for the report and for System Configuration Administrators.
Edit	Click this to open the Report Editor (page 68) where you can edit the report views, change the default view, and create a Save As (page 69) version of the report.
Rename	Click Rename (page 71) to change the name of the report. Not enabled for stock reports.
Edit Views	Open the Views Editor (page 77) , where you create, edit, or delete a view for the report dataset. Not enabled for stock reports.
Export	Click Export (page 71) to export the report XML file. Enabled for stock reports when the logged in user has the role of a System Configuration Administrator .
Delete	Click Delete (page 72) to(remove) the report. Enabled for stock reports when the logged in user has the role of a System Configuration Administrator . Note: <ul style="list-style-type: none">• If a report is deleted in error, you can re-import it. See Importing Reports (page 55).• You cannot delete a report if it is referenced by a schedule.

Importing Stock Reports and Other Reports

This page opens when you click **Import Report** on the [Available Reports Page \(page 48\)](#).

Report Designers can use this function to import stock reports and the related help files that are saved locally, into Cisco Unified Intelligence Center. The report that you want to import must be stored in a ZIP file along with the help content. The format for storing the report and help content is as shown below:

Figure 9: Directory Structure of the Report ZIP file



In the above figure, note that under **UCCE80_RT.zip** file, you find the **Stock** folder under which there is a **UCCE** folder. In the UCCE folder there are different reports. For example, the Agent Real Time report has its corresponding help content in the Agent Real Time folder. Within the Agent Real Time folder, we have different locales. Each locale can contain one property file with localized strings pertaining to that report.

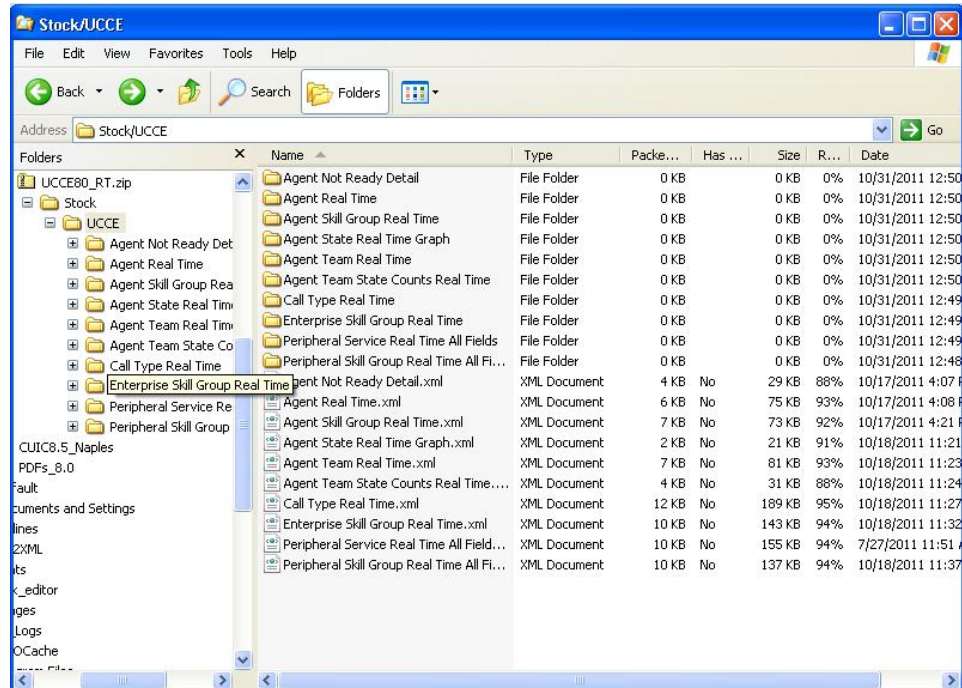
Each report help folder has a size limit of 3 MB. If the size exceeds this limit, the system does not load the help content.

If there are multiple reports that uses the same datasource, then all the reports can be grouped together in a zip file and imported at once. You can also place reports in different folders and zip them together for logical separation. In this case, the import utility creates categories for each folder and imports the respective reports to those categories.

For example:

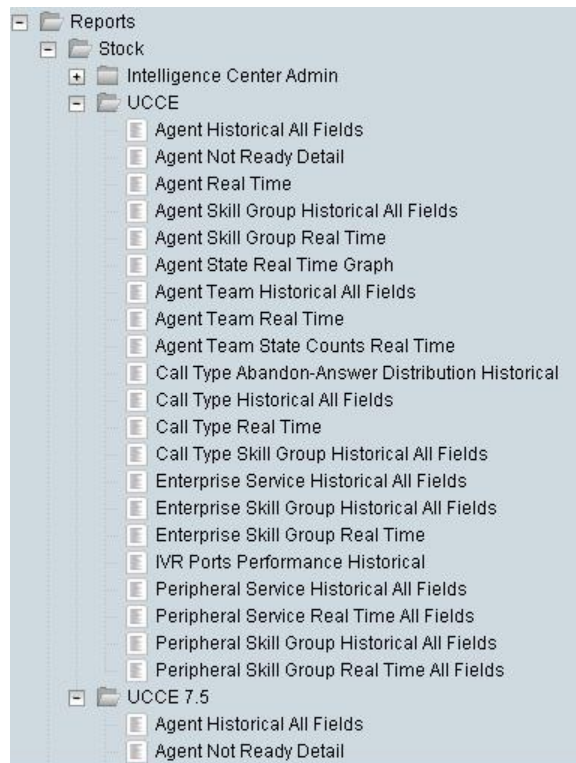
If you zip the following report hierarchy:

Figure 10: Stock zip



If you import this zip file under the **My UCCE Reports** category, then after importing the Report Manager displays the reports as:

Figure 11: Report Manager

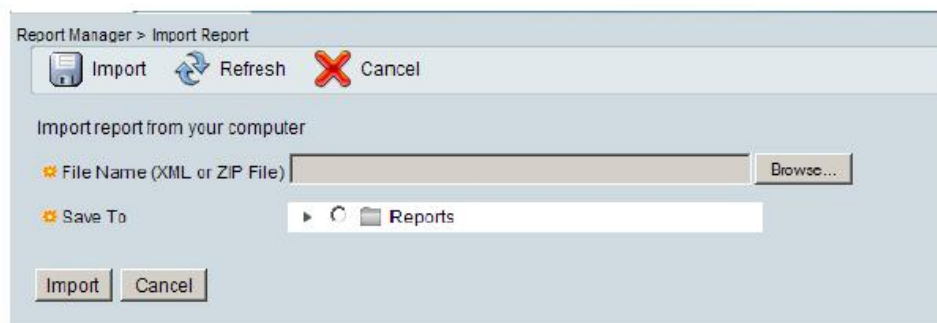


To import a report:

Importing Stock Reports and Other Reports

1. To import a report from your computer (a Report zip file that is saved locally), click **Browse** and navigate to select the template ZIP file.

Figure 12: Importing Reports



Note: You can import multiple reports in a *.zip file.

2. Navigate to, and click the radio button for, the category or subcategory in which you want to place the report.
3. Click **Import**
4. If you get the warning "One or more underlying report definitions do not exist and need to be created. Please select a data source and Click Import to continue" , Select the Data Source from the dropdown.

Note: It is important to select the correct and appropriate data source for the imported report. If a report is associated with the wrong data source, you will see an error when you try to run the report.

5. Click **Import**.
6. Click **Refresh** on the Reports page to see the imported report.

Note:

- Data from imported reports are extracted from the ZIP file and saved as configuration data in the CUIC database.
- If your Available Reports page already contains a report template with the same name as a report you are importing, you see a prompt asking if you want to overwrite it.

What is imported:

- The report
- Its Report Definition
- Its Value Lists
- Its Views

- The values defined for it in Report Editor (its default view, online help, etc)
- Its Thresholds
- Its Drilldowns
- Its Permissions
- Its Template Help

What is not imported:

- Report Filters
- Collections

Note:

- During the import, the software checks to see if any prerequisite objects needed by the report (such as Value Lists) already exist. If they do *not*, the import will create them. If they already exist, you are prompted to use the existing file or to overwrite it. Note that overwriting the existing valuelist will impact other report definitions which are based on same valuelist. However the collections created out of the existing valuelist will not be impacted.
- This allows users from one system to write a report that uses a certain Value List (for example, the Skill Groups Value List), and then export the report and import it into another system that has another (different) Skill Groups Value List. There is no need to create a new Value List or to edit the report.
- With Report or Report definition import, the existing valuelists will be overwritten only if the version associated with new one is different.
- Reports are language-independent. The report templates and their generated output depends on the locale you select for Unified IC.

Actions on the Import Report page:

- **Import** - proceeds with the import.
- **Cancel** - closes the page.
- **Refresh** updates the page to show changes another user has made.
- **Help** - opens online help for the page.

Upgrading Stock Report Template

In case there is a new version of the existing stock report template then you can do the following procedure to update it:

1. Open Report Manager and click on **Import Report**.
2. Choose the zip file that contains updated stock report template.
3. Click **Import**
4. It will upgrade your existing stock report template, its associated stock report definition and any value lists that was part of the original stock template.

Note:

- During the report import, the software checks to see if any previously installed versions of the same report , report definition or value lists exist. If they exist, you get a warning to overwrite them. If you select **Overwrite**, the report, its associated report definition and value lists will be overwritten. If you select **Cancel**, the operation will be aborted.
- A report definition and value list is overwritten only when their versions are different, no matter which one is smaller. They will also be overwritten when the new version has a version number and old version has a blank value or vice versa. If the old version and the new version do not have version number then they will not be overwritten.
- You cannot overwrite a stock report with a custom report. Stock reports can be overwritten only by using different versions of the same stock report.
- If you have any custom reports using the previous version of stock report definition, all those custom reports will be impacted by the upgrade. CUIC will try to minimize the impact by associating the custom reports fields (in all types of views it has - grid, charts, gauge) to the newly upgraded stock report definition fields. But if there are any changes to the fields of the new stock report definition that CUIC could not handle, you can re-associate them to the custom report by using respective view editors - for example, grid editor for grid view, chart editor for chart view and gauge editor for gauge view.

Running a Report

There are several ways to run a report. You can:

- Right-click a report from the [Available Reports Page \(page 48\)](#) page and select **Run**.
- Click the report name from the dashboard or the Reports page.

If the report designer has selected to bypass the filter dialog on the [Report Editor \(page 68\)](#) page, the report opens immediately.

If the report designer did not select to bypass the filter dialog, selecting a report to view opens the Filters page for that report. See [Filtering Reports \(page 61\)](#).

Once you select to run and filter a report, the report displays in the [Report Viewer \(page 65\)](#).

Filtering Reports

Use the filter page to both define and restrict the data that will populate the report.

The filter page opens:

- Before the report is generated - when you right-click the report and click **Run**. Note that you do not see the filter page if the report designer has selected Bypass Filter on the [Report Editor \(page 68\)](#) page.
- After the report is generated - when you click the **Filter** button in the [Report Viewer \(page 65\)](#) for the generated report. Do this to refine the filter values for a generated report.

Filter parameters are based on whether:

- The report based on a simple query or on an anonymous block or stored procedure.
 - Reports based on simple queries have two tabs in the filter interface: [Basic Filters Tab \(page 61\)](#) and [Advanced Filters Tab \(page 63\)](#).
 - Reports based on anonymous blocks or stored procedures have a Basic filters tab only. See [Basic Filters Tab for Anonymous Block/Stored Procedure \(page 64\)](#).
- You are running a real time or an historical report.

You can:

- Create a default filter to persist the filtering criteria so that the filter can be reused every time the report is run.
- Bypass the filter so that the filter page does not display and the report runs with the default filter.
- Create a default filter, so when you run the report, it always opens to the default filters you have defined. See [Setting the Default Filter \(page 65\)](#).

Basic Filters Tab

Follow these steps to complete the basic filters tab for a report based on a simple query. The filter tabs for reports based on queries are populated by all fields in the query. If you run the report without selecting filters, the report will return all data.

Reports based on Anonymous Blocks and Stored Procedures have a different filter interface. See [Basic Filters Tab for Anonymous Block/Stored Procedure \(page 64\)](#).

You use this tab to filter a report before you run the report. You also use this tab to edit the default filter for a report.

Step 1 *To filter a real time report, skip to step 3.*

Step 2 *To filter an historical report, select date/time ranges for Historical Reports as follows:*

Relative Date Range:

- From the **Relative Date Range** dropdown, select from Today, Yesterday, This Week, Last Week, This Month, Last Month, Year to Date, or Last Year.
- Check **Only show results that are within a specific time period** to check or uncheck days. By default, all days of the week are checked. This checkbox only appears if one of the following is selected in the Relative Date Range dropdown: This Week, Last Week, This Month, Last Month, Year to Date, or Last Year. If you do not check this box, the report shows all values from 12:00 AM of the first date in your range through 11:59 PM of the last date in the range.

Absolute Date Range:

- In the From and To fields, click the calendar icons to select a starting and ending date range.
- Check **Only show results that are within a specific time period** to enter a starting and ending time range. If you do not check this box, the report shows all values from 12:00 AM of the first date in your range through 11:59 PM of the last date in the range.
- Check **Only show results that are on certain days of the week** to check/uncheck days. By default, all days of the week are checked.

Step 3 **Select a filter for the report.**

Filters criteria are based on the Key Criteria field in the Report Definition and can be Value Lists or Collections, based on your permissions.

To filter by a Value List:

- Select one or more objects in the Available column and move them to the Selected column, or
- Use the Search in available and Search in selected fields to enter a character to move to the first item in the list that begins with that character.

To filter by a Collection:

- Select the collection from the Choose Collection dropdown.

Populate the Selected panel with the object you want in the report.

Note:

- A Value List or Collection displays in the Basic Filters tab only if you have Execute permission for it.
- Most stock reports are filtered by Value Lists or Collections that are associated with the Key Criteria Field that has been specified on the Report Definition [Properties \(page 126\)](#) tab.
- If no Key Criteria field has been specified in the Report Definition, you cannot filter the report. You can, however, run the report. Having no filters means the report will pull in a large amount of data.

Step 4 Click the [Advanced Filters \(page 63\)](#) to review and select additional filtering criteria.

Step 5 If you are running the report, click **Run** to generate the report.

If you are editing the default filter, click **Save**.

See Also

[Associating a Value List with a Report \(page 139\)](#)

Advanced Filters Tab

For reports defined as Database Queries, this second tab on the Filter page allows you to further refine the results in a report.

This tab is a list of *all* the fields that have Available in Filter checked in the [Edit Field Properties \(page 121\)](#) tab. It shows the field name, display name, and description.

Select one or more of these fields and then click **Edit** to indicate *any value* or a filtered value.

Filter criteria depend on the field type (Date, Decimal, Value List, String, or Boolean).

Step 1 Select one or more of the fields in the Advanced Filter tab. and then click **Edit** to indicate *any value* or a filtered value.

Filter criteria depend on the field type (Date, Decimal, Value List, String, or Boolean).

- For type **Date**, click Edit to specify any value or to filter by selecting either Relative Date Range or Absolute Date Range. For both Relative and Absolute date ranges, you can further indicate a specific time period and certain days of the week.
- For type **Decimal**, click Edit to specify any value or to select an Operator from Equal To, Not Equal To, Less Than, Less Than or Equal To, or Greater Than and then entering a value; for example, Operator = Greater Than and Value = 16.5.
- For type **String**, click Edit to specify any value or to filter by selecting an Operator from Equal To, Not Equal To, or Matches Pattern and then entering a value for the string; for example, Operator = Matches Pattern and Value = Team Green.

If you select Pattern as the Operator, you must specify an SQL pattern to match the string field. The system appends the wild card character % automatically to the beginning and end of the string. You can also use any SQL wild card pattern in between the string.

- For type **Boolean**, click Edit to specify any value or to filter by selecting an Operator and then selecting True or False.
- If the advanced filter field is a **Value List**, click Edit to specify any value or to filter by moving one, all, or some items in the list to the Selected column.

Step 2 Run the report.

The report will pull data for the Collection / Value List objects selected on the Basic tab, filtered by the values you set for the additional (Advanced) fields.

For example, if your Basic Filter is an Agent Team collection, and you added an Advanced Filter for *Agent Name Equal to <a certain string>*, then report shows only agents in the team whose name contain that string.

Note: The field for the Advanced Filter must be moved from the Available panel to the Current panel in the Grid Viewer in the [Grid Editor \(page 81\)](#).

Basic Filters Tab for Anonymous Block/Stored Procedure

Filters for reports whose Report Definitions are anonymous blocks or stored procedures have a different filter interface than filters for reports whose Report Definitions are simple queries. The filter tabs for reports based on Anonymous Blocks and Stored Procedures are populated by parameters. If you run the report without selecting filters and if no Default Filter exists, the report returns all data.

There is no Advanced Filters tab for these reports.

Follow these steps to filter a report before you run the report or to edit the default filter for a report.

Step 1 Enter a Start Date value.

Step 2 Enter an End Date value.

Note: Because the dates are parameters, the system cannot validate that Start is earlier than End.

Step 3 Select a filter.

The filter options are the parameters created in the Report Definition. A parameter is associated with a Value List.

See Also

[Associating a Value List with a Report \(page 139\)](#)

Setting the Default Filter

You can create a default filter for a report and save that filter so that the report always generates according to that filter (until you change the filter again).

Combining this feature with Bypass Default Filter allows for consistent report generation among report users.

-
- Step 1** Open the Available Reports page (Reports drawer) and navigate to the report for which you want to set a default filter.
- Step 2** Right-click the report and select **Edit**.
- This opens the [Report Editor \(page 68\)](#) page.
- Step 3** Click **Edit Default Filter**.
- This opens the filter page for the report.
- Depending on the report you selected, it might open the [Basic Filters Tab \(page 61\)](#) or the [Basic Filters Tab for Anonymous Block/Stored Procedure \(page 64\)](#).
- The tab appears almost exactly as it appears when you run a report with one exception; it has no **Run** button. It has a **Save** button.
- Step 4** Select the filter you want for the report. For example, if the filter offers a collection or a Value List of Call Types, you might select only one or two Call Types.
- Step 5** Click **Save**.
- Every time the report is run, the filter opens to your default settings. You can change them for that instance of the report.
-

The Report Viewer

When a report is run, it displays in the Report Viewer. This page is a container that manages the report execution. Its content varies, based on which view (data presentation) of a report is displayed - a grid, a chart, or a gauge. You can change the report view on this page.

If the report view is a grid, you can review the field definitions for its template in the help topic for that template.

The menubar across the top of the Report Viewer has these selections:

Save	Saves the report.
Save As	Opens the Save As (page 69) dialog box and makes a new copy of the report.
Auto Refresh	<p>Allows you to enable or disable auto refresh for data displayed in this window. When the Auto Refresh check box is checked, the system refreshes data in this window at real time. If this check box is unchecked the data available when you opened this window remains static unless you refresh it using the Refresh menu button.</p> <p>While in this window, if you press Refresh or the F5 button, the system refreshes the data in the window but does not alter the checked or unchecked state of the Auto Refresh check box.</p>
Edit	<p>Launches a page where you can edit the currently-selected view.</p> <ul style="list-style-type: none"> • For grid views, Edit opens the Grid Editor (page 81). • For gauge views, Edit opens the Gauge Editor (page 99). • For chart views, Edit opens the Chart Editor (page 90).
Print	Prints the report.
Filter	Opens the filter page so that you can change the filter values (such as date/time and values) for the report. See Filtering Reports (page 61) .
SQL	Opens a window with a read-only display of the SQL query on which the report is based.
Refresh	<p>Sends a request to the server to refresh the report dataset.</p> <p>Note:</p> <ul style="list-style-type: none"> • If the report view is a grid, and if you have sorted the grid, Refresh resets the view and cancels the sort. • You can also use Refresh when an error occurs to stop the auto-refreshing of the report.
Pop Out	<p>Opens the report in a new, separate browser display window. The popout has no Unified IC edit or toolbar functions.</p> <p>Click x to close the popout.</p> <p>Note: The Auto Refresh check box allows you to enable or disable auto refresh for data displayed in this window. When the Auto Refresh check box is checked, the system refreshes data in this window at real time. If this check box is unchecked the data available when you opened this window remains static unless you refresh it using the F5 button. Note that if the corresponding check box is checked in the parent window, the system checks</p>

	<p>the box in the pop out window as well. You can modify this by unchecking the box. While in this window, if you press the F5 button, the system refreshes the data in the window but does not alter the checked or unchecked state of the Auto Refresh check box.</p>
Export	<ul style="list-style-type: none"> • Launches the Export (page 101) page, where you can export the report grid to a Microsoft Excel file. • In case of Chart or Gauge view, the system prompts you to download or save the Report Chart or Gauge as an image (.jpg). Select a location where you want to save the image and click OK.
Views	<p>If there is more than one view associated with this report template, use the dropdown to select the view you want to display.</p> <p>If the resolution of your screen is too low and you are unable to see the Views dropdown list, you can select, drag, and narrow the width of the left panel (the Drawers).</p> <p>The date formats have been localized for the following languages:</p> <ul style="list-style-type: none"> • English(UK) - dd/mm/yyyy • Danish - dd/mm/yyyy • Polish - yyyy/mm/dd • Dutch - dd/mm/yyyy • Brazilian Portuguese - dd/mm/yyyy • Spanish - dd/mm/yyyy <p>Note:</p> <ul style="list-style-type: none"> • For the above mentioned languages the date formats are not localized in chart view and still displays as mm/dd/yyyy format. • For all other local languages the default date format supported is mm/dd/yyyy.
Help	<p>Opens a dropdown where you can select help for Unified IC reporting or for the fields in the report template.</p>

Report Editor

Right-click any report for which you have the appropriate permissions and select **Edit** to open the Report Editor page. Use this page to review the information for a stock report or to edit the information for a custom report.

Table 2: Fields on the Report Editor page

Field	Explanation
Report Description	This field displays a description for the report.
Version	<p>The field displays the version of report currently deployed in CUIC.</p> <p>Note: Version can be composed of decimal point like X.Y. Version should not start or end with a decimal point. Valid version number examples: 8.9 or 11.15</p>
Author	The field displays the name of template provider that has created the entity.
Report Definition	This field displays Report Definition for the report.
Default View	<p>From the dropdown, select the default view that is to display when users run the report.</p> <p>Note: Once the report has generated, users can change the view. For example, if the default view is a grid, and a gauge has been developed for the report, users can change the generated report to show the gauge view.</p>
Online Help	Displays the location of the online help topic for this stock report template. If you create a custom help, enter the URL for the full path the custom help.html file.
Bypass Filter Dialog	<p>Check this box so that the report runs directly and users are not prompted to filter the report.</p> <p>Note:</p> <ul style="list-style-type: none"> • Even if the report has run directly, you can click the Filter icon in the Report Viewer (page 65) to refilter and rerun the report. • As a best practice, do not check Bypass Filter until you have defined a Default Filter. See Setting the Default Filter (page 65). Bypassing with no default filter set will run the report for all dates and times and for all data.

Field	Explanation
Permissions	Use these boxes to view or change user permissions for My Group (the default group) and for the All Users group.

Actions on the Report Editor page:

- **Edit Default Filter** opens the filter page for the report, where you can review the basic and advanced filters that are defined in the Report Definition. See [Setting the Default Filter \(page 65\)](#).
- **Edit Views** opens the [Views Editor \(page 77\)](#).
- **Save (page 69)**
- **Save As (page 69)**
- **Cancel** closes the page without saving your changes.
- **Refresh** updates the page to show changes another user has made.

Save

Saves the report if it is valid.

A report is not valid to save if:

- The report description contains invalid characters such as symbols and punctuation marks.
- You did not select a valid view.

Save As

Use this page to save an existing report with a new name, description, report category, and permissions.

Table 3: Fields on the Save As dialog box

Field	Explanation
Report Name	The new name for the report
Description	Enter a description of the report.
Save To	Navigate to, and click the radio button for, the category or subcategory in which you want to place the report.
Permissions	Define the default permissions for My Group and for the All Users group.

Actions on this page:

- **OK** - saves your entries and closes the page.
- **Cancel** - closes the page without saving your entries.

Creating Reports

There are two ways to create a report. You can create a Save As version of an existing report, or you can create a report from scratch.

To create a Save As version of an existing report:

1. From the [Available Reports Page \(page 48\)](#), locate and right-click the report that you want to "Save As" (clone).
2. Select **Edit** to open the [Report Editor \(page 68\)](#).

On the Report Editor page, click [Save As \(page 69\)](#) to name the report.

The report is saved to the Available Reports page, where you can right-click to manage it.

To create a report from scratch:

1. Right-click a category or sub-category on the Reports page and select **Create Report**. This opens a naming dialog box.
2. Enter a name for the report.
3. Enter a description for the report.
4. From the Report Definition dropdown, select the Report Definition on which this report will be based.

What this dropdown shows:

- If you have a standard license, the list shows all stock Report Definitions and the custom Report Definitions for any custom templates you have imported.
 - If you have a premium license, the list contains all stock Report Definitions and any custom Report Definitions that have been created.
5. Specify the default permissions for this report for members of your User Group and for all users.
 6. Click **OK** to open the [Report Editor \(page 68\)](#).
 7. Complete fields on the Report Editor.
 8. Click **Save** from the Report Editor page to save the new report. The report is saved to the Available Reports page, where you can right-click to manage it.

Renaming a Report

Right-click a report and select **Rename** to open a dialog box prompting you for the new name.

Type a new name. Then click **OK**.

You see a message if you:

- Enter a duplicate name (the same name as an existing report).
- Leave the Rename To field blank.
- Type a name that contains invalid characters (symbols or punctuation marks other than an apostrophe).

Exporting a Report

A Report Designer with WRITE permission can export a custom report for troubleshooting or so that it can be archived or imported to another server in ZIP format. You can export stock reports.

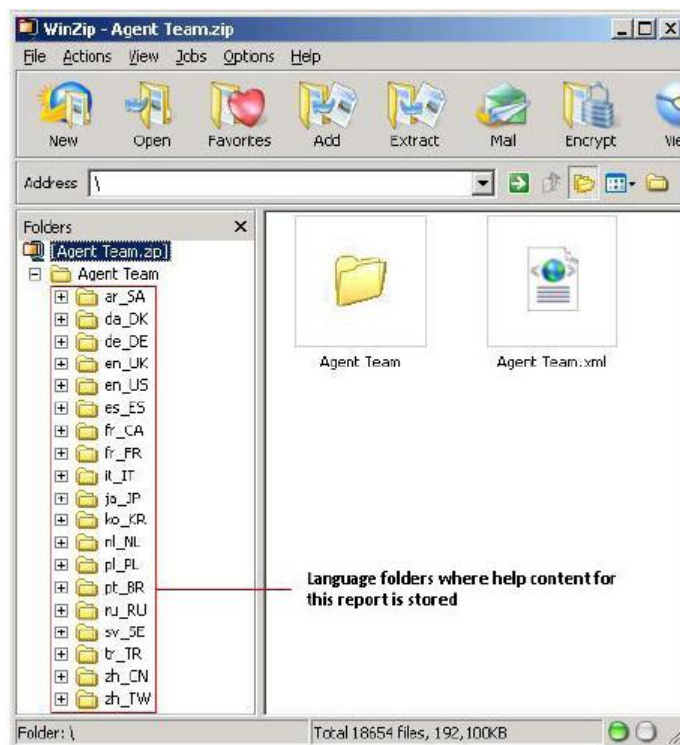
What is exported:

- The report
- Its Report Definition
- Its Value Lists
- Its Views - including all custom grids, charts, and gauges
- The values defined for it in Report Editor (default view, online help, etc)
- Its Thresholds
- Its Permissions
- Its Drilldowns
- The online help content with the directory structure. If there is no help file associated with the given report, then an empty directory structures is exported.

For example, if you want to export the **Agent Team** report, then the structure in which the system exports the help files is as shown below:

Deleting a Report

Figure 13: Directory Structure of the Exported Report ZIP file

**What is not exported:**

- Report Filters
- Collections

To export a report:

1. Right-click a report and select **Export** to open the Export Report dialog box, which gives you the option to rename the report.

You can change the name but do not change the file extension.

2. Click **OK** to open the Windows file download dialog box.
3. Click **Save** and navigate to the location where you want to save the report ZIP file.

Deleting a Report

Right-click a custom report and select **Delete** to open a message prompting for confirmation.

- Click **Yes** to Delete.
- Click **No** to cancel the deletion.

Note:

- Reports are referenced by views and schedulers.
- When you delete a report that has views and/or schedules, you see a message that reminds you to delete those views/schedules before you delete the report.
- You can delete a report *only if* you have the user role of a **System Configuration Administrator**.

Report Views

Report views are the presentation containers in which a report dataset can appear. There are three types of views: Grids, Charts, and Gauges. You cannot run a report that has no views. All stock reports and any custom reports that you create have at least one view. When a report has only one view, you cannot delete that view.

The default view for each report is defined in the [Report Editor \(page 68\)](#).

You can create and edit Views in the [Views Editor \(page 77\)](#).

Grids

All stock report templates are installed with one default grid view. The [Report Editor \(page 68\)](#) displays the name of the default grid, and you can access this grid view through the [Grid Editor \(page 81\)](#).

Grids are tabular presentations of the data in rows and columns. You can modify the stock grids by moving, adding, and deleting columns and by adding and renaming column headings and regrouping columns under those heading.

By default, all Cisco stock reports have a grid view. You can create additional grid views for the stock reports.

Figure 14: Grid

Agent Team Name	Supervisor	Agent Name	Active Skill Group	State	Duration In Current State
IPCC_1.Team2000001.000	LastName20000091, FirstName20000091	LastName20000001, FirstName20000001	Not Applicable	Ready	02:20:52
		LastName20000002, FirstName20000002	Not Applicable	Ready	02:21:06
		LastName20000003, FirstName20000003	Not Applicable	Ready	02:22:26
		LastName20000004, FirstName20000004	Not Applicable	Ready	02:21:24
		LastName20000005, FirstName20000005	Not Applicable	Ready	02:20:50
		LastName20000006, FirstName20000006	Not Applicable	Ready	02:20:42

For custom reports, a default grid is created from the SQL query in the Report Definition.

You can also create Charts and Gauges to view the same report data in graphical format. You do this from the [Grid Editor \(page 81\)](#).

Charts

Unified IC offers three types of charts:

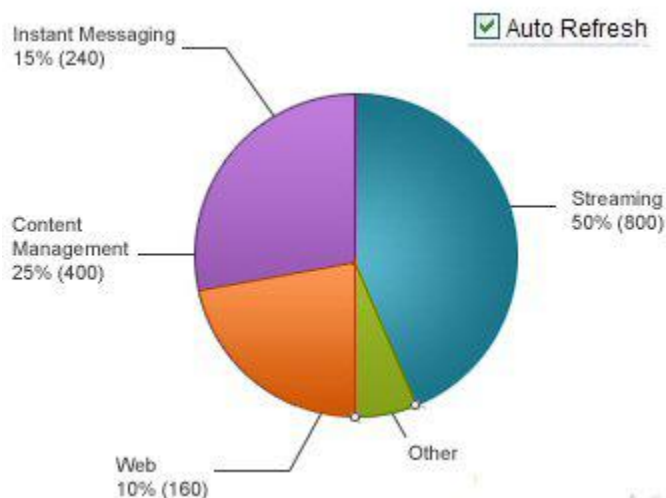
Pie

Pie charts present quantities as proportions of a whole. The circle (pie) represents 100% of the data, with each quantity represented as a wedge of the appropriate size.

Pie charts take decimal/numeric fields only.

A pie chart cannot have more than 50 wedges. If your dataset and chart editor selections generate a pie chart with more than 50 wedges, you will see an error.

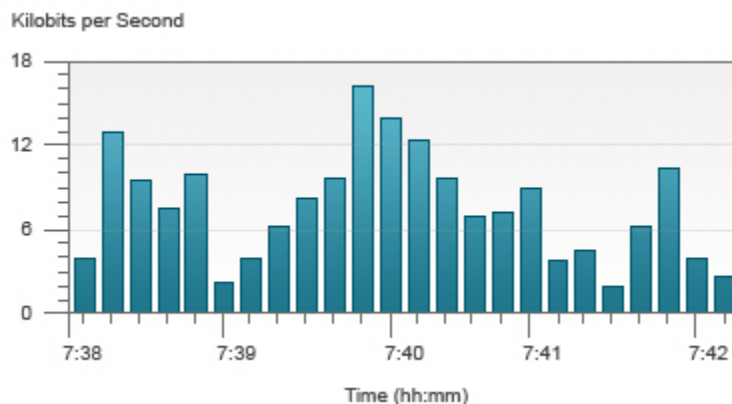
Figure 15: Pie Chart



Column

Column (Bar) charts display discontinuous events and show the differences between events rather than trends. Column charts can be oriented vertically or horizontally and can be stacked vertically or clustered side-by-side.

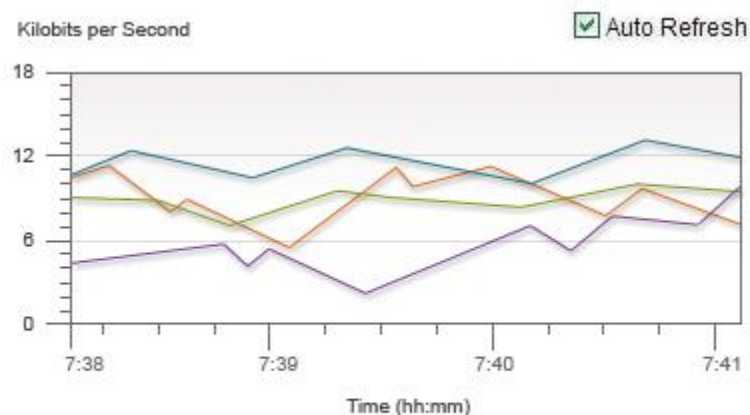
Figure 16: Column Chart



Line

Line charts show continuous quantities over time against a common scale. They are good for showing trends.

Figure 17: Line Chart



The type of chart and the properties for that chart are defined in the [Chart Editor \(page 90\)](#).

Some stock templates are installed with stock charts.

Create and edit charts from the [Chart Editor \(page 90\)](#).

Note: User can localize the legend labels and axis titles in column chart and line chart by enclosing square brackets around resource bundle key string.

Gauges

Gauges display the status of a single report metric (number); for example *Agents Logged On* or *ASA*. They are not intended to display multiple metrics or complex interrelationships.

A gauge in Unified IC is similar - both in function and in appearance - to the speedometer in your automobile. The gauges you can design in Unified IC are semi-circular graphics with a moving needle.

Gauges make good additions to dashboards, as they show a visual indicator that a value is within a normal range.

Figure 18: Sample Gauge



e

The needle tracks an essential metric or status, just as your speedometer tells you how fast you are moving and is not cluttered with other details such as the status of your fuel supply or your washer fluid.

Create and edit gauges from the [Gauge Editor \(page 99\)](#).

Report Permalinks

Report permalinks can be used to provide direct permanent content links to reports through an Excel, HTML or XML file. You can use this feature only for those report views where the *default filter is set* and the *Bypass filter checked*. For reports that do not fall in this category, the permalink feature will not work.

The types of permalinks are:

- **HTML permalinks** - supports grid, gauge, and chart views.
- **XML permalink** - used to generate XML data to be used by downstream processes rather than a webpage or to populate a spreadsheet. This permalink supports only the grid view.
- **Excel permalink** - supports only the grid view.
- [Dashboard permalink \(page 29\)](#)

Permalinks allow you to embed a report so that it can be accessed directly. The person accessing it does not need to log in to the Unified IC application.

Only the **report designers** who have *write* access to the report and can *edit* Views can access and distribute permalinks.

Timezone considerations for Report permalink

The system considers all the time specific data in the default filter as local to Cisco Unified Intelligence Center server timezone. The system then converts this time to data source timezone when the filter query is formed.

Similarly the system considers all time specific table data it fetches from the data source as local to data source timezone. The system then converts this time to Cisco Unified Intelligence Center server timezone before displaying the date and time in the report data.

However if the data source does not have a timezone set, then the timezone considered is of the Cisco Unified Intelligence Center server. For more information see [Timezone considerations for Report \(page 104\)](#)

Views Editor

This page opens when you right-click a report and select **Edit Views**.

It lists all the available views that are currently associated with a report and allows you to create new views or edit existing views.

Each view is a layout presentations of the data that is defined in the Report Definition to populate the report. Unified IC support three view types: Grids, Charts, and Gauges. By default, all stock reports but one have one grid view. (The exception is the Agent State Real Time Graph.) You can create your own grid views and can create gauges and charts for the report dataset.

Table 4: Fields on the Available Views Panel

Field	Explanation
View Name	The name of the view.
Type	The types of views: <ul style="list-style-type: none"> • Chart (page 74) • Gauge (page 75) • Grid (page 73)
Description	The description entered for the view.
Enable Links	Indicates if the access to report using permalink is allowed or blocked <ul style="list-style-type: none"> • Checking the Enable Links check box indicates that users who have the permalink can access the report using Microsoft Excel or a Web Browser.

Field	Explanation
	<ul style="list-style-type: none"> Unchecking the Enable Links check box restricts user access to this report using the report permalink.
Excel Link	<p>The permalink that you can use to view real-time reports in Microsoft Excel.</p> <p>For more details see Report Permalinks (page 76)</p>
HTML Link	<p>The permalink that you can use to view real-time reports in any supported browser.</p> <p>For more details see Report Permalinks (page 76)</p>
XML Link	<p>The permalink that you can use to to create custom report views using technologies like XSLT.</p> <p>For more details see Report Permalinks (page 76)</p>

Actions on the Views Editor page:

- **Create** or **Edit**, by opening:
 - [Grid Editor \(page 81\)](#)
 - [Gauge Editor \(page 99\)](#)
 - [Chart Editor \(page 90\)](#)
- **Delete** - asks for confirmation and then deletes the view. Do not delete all report views. You cannot run a report that has no views.
- **Refresh** - updates the page to show changes other users have made to the views for this report dataset.
- **Help** - opens online help for the page.

Exporting a Report to Excel using Permalinks

You can also export real-time reports and reports that have filtered embedded, to Excel using the report permalinks. For more information on permalinks, see [Report Permalinks \(page 76\)](#).

Before you perform this task:

1. Create a report and run it for a filtered and relative date range, usually for a specific set of Skill Groups or Call Types for say *This Week*.
2. Save a copy of this report with the filters intact and then follow the steps below.

-
- Step 1** Open the **Reports Manager**.
- Step 2** Right-click the report that you want to export to Excel and select **Report Info**.
- Step 3** In the *Report Info* dialog box, copy the URL from the **Excel Link** field to your clipboard.
- Step 4** Open *Microsoft Excel* and from the **Data** menu, choose **Import**.
- Step 5** In the **New Web Query** dialog box, paste the URL that you copied from the Report Info dialog box in the Address field.
- Step 6** Press **Go**.
- Excel displays the report preview.
- Step 7** Click **Import**.
- Excel prompts you to choose the insertion point for the imported data.
- Step 8** Select the cell in the Excel spreadsheet that you want to make the top left corner of your new report.
- Step 9** Click **OK**.
- The CUIC Report data is imported into Excel.
- Note:** *Microsoft Excel 2007* has a 'refresh rate' parameter in the **Connections** menu, which basically governs how frequently the report data needs to be fetched. Refer Excel documentation for details.

You can now filter or format the report to your requirements.

Opening an Exported Report in Excel

You can import the permalink URL to Excel as a web query, using report permalinks.

To import a report:

-
- Step 1** Open *Microsoft Excel* and from the **Data** menu, choose **From Web**.
- Step 2** In the *Report Info* dialog box, enter the **permalink URL** .
- Step 3** Select the table.
- Step 4** Click **OK**.

The CUIS Report data is imported into Excel.

HTML permalink

HTML permalink provides a direct link to the Report Viewer, thereby bypassing the main interface and logging into CUIC. The report has the same look and feel as the reports that are displayed using pop out functionality in Report Viewer in CUIC.

Note: The permalink status (Enable or Disable) will be preserved during the export of a report and the will be retained during report import. In case of importing older version reports(stock or customer), the permalinks will be enabled by default for all the views of the imported report.

XML permalink

XML permalink provides a direct link to generate an XML structure corresponding to a report view,thereby bypassing the main interface and logging into CUIC. The generated XML structure can be used by other applications to create custom report views using technologies like XSLT.

The generated XML will have the following types of tags:

- report - This is the root tag with attribute 'name', the value of which will be the report view name.
- row - For every record in the report, there will be a row tag in the XML. It will have an attribute 'index' which can take integer values starting from 0. This tag represents the sorting order of the records, if you sort the corresponding report view.
- header - This tag will be present only if there are super headers in the report view. There will be two attributes to this tag - name and index. The name attribute will correspond to Super Header name and the index attribute will correspond to the position of the Super Header in the report view, with index starting from 0.
- column - For every field in the report view, there will be a column tag. It will have two attributes - name and index. The name attribute will correspond to the field name and the index attribute will correspond to the position of the field in the report view. The text content of the column tag will be the value of the field. If field value is null, this tag will be empty.

An example of a sample report having a super header:

Branch Details		Call Type	Call Type ID
Orig Branch	Orig Branch Code		
032Bethlehem	5240	0032_MainQueue	9994
035Bethlehem	3479	0035_MainQueue	5628

The corresponding XML structure for the report will be as follows:

```
<report name="sample grid view">
  <row index="0">
```



```

<header index="0" name="Branch Details">
    <column index="0" name="Orig Branch">032Bethlehem</column>
    <column index="1" name="Orig Branch Code">5240</column>
</header>

<column index="1" name="Call Type">0032_MainQueue</column>
<column index="2" name="Call Type ID">9994</column>

</row>

<row index="1">
    <header index="0" name="Branch Details">
        <column index="0" name="Orig Branch">035Bethlehem</column>
        <column index="1" name="Orig Branch Code">3479</column>
    </header>
    <column index="1" name="Call Type">0035_MainQueue</column>
    <column index="2" name="Call Type ID">5628</column>

</row>

</report>

```

Grid Editor

This page opens when you select a grid view from the [Views Editor \(page 77\)](#) and then click **Edit**.

Use this page to edit an existing grid or to create a new grid view for a report dataset.

Fields on this page:

- **Name** - Enter the name for this view. The default view names for stock templates are read-only.
- **Description**: Enter a description for the view.
- **Font Size** - Retain the default font size (10) or enter another value between 8 and 45.

Panels on this page:

Available Fields This panel shows all fields that are collected from the database, that are available to be used in the report, and that are checked as *Allow to show if Invisible* in the Report Definition Fields tab.

The fields in the Available Fields panel include the Current fields (fields that appear in the current grid view) as well as all other fields that are eligible to be used in the report view.

In a stock template, if you add Available fields to the Current panel so that they appears in the grid, and if those fields do not have footers defined for them the summary row of the report will

not show column summaries/totals for those fields. To add a footer to a field, open the Report Definition, locate the field in the Fields tab, and click [Edit Field Properties \(page 121\)](#).

Current field order in the grid

This panel shows all fields that are currently used in the grid view of the report, the order in which they appear, and the headers (if any) under which they are grouped.

Fields in this list appear as columns in the report. You can reorder and rename these fields, and you can set thresholds for them. You can also remove them so they are no longer visible in the report.

Note: For custom reports, the Available panel and the Current field panel show identical fields. The Report Designer must move fields from Current to Available to remove them from the grid view.

To:	Do This:
View the properties of a Current (visible) Field	Right-click a field and select Properties to open a page where you can set Field Properties (page 83) .
Manage thresholds for a Current (visible) field	Right-click a field and select Thresholds (page 86)
Move a Current (visible) field so it is no longer visible in a report.	<p>Right-click a field and select Remove Selected. If the field has is a superheader (has other fields under it), you see a confirmation message. Click Yes at the confirmation message.</p> <p>To add the field back, select it in the Available Fields panel and move it back to the Current field order in the grid panel.</p> <p>If you remove all fields from the Current panel, the generated report will show no data.</p> <p>Note: To regain the default Current panel, you can re-import the report, or you can move fields from the Available panel back into the Current panel.</p>
Move a field from the Available panel to the Current panel.	<p>Click (highlight) GridHeaders at the top of the Current panel.</p> <p>Select the field you want to move in the Available panel.</p> <p>Click > to move the field over. It is placed at the bottom of the Current panel. Locate it; then use the up arrow to move it to the position in which you want it to display in the grid.</p>

To:	Do This:
	Note: The Available panel shows the default (database) name. The Current panel shows the display name. If you move an Available field that is already present in the Current panel (for example, if you move active_other from Available, and Active Other is already part of Current), the Active Other field in Current becomes highlighted. You cannot have the same field more than once in the Current panel.
Reorder Current Fields (Up and Down)	Use the up and down arrows to the right of the Current field order in the grid panel.

Actions on this page:

- **Grouping** - opens the [Grouping \(page 84\)](#) dialog box.
- **Save** - saves your changes to the grid view and closes the page.
- **Save As** - opens a dialog box where you can enter a name for the changes you have made to the grid view.
- **Cancel** - cancels entries you have made and closes the page.
- **Add Header** - opens the [Add Header \(page 85\)](#) dialog box.
- **Remove Selected** - removes a field from the Current panel so that it no longer appears in the report. The field remains in the Available panel.
- **Help** - opens the online help topic for this page.

Field Properties

This page opens when you right-click a Current (visible) field in the [Grid Editor \(page 81\)](#) and select Properties.

Table 5: Fields on this page

Default Name	Displays the name of the field as it appears in the database (as protected text).
New Display Name	Enter a new name for the field. Note: This does not change the name of the field in the Available panel.

Field Width	<p>The number of pixels the field can occupy in the grid. The default is 70. The minimum is 10, and the maximum is 500.</p> <p>Note:</p> <ul style="list-style-type: none"> • If the report cannot split a continuous text with no space, then it auto-adjusts the field width to display the entire text in one line irrespective of the field width configured. But if the report is scheduled as a PDF, the field width will not be auto adjusted and the extra text will be truncated. • In a report scheduled as PDF the field width will not be auto-adjusted for a continuous text with no space. If the header cells exceed the field width, it will overlap with adjacent columns. In other cells, extra text gets truncated. You need to adjust the field width to fix this issue.
-------------	---

Actions on this page:

- **OK** - saves your selections and closes the page.
- **Cancel** - closes the page without saving your changes.

Grouping

Use this page to indicate the format you want for report groups and whether you want to show summaries for groups.

Table 6: Fields on this page

Number of Groups	Click a radio button to indicate if you want zero, one, two, or three groups in the report.
Unique Value Vertical Alignment	Select Top, Middle, or Bottom to specify where you want the name of the group to display in the report column.
Sorted by	Select a value from the dropdown. The group will be sorted by this value.
Grouped By	Select a value from the dropdown. The group will be organized by this value.
Show Summary	Check this to include a summary row in the report for the grouping. For example, if you group by Agent Team and check Show Summary, there will be a row of summary data for each team.

Actions on this page:

- **OK** - saves your selections and closes the page.
- **Cancel** - closes the page without saving your changes.
- **Help** - opens the online help topic for this page.

Add Header

You can add a "superheader" (a header of headers) to the Current field panel to group report columns that have a logical relationship to each other.

Table 7: Related Columns with no Superheader

Held Tasks	Avg Hold Time
------------	---------------

In the example below, the Header *Incoming Hold Tasks* appears above, and groups, the *Held Tasks* and *Avg Hold Time* fields.

Table 8: Related Columns with Superheader

Incoming Hold Tasks	
Held Tasks	Avg Hold Time

To organize related columns into a grouping:

1. Click Add Header. Enter a name for the header and click **OK**. The header appears as a folder icon in the Current field panel.
2. Move Available fields into this header by selecting them and clicking the > or by using drag and drop.

To organize fields within a Header, use the up and down arrows to the right of the Current field order in grid panel.

To delete a Header, right-click the Header and select **Remove Selected**. Select **Yes** to confirm the deletion.

To rename a Header, right-click the header icon and select **Rename**. Complete the Rename To: field; then click **OK**.

Current Fields and Available Fields

For every report, the [Grid Editor \(page 81\)](#) shows a panel named Available Fields and a panel named Current Field order in the grid.

When you create custom reports, both panels contain the identical list of database fields.

For Cisco stock reports:

- The Available panel includes all the fields that the SQL query is pulling from the database, including those fields that display by default when you run the report. The Available panel is inclusive of the Current panel.
- The Current panel includes all fields that appear in the default grid view of the generated stock report. The vertical list of Current fields represents their left-to-right orientation in the grid. The second field from the top of this list is the second field from the left in the report grid.

You can change the fields in the Current panel as follows:

- You can remove a field. (Select it and use the < to move to the Available panel.)
- You can move a field. (Select it and use the up/down arrow keys to move it up or down the list)
- You can rename a field. (Right-click it and select Properties.) If you rename the field in the Current list, the field retains its original name when you move it back to the Available list.
- You can set a threshold for a field so that it appears in a certain format in the generated report. (Right-click it and select Properties.)
- You can create a Header and group it with related fields.

Thresholds

When you set a threshold for a field in a report *grid*, you are configuring that field to display in a distinctive format when its value matches, exceeds, or does not meet a criterion that you set.

For example, you can configure a field so that it always appears as bold or as red in the generated report grid when it is greater than or equal to a certain value.

To access the Thresholds available for the field:

1. Open the Reports page and right-click the report for which you want to set a threshold.
2. Select **Edit Views**.
3. Select a view of type *Grid*; then click **Edit**. This opens the Grid Viewer in the [Grid Editor \(page 81\)](#).
4. Right click a field in the **Current Fields** panel.
5. Select **Thresholds**.

This opens a page that shows a list of thresholds that are available for this field. The page is blank if no thresholds exist.

Each available threshold has a bullet in the far left. The name of the threshold indicates the criteria on which it is based - for example, *Greater Than: 50*.

Note:

- There is no limit to the number of thresholds you can define for a field.
- The thresholds will not be displayed in a grouped field.

Actions on this page:

- To add a threshold, click **Add**. This opens the [Add/Edit Thresholds page \(page 87\)](#).
- To edit a threshold, select the bullet to the left of its name and click **Edit**. This opens the [Add/Edit Thresholds page \(page 87\)](#).
- To delete a threshold, select the bullet to the left of its name and click **Delete**. This displays a confirmation message. Click **Yes** to complete the deletion.
- **OK** - closes the Available Thresholds page.

Add/Edit Thresholds Page

Complete the Add/Edit Threshold page as follow:

Value	Description
Type	<p>Click the dropdown to select a type.</p> <p>The available types are Always, Equal To, Not Equal To, Greater Than, Greater Than or Equal To, Less Than, Less Than or Equal To, and Between.</p> <p>The Types you can select depend on the field. For example, you cannot select the type <i>Greater Than</i> for the Agent Name field.</p> <p>Selecting any type other than <i>Always</i> displays a field where you must enter a value to which the field must be compared.</p> <p>When you select a field that is text (string), a Regular Expression checkbox displays. Check Regular Expression if you want the threshold to include all strings that contain a text value.</p> <p>For example, if you set a threshold for <i>Supervisor must be equal to R*</i> and check <i>Regular Expression</i>, the threshold will apply to Ralph, Roger, Roy, and Riley.</p> <p>If you do not check Regular Expression, the threshold will apply only to a Supervisor whose name is <i>R</i>.</p>
Bold	Check Bold or leave it unchecked.

Value	Description
Text Color	Click the box to open a color palette. Clicking a color selects that color for the text and closes the palette.
Background Color:	Click the box to open a color palette. Clicking a color selects that color for the report cell and closes the palette.
Text Substitute:	To mask the field value with text other than one of the default types when the threshold condition is met, enter that text here. For example, if you selected <i>Less Than</i> as the type, you might want the text to say <i>Warning</i> .
Image Substitute URL:	To mask the value of the field with an image instead of text, enter the image URL or path. For example: <i>cues_icons/Status_criticalerror_icon.gif</i> See Threshold Images (page 88) .



Actions on this page:









- **OK** saves the threshold definition and closes the Add/Edit Thresholds page.
- **Cancel** cancel changes and closes the page.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Threshold Images

Images that can be used to represent field thresholds appear below. To insert the image, add the full path and filename (*cues_icons/status_criticalerror_icon.gif*) in the Image Substitute field on the Add/Edit Thresholds page.

Note: The image names are context-sensitive.

FileName	Image
<i>cues_icons/Status_criticalerror_icon.gif</i>	<i>Figure 19: Threshold Image - Status Critical Error</i> 
<i>cues_icons/Status_error_icon.gif</i>	<i>Figure 20: Threshold Image - Status Error</i> 

FileName	Image
cues_icons/Status_warning_icon.gif	Figure 21: Threshold Image - Status Warning 
cues_icons/Status_success_icon.gif	Figure 22: Threshold Image - Status Success 
cues_icons/wizard_check.gif	Figure 23: Threshold Image - Wizard Check 
cues_icons/wizard_error.gif	Figure 24: Threshold Image - Wizard Error 
images/Help24T.gif	Figure 25: Threshold Image - Help 
images/Stop24T.gif	Figure 26: Threshold Image - Stop 
images/Enable.gif	Figure 27: Threshold Image - Green check 
images/Kubrick/alert_informational_2009_256.png	Figure 28: Threshold Image - Info 

Note: If a report having a threshold image that is referencing an external URL is scheduled as a PDF, it will display the image only if the Unified Intelligence Center server is able to connect to the external URL. Similarly if the same report is opened in the browser or scheduled as an inline HTML it will display the image only if the client machine is able to connect to the external URL.

Report Summaries

You can control whether and how a custom report is grouped and summarized by configuring its [Grouping \(page 84\)](#) in [Grid Editor \(page 81\)](#).

Even if you select Show Summary on the Grouping page to include one or more summary rows in the report, values appear in the summary only if the fields have a default footer value.

Some, but not all, fields that are defined in the **Current field order in the grid** panel in Grid Editor have default footer values. When you generate the report, the report summary row displays the footer values for these fields, which can be Count, Total, Min, Max, or Custom Formula.

If you create a custom report, the summary row does not show values until you create footers for its fields.

If you move an Available field into the Current field order in grid panel, the summary for that column will be empty unless you define its footer value.

To define a footer value for a report field:

1. Open the Report Definition.
2. Click the Fields tab.
3. Locate the field and click the radio button at the left to select that field for editing.
4. Click Field Formatting.
5. Scroll down to the Footer field and select a value from the dropdown.

Chart Editor

This page opens from the [Views Editor \(page 77\)](#) page when you select to Create or Edit a chart. It also opens directly from the Report Viewer when you are viewing a chart.

The Chart Editor is a wizard that moves you through with three or four steps, depending on the type of chart you are creating or editing.

[General Settings \(page 90\)](#)

[Series Settings \(page 94\)](#)


[Axis Settings \(page 96\)](#)

[Summary \(page 98\)](#)

General Settings

Table 9: Fields on this page

Field	Description
Chart Type	Options are Pie Chart (the default), Column Chart, and Line Chart. See Charts (page 74) for a description of each. Once you save a chart, you cannot change its chart type.
Chart Name	Enter the name of a new chart or edit the name of an existing chart. Chart names are required and must be unique for all views of a report.
Chart Description	Enter text that identifies the purpose of the report.

Field	Description																																	
Accessible Mode	Check this box to add fill patterns (stripes and dots) to chart colors, making them easier to distinguish for users who have color blindness.																																	
Dynamic Dataset	<p>Note:</p> <ul style="list-style-type: none">• Not available for pie charts.• Line and column charts can use Dynamic Dataset OR Use Report Footer, but not both. <p>For line and column charts, check this to transform data into a summarized format. An example summarizing agent call volume:</p> <p><i>Figure 29: Chart Dynamic Dataset example</i></p> <div><div><p>Original Data</p><table><thead><tr><th>Date</th><th>Agent</th><th>Calls</th></tr></thead><tbody><tr><td>12/31/09</td><td>John</td><td>5</td></tr><tr><td>12/31/09</td><td>Jane</td><td>6</td></tr><tr><td>01/01/10</td><td>John</td><td>7</td></tr><tr><td>01/01/10</td><td>Jane</td><td>8</td></tr><tr><td>01/02/10</td><td>John</td><td>9</td></tr><tr><td>01/02/10</td><td>Jane</td><td>10</td></tr></tbody></table></div><div></div><div><p>With Dynamic Dataset</p><table><thead><tr><th>Date</th><th>John</th><th>Jane</th></tr></thead><tbody><tr><td>12/31/09</td><td>5</td><td>6</td></tr><tr><td>01/01/10</td><td>7</td><td>8</td></tr><tr><td>01/02/10</td><td>9</td><td>10</td></tr></tbody></table></div></div> <p>Once transformed, the data can be easily graphed and analyzed using a line or column chart.</p> <p>You can create dynamic datasets with decimal/numeric values only.</p>	Date	Agent	Calls	12/31/09	John	5	12/31/09	Jane	6	01/01/10	John	7	01/01/10	Jane	8	01/02/10	John	9	01/02/10	Jane	10	Date	John	Jane	12/31/09	5	6	01/01/10	7	8	01/02/10	9	10
Date	Agent	Calls																																
12/31/09	John	5																																
12/31/09	Jane	6																																
01/01/10	John	7																																
01/01/10	Jane	8																																
01/02/10	John	9																																
01/02/10	Jane	10																																
Date	John	Jane																																
12/31/09	5	6																																
01/01/10	7	8																																
01/02/10	9	10																																
Use Report Footer	<p>Note: Line and column charts can use Use Report Footer OR Dynamic Dataset, but not both.</p> <p>Check this if you want the repeated data in the chart to be grouped or collapsed by the field's footer. As a best practice, check this to consolidate data so that the chart will be less cluttered and easier to analyze.</p> <p>Note: A pie chart cannot have more than 50 wedges. If your dataset and chart editor selections generate a pie chart with more than 50 wedges, you will see an error. Selecting Use Report Footer reduces the number of wedges.</p> <p>For pie charts, the data will be grouped by the Label field.</p> <p>For line charts, the data will be grouped by the Horizontal Axis field.</p> <p>For column charts, the data will be grouped by the Horizontal Axis field for vertical charts or by the Vertical Axis for horizontal charts</p> <p>These images illustrate report footers:</p>																																	

Field	Description																																																			
	<p>Figure 30: Chart Data with Use Report Filters disabled</p> <p>Original Data</p> <table><tr><th>Fruit Name</th><th>Fruit Price</th><th>Fruit Weight</th><th>Fruit Length</th></tr><tr><td>Apple</td><td>0.50</td><td>5</td><td>2</td></tr><tr><td>Apple</td><td>0.25</td><td>6</td><td>2</td></tr><tr><td>Apple</td><td>0.75</td><td>4</td><td>2</td></tr><tr><td>Peach</td><td>1</td><td>3</td><td>1.5</td></tr><tr><td>Peach</td><td>0.90</td><td>4</td><td>1.5</td></tr><tr><td>Orange</td><td>1.25</td><td>3</td><td>1</td></tr><tr><td>Banana</td><td>0.80</td><td>2</td><td>4</td></tr><tr><td>FOOTER FUNCTION (DEFINED IN REPORT DEFINITION)</td><td>Count</td><td>Average</td><td>[None Defined]</td></tr></table> <p>Note that there are repeated values for Fruit Name. The purpose of Use Report Footer is to collapse these repeated values into single rows, using the footers defined in the other columns.</p> <p>Figure 31: Chart Data with Use Report Filters enabled</p> <table><tr><th>Fruit Name</th><th>Fruit Price</th><th>Fruit Weight</th></tr><tr><td>Apple</td><td>3</td><td>5</td></tr><tr><td>Peach</td><td>2</td><td>3.5</td></tr><tr><td>Orange</td><td>1</td><td>3</td></tr><tr><td>Banana</td><td>1</td><td>2</td></tr></table> <p>With Use Report Footers enabled, the original rows are collapsed by distinct Fruit Names. The Fruit Price column shows a count (3 prices for Apple, 2 for Peach) since that is its footer function, and the Fruit Weight column shows the average weight for each fruit.</p> <p>Note:</p> <ul style="list-style-type: none">• If Use Report Footer is enabled and no footer is defined in one of the selected "grouping" fields, an error displays and the box does not remain checked.• Fields that do not have footers are disabled and cannot be selected. <p>To set the footer for a Save As or custome Report Definition:</p> <ul style="list-style-type: none">• Open the Report Definition and click the Fields tab.• Locate the field for the gauge and select Edit Formatting.• Select a footer value from the dropdown.	Fruit Name	Fruit Price	Fruit Weight	Fruit Length	Apple	0.50	5	2	Apple	0.25	6	2	Apple	0.75	4	2	Peach	1	3	1.5	Peach	0.90	4	1.5	Orange	1.25	3	1	Banana	0.80	2	4	FOOTER FUNCTION (DEFINED IN REPORT DEFINITION)	Count	Average	[None Defined]	Fruit Name	Fruit Price	Fruit Weight	Apple	3	5	Peach	2	3.5	Orange	1	3	Banana	1	2
Fruit Name	Fruit Price	Fruit Weight	Fruit Length																																																	
Apple	0.50	5	2																																																	
Apple	0.25	6	2																																																	
Apple	0.75	4	2																																																	
Peach	1	3	1.5																																																	
Peach	0.90	4	1.5																																																	
Orange	1.25	3	1																																																	
Banana	0.80	2	4																																																	
FOOTER FUNCTION (DEFINED IN REPORT DEFINITION)	Count	Average	[None Defined]																																																	
Fruit Name	Fruit Price	Fruit Weight																																																		
Apple	3	5																																																		
Peach	2	3.5																																																		
Orange	1	3																																																		
Banana	1	2																																																		

Field	Description
Legend: Show Legend	<p>A legend provides text labels explaining the meaning of each data series and its associated color, pattern or data point marker.</p> <p>Checking this box configures the chart to show a label and enables these two fields:</p> <ul style="list-style-type: none"> Legend Placement <p>Select where the legend should appear in the chart view. Options are Right and Bottom.</p> <p>Right is preferable, as it does not add to the total height of the chart.</p> Maximum Legend Label Length <p>Enter a value (in number of characters) for the length of the chart label.</p> <p>Use a short legend length to eliminate wrapping.</p>
Data Change Effect	<p>Data Change Effect enables animation in the chart . Animation occurs the first time the chart draws and at every refresh. It has these options:</p> <ul style="list-style-type: none"> Type <p>Select a type of animation for the chart. Options are Interpolate, Zoom, Slide, and None.</p> Duration <p>Enter a value in milliseconds for the duration of the interval between the animation transitions.</p> <p>Note:</p> <ul style="list-style-type: none"> Modifications to the default value for Duration (milliseconds) can cause the chart to appear to constantly refresh. The default Refresh Rate for a Real Time report is 15 seconds. The default Data Change Effect is 1000 ms. These two values work well together. If you change the Data Change Effect to 10000 ms (10 sec), then by the time the Chart Effect is completing, the Chart refresh rate is ready to begin again. This makes the chart appear to constantly be refreshing. If you want to modify the default Data Change Effect value consider modifying the Report Refresh Rate.
Column Chart Settings	<p>Note: Unavailable for Pie Charts and Line Charts.</p> <p>Column Chart Settings are:</p>

Field	Description
	<ul style="list-style-type: none"> • Column Type Select the type of display. Options are Clustered or Stacked columns. • Column Orientation Enter the orientation of the columns. Options are Horizontal or Vertical. <p>Note: The selection of Column Orientation (Vertical or Horizontal) determines the layout of the Series Settings and Axis Settings pages.</p>
Line Chart Settings	Check this to interpolate the display of a line chart such that a continuous line appears if there is a gap in the data. Protected for pie charts and column charts.

Actions from this page:

- **Back** - moves to the previous wizard page
- **Next** - moves to the next wizard page
- **Save & Exit** - saves the settings you have configured up to this point and closes the Chart Editor wizard. This button is disabled until you reach the Summary page.
- **Cancel** - closes the Chart Editor wizard. Does not save changes.

Series Settings

This wizard page opens when you click **Next** at the General Settings page of the Chart Editor.

Series settings differ by chart type, column chart orientation, and Dynamic Dataset selections made on the General Settings page.

Table 10: Pie Chart Series

Field	Description
Data Field	<p>From the dropdown, select a data field for the series.</p> <p>Options are the numeric fields only. You cannot create a pie chart from date or text values.</p>
Label Field	<p>From the dropdown, select a label field for the data field.</p> <p>Each label corresponds to its field name, but you can edit the label.</p>
Label Position	From the dropdown, select a label position. Options are Callouts, Inside Wedges, Inside Wedges + Callouts, Outside Wedges, and None.

Field	Description
	Note: For pie charts, this option does not add labels inside the wedges <i>and</i> add callouts. It display labels inside wedges OR add callouts. If the pie slice is big enough, you see a label inside the wedge. If the slice is too small to enter a label inside the wedge, you see a callout for that label only.
Label Format	From the dropdown, select Value with Percent Inside Parenthesis, Percent with Value Inside Parenthesis, or Percent Only.

Table 11: Line and Column Chart Series, Dynamic Dataset Is Not Enabled

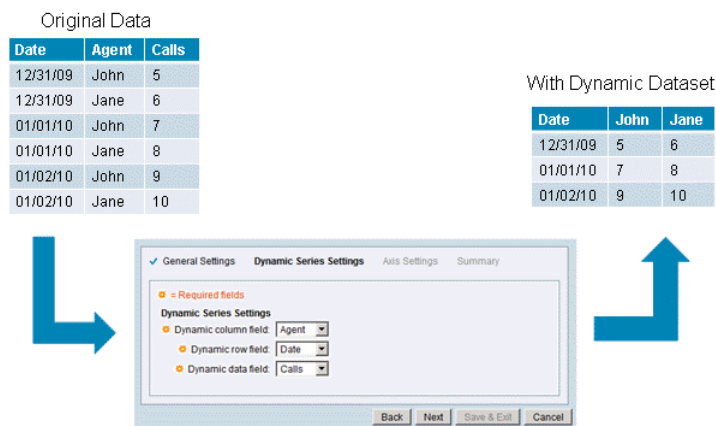
Field	Description
Axis: Type and Fields	<p>This panel appears on the right if you select a vertical orientation on the General Settings page. It appears on the left if you select a horizontal orientation.</p> <p>Select one Type from the dropdown. Options are Numeric, Date/Time, or Text.</p> <p>Then select one or more fields for that Type.</p> <p>On a column chart, this field becomes the Series Descriptions/Legend Labels field on the Axis Settings page.</p> <p>A line chart will show a line for each field. A column chart will show a column for each field</p> <p>Note: The type of field that you select (Numeric, Date/Time, or Text) determines the Axis Type on the Axis page.</p>
Axis: Field	<p>This panel appears on the right if you select a vertical orientation on the General Settings page. It appears on the left if you select a horizontal orientation.</p> <p>Select one field.</p> <p>Note: The type of field that you select (Numeric, Date/Time, or Text) determines the Axis Type on the Axis page.</p>

Table 12: Line and Column Chart Series, Dynamic Dataset Enabled

Field	Description
Dynamic Column Field	From the dropdown, select the field for the column headings of the chart. For example, select Agent to generate a chart with a column heading for each agent.
Dynamic Row Field	From the dropdown, select the field that will define the rows. For example, select Date to see a row for each date.

Field	Description
Dynamic Data Field	From the dropdown, select the value for the data that will populate the chart.

Figure 32: Chart Dynamic Dataset

**Actions from this page:**

- **Back** - moves to the previous wizard page
- **Next** - moves to the next wizard page
- **Save & Exit** - saves the settings you have configured up to this point and closes the Chart Editor wizard. This button is disabled until you reach the Summary page.
- **Cancel** - closes the Chart Editor. Does not save changes.

Axis Settings

This wizard page opens when you click **Next** at the Series Settings page of the Chart Editor for Line Charts and Column Charts. There is no Axis Settings page for pie charts.

Note:

- The layout of the Axis Settings page is based on your selection of Vertical or Horizontal on the General Settings page.
- The Axis Types on this page are based on the data types you selected on the Series Settings page.

Table 13: Fields on this page

Field	Description
Series Descriptions/ Legend Labels	This field is always at the top of the fields on the Axis Settings page.

Field	Description
	It shows the label for the Axis field you selected on the Series Settings page. You can edit the label. For example if you selected the field <i>CTDelayAbandTime</i> , you can edit the label to show <i>Call Type Delay</i> .
Axis Type	<p>There are two Axis Type fields on this page: one for Horizontal Axis and one for Vertical Axis. Axis Type option(s) are determined by the data type of the field:</p> <ul style="list-style-type: none"> • If the field is a Text data type, the Axis Type is Category, and it is protected. • If the field is a Date/Time data type, the Axis Type is Date/Time, and it is protected. <p>Axis Type of Date/Time exposes these additional settings:</p> <ul style="list-style-type: none"> – Data Units <p>Select from Milliseconds Seconds Minutes Hours Days Weeks Months Years</p> <p>Note:</p> <ul style="list-style-type: none"> • An incorrect setting can result in very thin or very wide bars - or nothing at all. This can happen if your data is in minutes and you chose milliseconds. • The best practice is to select the data units closest to what your report returns. If your data occurs every 15 minutes, choose Minutes. <ul style="list-style-type: none"> – Data Interval - Enter the interval between data units. – Display in Local Time - If you check this box, the time zone displayed for this user will be the local time zone that you have specified in the User Setting window. However, if your browser's time zone setting is different from what you have set in the User Settings window, then the time displayed in the browser window will have the browser time zone name appended to the displayed time. <p>Note: Cisco recommends that you always open CUI in a browser that is in the same time zone as that specified in the User Settings window.</p> <ul style="list-style-type: none"> • If the fields is a Numeric data type, the Axis Type options are Linear or Log (Logarithmic). <p>For a stacked column chart, Log is often the best selection when there is a wide range in returned values.</p>
Axis Title	Enter text for the Axis
Axis Minimum	Enter a minimum value for the axis range.
Axis Maximum	Enter a maximum value for the axis range.

Field	Description
Axis Minor Tick Interval	Enter a value to determine the spacing of the minor ticks.
Axis Major Tick Interval	Enter a value to determine the spacing of the major ticks.
Maximum Label Precision	<p>Use this field with Decimal (%) values such as Service Level to configure the digits that appear after the decimal point.</p> <p>For example, with a value of 3, you see 0.000. 0.400, 1.000. With a value of 1, you see 0.0, 0.4, 1.0.</p> <p>Note: Making the Maximum Label Position large does not add decimals to the value. Setting it to 5 does not make the value of 10.25 display as 10.25000.</p>
Auto adjust	If this is selected, the system takes a best guess at the range and will adjust the beginning and end of the axis to meet the data range.
Base at zero	<p>With this selected, if all values are positive, or all values are negative, the chart will base the axis at zero.</p> <p>Note: Base at zero will not have any effect if Auto Adjust is disabled.</p>

Actions from this page:

- **Back** - moves to the previous wizard page
- **Next** - moves to the next wizard page
- **Save & Exit** - saves the settings you have configured up to this point and closes the Chart Editor wizard. This button is disabled until you reach the Summary page.
- **Cancel** - closes the Chart Editor. Does not save changes.

Summary

The left panel on this page shows a summary of the settings you have made for the chart.

Actions from this page are:

- **Save and Preview.** Clicking this saves the chart, runs the report without a filter, and displays the chart in the Preview area.
- **Back** - moves to the previous wizard page
- **Next** - disabled
- **Save & Exit** - saves the chart and closes the Chart Editor wizard.

- **Cancel** - closes the Chart Editor.

Gauge Editor

This page opens from the [Views Editor \(page 77\)](#) when you select to create or edit a gauge. Use the fields on the Gauge Editor to create a new gauge or to edit an existing gauge. The changes that you make are reflected immediately in the gauge graphic.

A gauge displays a single number, and that number is the *footer* value of one of the fields in the Report Definition.

Note: If the field does not have a footer, you see an error saying that the footer value is null or is not a number when you run the report. You will need to set the footer for the field.

To set the footer for a Save As or a Custom Report Definition:

- Open the Report Definition and click the Fields tab.
- Locate the field for the gauge and select Edit Formatting.
- Select a footer value from the dropdown.

Note: Footer values are Sum | Avg | Count | Min | Max | Custom Formula. Some footer values do not make sense for some fields, and will not result in useful gauges. For example, setting a gauge field to *Agent Name* and setting the Agent Name footer value to *Avg* does not result in a useful gauge.

Table 14: Fields on the Gauge Editor

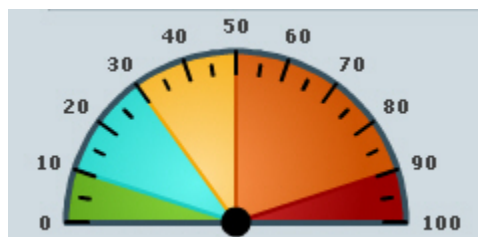
Field	Explanation
Field	From the dropdown, select the field from the report definition that the gauge will track. You can select only one field. Note: Not all of the fields in the dropdown list make useful gauges, and not all of them have pre-defined footer values.
Name	Enter the name for the gauge. This is the name that will display as the report view. The name must be unique among all gauge views for the report.
Range	Enter minimum and maximum values to set the range for the gauge.
Number of scale markers	Check the types of markers (ticks) you want to display on the gauge. Note: If the gauge has a small range and a large number of scale markers, the markers might overlap.

Field	Explanation
Scale options	<p>Check one, any, all or none of Show Labels, Show Half Ticks, and Show Quarter ticks.</p> <ul style="list-style-type: none"> Labels are the numbers that appear above each tick or half tick. Half ticks are lines that appear between each marker. Quarter ticks are lines that appear between each half tick.

Optionally, you can define threshold values for the gauge so that ranges of the gauge are filled with different colors when events or activities are greater or less than values you define. If you do not set thresholds, the gauge will be black and white.

Thresholds are listed in order of severity. The most severe threshold is at the far right of the gauge.

Figure 33: Gauge Sample



Note:

- Configure thresholds so that the most severe threshold is at the far right of the gauge and so that they do not overlap such that a more important threshold is not overwritten by a less important threshold. For example, if it is a "major" problem when a value is less than 30, then it cannot be a "warning" if the value is less than 20. In this case, a value of 19 will trigger the "major" threshold and will not display as a "warning."
- You cannot make Warning a higher severity than Critical.
- The highest "less than" threshold value should not be higher than the lowest "higher than" threshold value.

To display thresholds on the gauge, complete the Thresholds fields as follows:

- Level:** Check one, several, all, or none of the following:
 - Critical* displays as red.
 - Major* displays as orange.
 - Minor* displays as yellow.

– *Warning* displays as blue.

- For each Level, select a **Direction**: Options are Greater than and Less than.
- For each Level, select a **Value**. Values must be numbers.

Note:

- You cannot specify a range for a Normal threshold. Any values in the bottom range that are not specified display as Normal (Green). For example, if you set Warning to be greater than 20 and your minimum range is 0, then 0 - 19 display as green.
- The sample gauge updates along with your changes unless there is an error in your settings. Once you resolve the error, the sample gauge will update. The **Save** buttons are also disabled until any errors are resolved.
- If you do not see the change immediately, click elsewhere on the page.

Each gauge that you design and save becomes available in the [Views Editor \(page 77\)](#).

To see the gauge, run the report and select the Gauge from Report Viewer, or create a Save As for the report's Gauge View and add it to a dashboard. (See [Add a Report \(page 32\)](#) under Dashboards help.)

Actions on this page:

- **Save As** creates a new gauge based on the gauge you have opened. You must enter a new name for the Save As version of the gauge.
- **Save and Close** saves the gauge, closes the Gauge Editor, and returns you to the Views Editor.
- **Save** saves the gauge and keeps the page open so that you can refine the values.
- **Refresh** refreshes the page to show changes another user might have made to this gauge.
- **Cancel** cancel changes and closes the Gauge Editor.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Export to Excel

Click the **Export** button in a generated report grid to save the report as an Microsoft Excel xls file that you can download and save locally.

The report grid is exported exactly as it is displayed in Unified IC, with thresholds applied. The only exception is data shown in HH:MM:SS format. You have the option of exporting this data as integer values so that it can be used in Excel formulas.

Microsoft Excel must be installed on the computer from which you launch the browser.

Click the **Export** icon.

If	Then
Excel is not installed on the system from which you launched the browser to sign in to Unified IC.	You see an error message.
If Excel 2003 is installed on the system.	The Excel report document opens in a new browser window.
If Excel 2007 is installed on the system.	<p>A dialog box opens, giving the option to Open or Save.</p> <p>Click Open to open the Excel report document in a new browser window.</p> <p>Click Save and follow prompts to download and save the file.</p>

Exporting reports to Excel for SSL users.

-
- Step 1** Go to **Start > Run REGEDIT**.
 - Step 2** In the Registry Editor window navigate to the folder **HKEY_CURRENT_USER > Software > Microsoft > Windows > CurrentVersion > Internet Settings**
 - Step 3** Right Click **Internet Settings** and select **New > DWORD value(32-bit)**.
 - Step 4** Rename the New value#1 as BypassSSLNoCacheCheck.
 - Step 5** Double click on BypassSSLNoCacheCheck to open the **Edit DWORD Value** dialog.
 - Step 6** In the **value data** field enter value 1 and Click **OK**.
 - Step 7** Close and Restart Excel. You do not need to restart windows.
-

For more information on this settings, see <http://support.microsoft.com/kb/815313>.

To print a grid, a gauge, or a chart, click the Print icon on the report toolbar or in the report popout.

Long report grids print on multiple pages.

Wide report grids are truncated and might require you to:

- Use [Grid Editor \(page 81\)](#) to make some columns invisible.
- Set the printer to Landscape mode.
- Use legal-sized paper.
- [Export to Excel \(page 101\)](#).

Reports and TimeZones

Four timezones are configured in Unified IC:

Server. A timezone is defined during installation by the person who runs the installation wizard.

This is the server timezone. It does not affect reports. The server administrator can view and can change the server time zone using these CLI commands: show timezone and set timezone.

Data Source.

The data source timezone is defined when the data source is configured. It is the timezone of the database. See [Create/Edit a Data Source \(page 41\)](#). Reports use this timezone.

Report.

The time defined in the report filter.

As a best practice, if your call center spans several timezones and if you intend to compare reports, run historical reports using the absolute date range and a specific time period.

Figure 34: Absolute Date Range

DateTime (DateTime)

☐ Relative Date Range ☒ Absolute Date Range

From (mm/dd/yyyy): 2/2/2009 To (mm/dd/yyyy): 02/04/2010

☒ Only show results that are within a specific time period

From: 12 00 AM To: 11 59 PM

User.

The user's timezone, as set on his or her [User Information Page \(page 156\)](#).

A user in New York City, when asked by a colleague to review a report run in the China office, would access her User Information page, change her timezone to match that of her colleague, and then run the report using the same absolute date range.

Timezone considerations for Report

The system considers all the time specific data that the user enters as local to user timezone. The system then converts this time to data source timezone when the filter query is formed.

Similarly the system considers all the time specific data that it fetches from data source as local to data source. The system then converts this time to user timezone before displaying the date and time in the report data.

However if the user or data source does not have a timezone set, then the timezone considered is of the Cisco Unified Intelligence Center server. Note that the system performs these conversions only after the timezone normalization at data source level has happened.

Consider the following example in which the user enters date and time value in filter as 1/1/2010 12:00:00 AM. Depending on the timezone setting, the system converts the timezones in the filter query as shown below:

filter value = 1/1/2010 12:00:00 AM		Data source Timezone	Data source Timezone
		<i>When set (+2 GMT)</i>	<i>When not set (Add Cisco Unified Intelligence Center server Timezone)</i>
User Timezone	<i>When set (+11 GMT)</i>	Thursday, December 31, 2009 3:00:00 PM EET Original Time - User Timezone offset (+11 GMT) + Datasource Timezone (+2 GMT) To Original Time, -9 (-11 + 2) hrs added	Thursday, December 31, 2009 6:30:00 PM IST Original Time - User Timezone offset (+ 11 GMT) + Cisco Unified Intelligence Center server Timezone (+5.30 GMT) From Original Time, 5.30 (-11 + 5.30) hrs subtracted
User Timezone	<i>When not set (Subtract Cisco Unified Intelligence Center server Timezone)</i>	Thursday, December 31, 2009 8:30:00 PM EET Original Time - Cisco Unified Intelligence Center server Timezone(+5.30 GMT) + Datasource Timezone offset (+2 GMT) From Original Time, 3.30 (-5.30+2) hrs subtracted	Friday, January 1, 2010 12:00:00 AM IST To Original Time, 0 (-5.30 + 5.30) hrs added

Consider the following example in which the database has a date and time value as 1/1/2010 12:00:00 AM. Depending on your timezone setting, the system converts and displays the timezones in the report data as shown below:

Database value = 1/1/2010 12:00:00 AM		User Timezone	User Timezone
		<i>When set (+2 GMT)</i>	<i>When not set (Add Cisco Unified Intelligence Center server Timezone)</i>
Data source Timezone	<i>When set (+11 GMT)</i>	Thursday, December 31, 2009 3:00:00 PM EET Original Time - Datasource Timezone offset (+11 GMT) + User Timezone (+2 GMT) To Original Time, -9 (-11 + 2) hrs added	Thursday, December 31, 2009 6:30:00 PM IST Original Time - Datasource Timezone offset (+ 11 GMT) + Cisco Unified Intelligence Center server Timezone (+5.30 GMT) From Original Time, 5.30 (-11 + 5.30) hrs subtracted
Data source Timezone	<i>When not set (Subtract CUIC server Timezone)</i>	Thursday, December 31, 2009 8:30:00 PM EET Original Time - CUIC Server Timezone(+5.30 GMT) + User Timezone offset (+2 GMT) From Original Time, 3.30 (-5.30+2) hrs subtracted	Friday, January 1, 2010 12:00:00 AM IST To Original Time, 0 (-5.30 + 5.30) hrs added

Filters and Daylight Savings Time

Filter fields take date and time value from the user time zone, as entered in the Timezone field of the user.

The timezone value is automatically updated when the daylight savings time change occurs.

Note: The DST (Day Light Saving Time) changes considered during conversion will be the effective DST configured on the server at the time of running report.

Reports and Daylight Savings Time

Report fields that show date or time take the value from the database timezone, as entered in the Timezone field of the Data Source. See [Create/Edit a Data Source \(page 41\)](#).

The data source timezone value is automatically updated when the daylight savings time change occurs.

If you generate a report that spans dates before and after the daylight savings time change, then the date/time fields for days before DST will reflect that time, and the date/time fields for days after DST will reflect the DST time.



Chapter 6

Report Definitions

Each report has a Report Definition, which represents the manner in which data is retrieved from the data source for that report template.

In addition to specifying the manner in which data is retrieved (by a simple MS SQL query, by a stored procedure query, or by an anonymous block query), a Report Definition contains the dataset that is obtained. This includes the fields, the filters, the formulas, the refresh rate, and the key criteria field for the report.

Note: There is a stock Report Definition for each Cisco stock report template.

When you *create* a custom report template from scratch, you must first select its Report Definition. If the custom template requires a custom Report Definition, you must create the Report Definition before you create the template.

Access to the Report Definitions interface is controlled by license type and user role. You must have a premium license and a Report Definition Designer user role to open this drawer.

Users with a standard license cannot access the Report Definition drawer to create or edit Report Definitions. They can, however, see and select from a list Report Definitions when they *create* a report. The Report Definitions they can see are the stock Report Definitions and any Report Definitions for custom reports that were created or were imported into their database.

Users with a premium license

- With Report Definition Designer user role, can access the Report Definition drawer.
- Can view and Save As the stock Report Definitions; for example, to change the refresh rate, and to create new filters and formula fields in the Save As copies.
- Can create new Report Definitions.

Note: All actions on the Report Definitions interface are based on User Role and on the user's object Permissions for report definitions and for Categories. See [About Permissions \(page 167\)](#).

See also:

[Troubleshooting Report Definitions](http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0) (http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0)

This chapter contains the following topics:

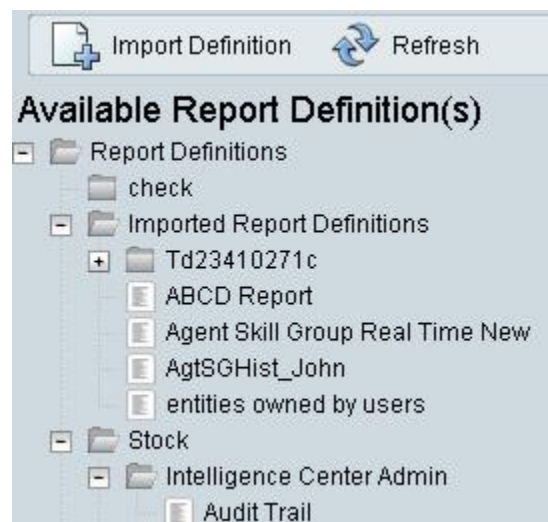
- [Available Report Definitions Page, page 108](#)
- [Create a Report Definition, page 109](#)
- [Save As, page 110](#)
- [Edit Report Definition, page 110](#)
- [Unified IC SQL Syntax , page 127](#)
- [Working with Drilldowns, page 129](#)
- [Rename a Report Definition, page 132](#)
- [Delete a Report Definition, page 133](#)
- [Import a Report Definition, page 133](#)
- [Export a Report Definition, page 134](#)

Available Report Definitions Page

This page opens when you click the Report Definitions drawer. Use it to manage (edit, create, delete, and rename) Report Definitions. It shows the available Report Definitions, organized in categories. Categories are represented by folder icons. Report definitions are represented by page icons.

The default *Report Definitions* Imported Report Definitions under it, in an expandable tree format, are all the subcategories and Report Definitions that are defined. These include the Stock folder, with its subfolder of UCCE Report Definitions.

Figure 35: Available Report Definitions



You can rename the default *Report Definitions* category. You cannot delete it or move it.

Looking at the various stock Report Definitions can be helpful when you design your own.

Actions from the Report Definitions page:

- **Open a Report Definition** - click the Report Definition icon.
- **Import Definition** - Click Import Definition to open the [Import Definition \(page 133\)](#) page.
- **Refresh** - Click this to update and see reflect changes anyone has made to add, modify, or delete Report Definitions or categories.

- **Work with Categories**

Actions are:

- [Create Sub-category \(page 181\)](#) from a category or a sub-category.
 - [Delete Sub-category \(page 182\)](#)
 - [Rename Sub-category \(page 182\)](#)
 - Set Permissions for the sub-category
- **Create** a Report Definition. To do this, right-click a category or sub-category and select Create Report Definition. See [Create Report Definition \(page 109\)](#).
 - **Edit** a Report Definition. To do this, right-click a Report Definition and select Edit. See [Edit Report Definition \(page 110\)](#).
 - **Delete** a Report Definition. To do this, right-click a Report Definition and select Delete. See [Delete a Report Definition \(page 133\)](#).
 - **Rename** a Report Definition. To do this, right-click a Report Definition and select Rename. See [Rename a Report Definition \(page 132\)](#).
 - **Export** a Report Definition. To do this, right-click a Report Definition and select Export. See [Export a Report Definition \(page 134\)](#)
 - **Help** - opens online help for the page.
 - **Drag and Drop** - you can [drag and drop \(page 182\)](#) Report Definitions and sub-categories.

Create a Report Definition

This page opens when you right-click a category or sub-category and select **Create Report Definition**.

To create a Report Definition:

1. Enter a Name.
2. Enter a Description.

3. Set the default permissions for My Group and for the All Users group.
4. Click **OK**. This opens the [Edit Report Definition \(page 110\)](#) page.

Note:

- Custom Report Definitions are not supported by Cisco Systems.
- Unified IC documentation does not explain how to form SQL queries, and your support provider is not prepared to troubleshoot queries.
- Customers are responsible for the performance of their queries and are advised not to run queries against large datasets.

Save As

Use this page to clone (save as) an existing Report Definition with a new name and to specify the Report Definition category under which you want it to display.

Table 15: Fields on the Save As page

Field	Explanation
Name	The new name for the Report Definition
Description	Enter a description for the Report Definition.
Save To	Navigate to, and click the radio button for, the category or subcategory for the report.
Default Permissions	Define the permissions for My Group and for the All Users group.

Actions on this page:

- **OK** - saves your entries and closes the page.
- **Cancel** - closes the page without saving your entries.

Edit Report Definition

This page opens when you create a new Report Definition and when you right-click an existing Report Definition and select **Edit**. This page provides a list of default formatting masks.

Note: A change to a Report Definition affects all reports that use it.

Tabs on this page are [Data Source \(page 111\)](#), [Fields \(page 117\)](#), [Parameters \(page 123\)](#) (used for Anonymous Blocks and Stored Procedures only), and [Properties \(page 126\)](#).

All tabs display a message noting that reports will be affected if you edit a Report Definition.

The available formats depend on the data type of the field as set in [Edit Field Properties \(page 121\)](#). For example, for numeric values the dropdown offers all possible display formats for numeric values. Selecting (Custom) from this list applies the format string supplied in the Custom Format String to the value returned. Following are the custom format supported:

1. **String Datatype:** Used to add a string before the string value. For example, if there is a String field called *name* where it lists the name of all the doctors and if you want to append *Dr.* to the doctors' names in report, then use **custom format** for this field and enter the value *Dr.* The resulting report displays all names as *Dr. XXXX*.
2. **Decimal Datatype:** Unified IC supports decimal data formatting in accordance with the java decimal formatting rules.

Following are few examples of custom formats. The # symbol indicates a digit or nothing if no digit present The digit shows a digit or 0 if no digit present:

Data	Format	Value
123	123456	000123
123456.789	###,###.###	123,456.789
123456.789	###.##	123456.79
123.78	123456.789	000123.780
12345.67	\$###,###.###	\$12,345.67
12345.67	\$1234.56	\$12345.67
123	0.0E+0	1.2E2
123	0.0E+00	1.2E02
123	Rs 1234	Rs 123a

Data Source Tab

This tab specifies the query information used for the Report Definition.

Database Queries, Stored Procedures, and Anonymous Blocks are all ways to retrieve data from a database. Most stock templates are based on Database Queries. Two stock templates are based on Anonymous Blocks. No stock templates are based on Stored Procedures.

Complete this tab as follows:

-
- Step 1** Select the **Query Type** from these options: Database Query, Anonymous Block, and Stored Procedure.
- The screen repaints based on the Query Type you select.
- Step 2** For all Query Types, select the data source for the report definition from the **Data Source** dropdown. This dropdown shows all data sources that are configured.

Selecting a Data Source populates the **Data Source Type** and the **Data Source Status** fields. If the Data Source Status shows *Offline*, then troubleshoot the connection.

Figure 36: Report Definition Data Source Tab

Data Source Fields Parameters Data Settings

✱ = Required fields

✱ Query Type Database Query

✱ Data Source UCCE Data Source

Data Source Type Microsoft SQL Server

Data Source Status ☒ Online

✱ Query

```
SELECT
Call_Type.EnterpriseName,
Call_Type_Real_Time.CallTypeID,
Call_Type_Real_Time.DateTime,
Year = Datepart(yy, Call_Type_Real_Time.DateTime),
Month = Datepart(mm, Call_Type_Real_Time.DateTime),
```

- Step 3** Complete the tab based on the query type you have selected: [Database Query \(page 112\)](#), [Anonymous Block \(page 113\)](#), or [Stored Procedure \(page 115\)](#).
- Step 4** For Anonymous Blocks and Stored Procedures, open the [Parameters \(page 123\)](#) tab, where you can [Edit Parameter Properties \(page 124\)](#).
- Step 5** For Database Queries, Anonymous Blocks and Stored Procedures, open the [Fields \(page 117\)](#) tab, where you can [Edit Fields Properties \(page 121\)](#) and create Drilldowns.

Actions on this page:

- **Save** - saves the values you enter on the page. Save is enabled for custom Report Definitions. You cannot edit and then save a stock Report Definition.
- **Save As** - Opens the [Save As \(page 110\)](#) dialog (prompting for name, description, category, and permissions), and saves a copy of the Report Definition.
- **Cancel** - closes the page without saving your changes.
- **Refresh** - refreshes the page.

Database Query

Most stock templates are built from Database queries.

Database queries populate the Fields tab and the Properties tab but not the Parameters tab.

To complete the [Data Source tab \(page 111\)](#) for a database query:

1. Use the **Query** field to review or edit the SQL query for an existing report or to build a SQL query for a new report.

You can type the query directly or paste a query you create in Query Analyzer or similar tool.

2. Click **Create Fields** to validate the query syntax and to populate the [Fields \(page 117\)](#) tab. Each field represents a column in the database.

Anonymous Block

Anonymous Blocks are queries with both parameters and fields. Two stock templates are built from Anonymous Blocks. They are the Agent Historical All Fields and Agent Not Ready Detail reports.

To complete the [Data Source tab \(page 111\)](#) for an anonymous block:

1. In the **Anonymous Block Field**, enter or paste the anonymous block.

Here is a sample anonymous block: `select SkillTargetID, EnterpriseName from Agent where SkillTargetID = :paramName`

Parameter names in the anonymous block must have a colon followed by the rest of the parameter name; for example `:paramName` or `:anotherParamName`. The colon at the beginning of the parameter name will be substituted with the at sign (@).

2. Click **Create Parameters** to create parameters.

You see a message that the parameters were successfully created.

A panel displays under the **Create Parameters** button. This panel displays the parameter name, and for each name shows Data Type 'String' and Value 'test'.

3. For each parameter in the panel, select the correct Data Type.

A sample value for this data type will appear in the Value textbox. This value will be pasted into the anonymous block instead of the parameter name to validate it and create fields.

4. Click **Create Fields** to validate the query and create fields.

You see a message that the fields were created.

5. Open the Fields tab to review them.

For example:

- Enter this anonymous block

Figure 37: Anonymous Block example 1 of 5

Anonymous Block

```
select SkillTargetID, EnterpriseName from Agent where SkillTargetID = :paramName
```

- Click Create Parameters:

Figure 38: Anonymous Block example 2 of 5

Create Parameters The parameters were successfully created. Update the data type and their values.

- Set the Data Type:

Figure 39: Anonymous Block example 3 of 5

Parameters		
Name	Data Type	Value
@paramName	DECIMAL	'12346'

- Click Create Fields:

Figure 40:

Create Fields The query validated successfully, and the field(s) were created.

- Open the Fields tab:

Figure 41: Anonymous Block example 4 of 5

Data Source	Fields	Parameters	Properties
Fields			
Name starts with		Filter	Clear
Name	Display Name	Type	Data Type
<input type="radio"/> EnterpriseName	EnterpriseName	Query Field	STRING
<input type="radio"/> SkillTargetID	SkillTargetID	Query Field	DECIMAL

- Open the Parameters tab:

Figure 42: Anonymous Block example 5 of 5

Data Source	Fields	Parameters	Properties
Parameters			
Name	Display Name	Data Type	
@paramName	@paramName	DECIMAL	

Stored Procedure

Stored Procedures are stored in the data source. No stock templates are built from Stored Procedures.

To complete the [Data Source tab \(page 111\)](#) for a stored procedure:

1. In the **Stored Procedure** field, enter a name for the Stored Procedure that you have already created for your data source.

Note:

- Unified IC supports stored procedures for both MS SQL and Informix data sources.
- The database user for the data source containing the Stored Procedure must have permissions to execute the Stored Procedure.

2. Click **Create Parameters** to create parameters. You see a message that the parameters were successfully created.

A panel displays under the Create Parameters button. This panel displays the parameter name, and for each name shows the corresponding Data Type and a test Value.

A sample value for this data type will appear in the Value text box. This value will be pasted into the stored procedure instead of the parameter name to validate it and create fields.

3. Click **Create Fields** to validate the query and create fields. You see a message that the fields were created.
4. Open the [Fields tab \(page 117\)](#) to review the results.

For example:

- Complete the fields in Datasource tab

Figure 43: Stored Procedure example 1 of 5

= Required fields

Query Type

Data Source

Data Source Type

Data Source Status ☒ Online

Stored Procedure

- Click Create Parameters:

Figure 44: Stored Procedure example 2 of 5

The parameters were successfully created. Update the data type and their values.

- Set the Data Type:

Figure 45: Stored Procedure example 3 of 5

Parameters		
Name	Data Type	Value
@paramName	DECIMAL	'12346'

- Click Create Fields:

Figure 46:

The query validated successfully, and the field(s) were created.

- Open the Fields tab:

Figure 47: Stored Procedure example 4 of 5

Data Source **Fields** **Parameters** **Properties**

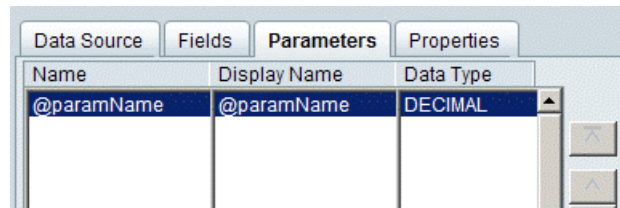
Fields

Name starts with

	Name	Display Name	Type	Data Type
<input type="radio"/>	EnterpriseName	EnterpriseName	Query Field	STRING
<input type="radio"/>	SkillTargetID	SkillTargetID	Query Field	DECIMAL

- Open the Parameters tab:

Figure 48: Stored Procedure example 5 of 5



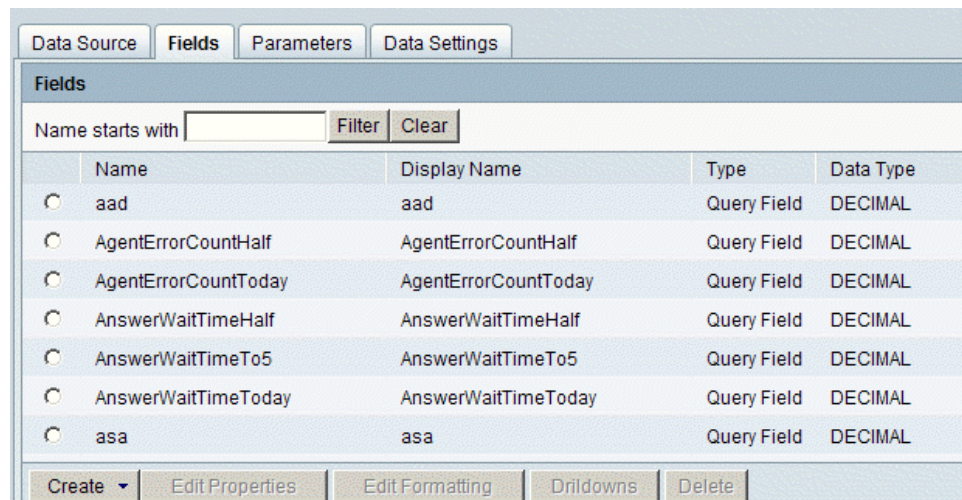
Fields Tab

Use this tab to manage the fields in a Report Definition.

For a new Report Definition, this tab will be empty until you enter the query on the Data Source tab and click **Create Fields**.

For an existing Report Definition, this tab lists the available fields and allows you to create formula and filter fields and to edit field properties and field formatting.

Figure 49: Report Definition Fields Tab



There are three types of fields:

- **Query Fields** Query fields represent a field in a database table. You cannot create or delete a query field.
- **Formula** - These are custom fields that compute and return a value.
- **Filter** - These are custom fields that can appear on the advanced reporting options tab on the Filter page. See [Filtering Reports \(page 61\)](#).

Click the radio button at the left of each field to select that field for editing.

You can [Edit Field Properties \(page 121\)](#) and edit [Field Formatting \(page 122\)](#) for all field types.

Table 16: Rows on this page

Field	Description
Name	The database name of the field.
Display Name	The name of the field as it appears in the report grid.
Type	The type of field (Query Field, Filter Field, or Formula Field).
Data Type	The data type of the field. Note: You cannot change the data type for a parameter.

Actions from this page:

- **Create** - opens a dropdown for selecting the type of field you want to create. Options are [Formula Field \(page 119\)](#) and [Filter Field \(page 118\)](#).
- **Edit Properties** - enabled when a row is selected. Expands the page to reveal [Edit Field Properties \(page 121\)](#).
- **Edit Formatting** - enabled when a row is selected. Expands the page to reveal [Field Formatting \(page 122\)](#).
- **Drilldowns** - enabled when a row is selected. Click to display the All Drilldowns panel where you can view, create, edit, or delete a drilldown for the field.

See [Working with Drilldowns \(page 129\)](#).

- **Delete** - enabled when a row is selected, prompts for a confirmation and then deletes the field.

Note: You can delete format and filter fields only.

- **Save** - saves your changes on all tabs.
- **Cancel** - cancels your changes on this tab.
- **Refresh** - updates the page to show changes another user might have made on the fields tabs.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Filter Field

Create a filter field if you want to add a filtering value to the **advanced filters** tab on the Filter page. See [Filtering Reports \(page 61\)](#).

Filter fields reduce the amount of data that is used to generate a report, They do not display as columns in the generated report.

-
- Step 1** Click **Create** from the [Fields Tab \(page 117\)](#) and select Filter.
- The new filter field is *added to the end of list of Fields. Scroll down the page to locate it.*
- Step 2** Select [Edit Field Properties \(page 121\)](#) and complete the fields to define a required Display Name and Data Type for the field. Complete optional Edit Field Properties fields such as entering the formula syntax, referring to the [User Guide for the Cisco Unified Intelligence Center Reporting Application](#) () and the online help for explanations.
- Step 3** Click **Update** to save the field properties.
-

Formula Field

Create a formula field if you want the report to include a computed field that does not exist in the list of fields.

To create a formula field.

-
- Step 1** Click **Create** from the [Fields Tab \(page 117\)](#) and select Formula.
- The new formula field is added to the end of list of Fields. Scroll down the page to locate it.
- Step 2** Select [Edit Field Properties \(page 121\)](#) and complete the fields to define a required Display Name and Data Type for the field. Complete optional Edit Field Properties fields, referring to the online help for explanations.
- Step 3** Click **Update** to save the field properties.
- Step 4** Scroll up and select [Edit Field Properties \(page 121\)](#) for the formula field.
- Step 5** Click **Update** to save the field formatting.
-

Best Practices for Formulas

A formula field is an expression that uses operators to perform a calculation on database fields. You can define a formula field to appear as a column in a report. You can also create a formula for a column footer.

The operators you can use in a formula are the basic arithmetic operators: + for addition, - for subtraction, * for multiplication, / for division, and () parentheses for grouping operands..

The database field values you can use in a formula can be any data type (Boolean, Date, Decimal, or String).

Note that:

- Each value in a formula represents a single field in the database. For example, to create a formula that adds AbanHold and AbanRing, the syntax must be \${AbanHold} + \${AbanRing}.

If you enter $\${AbanHold + AbanRing}$, the formula will fail because there is no database field named $AbanHold + AbanRing$.

- Dates must be enclosed in double quotes. The system interprets "10/10/2010" as a date. It interprets 10/10/2010 as a mathematical operation. To find the date difference between two date fields, CUIIC provides the formula $DateDiff(\{DateField1\},\{DateField2\})$. This formula compares two date fields and returns the difference of seconds in decimal. If DateField1 is earlier than DateField2, it returns the difference in negative.
- The Key Criteria field cannot be a formula field.
- A formula cannot use other formulas in its formula.
- If you enter a formula in a footer, note that a footer cannot interpret a specific database field. The footer interprets the field name as an array for the database column to which the field belongs. For example, this expression in footer formula $\{FIELD1\} + 1$ is interpreted as $\{FIELD1 : FIELDn\} + 1$.

See also [Examples of Correct and Incorrect Formula Syntax \(page 120\)](#).

Examples of Correct and Incorrect Formula Syntax

Correct Syntax:

- $\{num1\} + \{num2\}$
- $\{num1\} - \{num2\}$
- $(\{num1\}) / (\{num2\}) * (\{num3\})$
- $(\{num1\}) / (\{num2\}) / (\{num3\} * \{num4\}) - \{num1\}$
- $DateDiff(\{DateField1\},\{DateField2\})$
- $\{str1\} + \{str2\}$

You can use + with strings to concatenate them.

Incorrect Syntax:

- $\{str1\} - \{str2\} -$

You cannot subtract strings. You also cannot multiply or divide them.

- $\{str1\} + \{num1\}$

You can add a num and a string only if the database has a null constraint on the number.

- $\{str1 + str2\}$

str1 + *str2* is not a field name.

Edit Field Properties

The editable properties for a field vary, based on whether the field is a Query, Filter, or Formula field.

Figure 50: Report Definitions Edit Field Properties

Edit Field Properties

Click Update Field to keep changes.

✱ = Required fields

Name:

Display Name:

Description:

Data Clause:

Value List:

☒ Allow to show if invisible

☒ Available in Filter

Field Property	For Field Type	Definition
Name	All	The default database name appears in this field.
Display Name	All	By default, the Display Name is the same as the Name. You can edit it. This is the name for the column header by which this field will appear on the report.
Description	All	Enter a description for this field.
Data Type	Formula fields	From the dropdown, select the data type for the field. Options are Decimal, String, Number, Date, and Boolean. This setting determines the options that will be displayed for this field on the Formatting Tab.
Data Clause	Query and Filter fields only	Identifies which column in the dataset has been bound to this field (SQL query and Filter fields only). The SQL Parser uses this value when retrieving data from the database.

Edit Report Definition

Field Property	For Field Type	Definition
		Note: Do not change the data clause.
Value List	Query and Filter fields only	<p>From the dropdown, select the Value List for this field. When a field is associated with a Value List, report users can filter the report with one or more fields from that Value List or its Collections.</p> <p>Note: Only fields of type string and decimal can be associated with a Value List.</p> <p>See Value Lists and Collections (page 135).</p>
Allow to show if invisible	Query and Formula fields only	Check this if the field is to appear on the list of Available fields in the Grid Editor (page 81) . If this is unchecked, the field will not appear in the Available fields panel.
Available in Filter	All	Check this box to add the field to the Advanced Filters tab.
Available fields	Formula	<p>Select a field from the dropdown list and click Insert Field to insert it into the formula textbox.</p> <p>Fields on this list appear by Name and not by Display Name,</p>
Formula	Formula	Enter operators to construct a formula for the fields you have selected.

For reports that use dynamic headers (headers whose content includes dynamic content), provide the SQL field name as part of the header name in the Report definition field properties page. The column name will be surrounded by curly braces so that user can easily find dynamic content within header.

Actions:

- **Update** - saves your Edit Properties selections for that field only. To keep the changes, you must save (or Save As) the Report Definition.
- **Cancel** - closes without saving your changes.

Edit Formatting

You can edit the formatting for Query fields and Formula fields. There are two format options for a field:

Format	<p>Provides a list of default formatting masks.</p> <p>The available formats depend on the data type of the field as set in Edit Field Properties (page 121). For example, for numeric values, the dropdown offers all possible display formats for numeric values.</p> <p>Selecting (Custom) from this list will apply the format string supplied in the Custom Format String to the value returned.</p>
Footer	<p>The formula to use in the footer. Options are None, Avg, Sum, Count, Min, and Custom Formula.</p> <p>See Report Summaries (page 89).</p>

Figure 51: Report Definition Edit Field Format

Click Update Field to keep changes.

Format: Minutes and seconds (hh:mm:ss)

☒ Export as hh:mm:ss string (vs. seconds)

Footer: Custom Formula

Default Custom Footer Formula: SUM({DelayQAbandTime})/SUM({AbanQueue})

Group 1 Custom Footer Formula:

Group 2 Custom Footer Formula:

Group 3 Custom Footer Formula:

Update Field Cancel

Actions:

- **Update** - - saves your Edit Properties selections for that field only. To keep the changes, you must save (or Save As) the Report Definition.
- **Cancel** - closes without saving your changes.

Parameters Tab

Use this tab to edit and reorder the parameters created from a Stored Procedure or an Anonymous Block. The parameters are used as filters when you generate the report.

Figure 52: Report Definition Parameters Tab

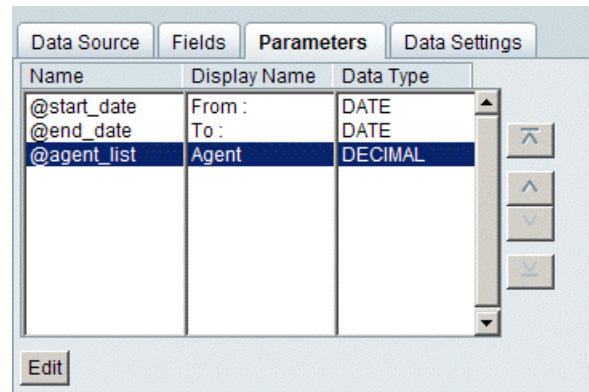


Table 17: Rows on this page

Field	Description
Name	The name of the parameter.
Display Name	The display name of the parameter that a user can modify and that appears in the filter page
Data Type	The data type of the parameter (Date, Decimal, Boolean, or String).

Actions from this page:

- **Edit** - select a parameter and click **Edit** to expand the page to display edit fields. Change these fields to modify the way the parameter is presented to the user for input and passed to the database for processing.
- **Reorder arrows** - select a parameter and click an arrow to move the parameter up one, to the top of the list, down one, or to the bottom of the list. Doing this changes their order on the report filter. See [Filtering Reports \(page 61\)](#).
- **Save** - saves your changes on this all tabs.
- **Cancel** - cancels your changes on this tab.
- **Refresh** - updates the page to show changes another user might have made to this tab
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

If you reorder the parameters, be sure to click the **Save Order** button before leaving the page or your changes will not be saved.

Edit Parameter Properties

The first seven fields on this page are the same for all parameters, regardless of data type.

- Step 1** **Name:** The name of the parameter.
- Step 2** **Display Name:** Change the display (user-friendly) name of the parameter.
- Step 3** **Description:** Enter a description for the parameter.
- Step 4** **Data Type:** You cannot change the data type for a parameter.
- Step 5** **Hard-coded value:** Enter a hard-coded value to be passed as a parameter value when running a report based on an anonymous block or stored procedure report definition. To pass null as a hard-coded value, leave this textbox blank and check Pass NULL for empty string. Entering a hard-coded value will hide this parameter in the filter page.
- Step 6** **Required:** Check or uncheck to indicate if the parameter is required on the report filter.
- Step 7** **Pass Null for empty string:** This field is enabled only if the parameter is not required or has no value. If the parameter is populated, then this field is disabled, and the value is passed.
- Step 8** The remaining fields on this page vary, based on the data type.

For DateTime: select a date format from the dropdown.

Table 18: For Decimal:

Value Delimiter	Select the character to be placed between each value when a value list is passed to the stored procedure/anonymous block
Value List	From the dropdown, select a Value List to associate this parameter with that list.
Quote Values	Check this checkbox to surround the parameter value with two additional single quotes when the value is passed to the stored procedure/anonymous block. The first single quote is used to escape the second single quote.

Table 19: For String:

Value Delimiter	Select the character to be placed between each value when a value list is passed to the stored procedure/anonymous block
Value List	From the dropdown, select a Value List to associate this parameter with that list.
Value Prefix	The value prefix defines how the parameter will appear in the filter.
Quote Values	Check this to surround the parameter value with two additional single quotes when the value is passed to the stored procedure/anonymous block. The first single quote is used to escape the second single quote.

- Step 9** Select **Update Field** - saves your Edit Properties selections for that field only. To keep the changes, you must save (or Save As) the Report Definition.
-

Properties Tab

Use this tab to establish or change data settings for the report template.

Complete this tab as follows:

- Step 1** **Description:** Enter text to describe the data settings.
- Step 2** **Version:** Enter the version of report definition entity currently deployed in CUIC.
- Note:** Version can be composed of decimal point like X.Y. Version should not start or end with a decimal point. Valid version number examples: 8.9 or 11.15.
- Step 3** **Author:** Enter the name of the template provider that has created the entity.
- Step 4** **Key Criteria Field:** For reports based on simple queries, select a key criteria field from the dropdown.
- This field is required if you intend to filter the report with it. See [Associating a Value List with a Report \(page 139\)](#).
- The Key Criteria field is not enabled for reports based on Anonymous Blocks or Stored Procedures.
- Note:** Although users can run a report based on a simple query if the Report Definition does not have a Key Criteria field defined, the report will run with the default filter and might be very large.
- Step 5** **Historical checkbox:** Check this if the report is an historical report. Leave blank for a real-time report.
- Step 6** **Refresh Rate (seconds):** Enter the refresh rate for this report in seconds. This is the rate at which the report is automatically refreshed. The minimum refresh rate is every 15 seconds for real-time reports and every 900 seconds for historical reports. You cannot enter values less than the defaults.
- Step 7** **Historical Key Field:** Enter or modify the historical key field used for the date and time intervals for the report.
- Although historical reports can run if this field is left blank, the report will return all data for all dates and might be very large. Only fields of date format are available in the Historical Key Field drop down list.
- Step 8** **Default Permissions:** Set permissions for My Group and for the All Users group.

Figure 53: Report Definition Data Settings Tab

Use this tab to update the properties for the selected Report Definition.

Required fields

Description:

Version:

Author:

Key Criteria Field:

☐ Historical

Refresh Rate:

Historical Key Field:

Permissions:

My Group			All Users		
<input checked="" type="checkbox"/> Read	<input checked="" type="checkbox"/> Execute	<input type="checkbox"/> Write	<input checked="" type="checkbox"/> Read	<input checked="" type="checkbox"/> Execute	<input type="checkbox"/> Write

Unified IC SQL Syntax

Guidelines:

- You cannot use comments in a SQL query.
- A database query must contain a select statement followed by one or more fields. For example:
SELECT [fields] FROM [tables] WHERE [...]

This sample query: **select CallTypeID, TimeZone from Call_Type_Interval where TimeZone = 240** creates fields fields CallTypeID and TimeZone.

- You cannot use **SELECT***, instead you must list all the fields you want to be returned in a SQL query
- A query which selects calculated fields must use the **as** clause to name the field. If not, the query will be evaluated as invalid. For example, if you have a decimal column **X** in your table **MyTable** and in your query it is selected as **SELECT X + 2 from MyTable**, it will be invalid. To select such calculated fields, you must use the **as** clause: **SELECT X + 2 as Y from MyTable** where Y is the name of the calculated field that you have assigned.
- An Anonymous Block must be a valid SQL statement that returns a result set. It may contain parameters named **:[paramName]**, where a colon is always the first character of the parameter name and **[paramName]** is a remaining part of the parameter name.

The parameter values entered by a user will be substituted into the body of the anonymous block in place of the corresponding parameter names.

- Informix and SQL Server Stored Procedures are supported. Stored Procedures must return a result set. For Stored Procedures, parameters are used to pass the values when making a stored procedure call to the database to obtain the result set.
- Using the Datediff() function in a Where clause can cause performance issues.
- There can be no unnamed fields in a SQL query. Each field needs an alias.
- Alias names must be unique.
- Informix stored procedures must contain a returning statement, and for each datatype in the returning statement, there must be corresponding alias specified with AS.

For example: RETURNING CHAR(32) AS returnID, CHAR(32) AS returnName, INTEGER AS returnRefreshrate, BOOLEAN as returnHistorical; And not: RETURNING CHAR(32, CHAR(32, INTEGER, BOOLEAN; If a user fails to provide an alias, the field name will just be fieldN, where N is the index of unnamed field, such as field1, field2, etc.

- Every SQL query must have a WHERE clause, even if it serves no purpose.
- Informix stored procedure parameter names will be prepended with the 'at' character:
@param1, @param2 ...

Supported data types for fields and parameters are:

- *BIGINT, DECIMAL, DOUBLE, FLOAT, INTEGER, NUMERIC, SMALLINT, REAL, TINYINT*
- *CHAR, LONGNVARCHAR, LONGVARCHAR, NCHAR, NVARCHAR, VARCHAR*
- *DATETIME*
- *BOOLEAN, BIT*

Special Keywords for the SQL Parser (with sample queries):

- **ALL** (SQL Server or Informix) - SELECT ALL CallTypeID from Call_Type_Interval
- **DISTINCT** (SQL Server or Informix) - SELECT DISTINCT CallTypeID from Call_Type_Interval
- **TOP** (SQL Server) - SELECT TOP 5 CallTypeID from Call_Type_Interval
- **FIRST** (Informix) - SELECT FIRST 5 ID FROM CUICDATASETINFO
- **UNIQUE**(Informix) - SELECT UNIQUE NAME FROM CUICGRID

Unified IC supports these aggregate functions for both Informix and SQL Server: SUM, COUNT, MIN, MAX, and AVG.

In cases where a report definition field is an aggregate function (such as *sum(CallsHandled)*), and that field is a key criteria field or an advanced filter, the supported syntax for filter the report is:

```
SELECT (fields)FROM [tables]
WHERE [...]
GROUP BY [...]
HAVING [...] optional
ORDER BY [...] optional
```

Sample query:

```
select CallTypeID, TimeZone, sum(CallsHandled) as total, avg(CallsHandled) as average
from Call_Type_Interval
where TimeZone = 240
group by CallTypeID, TimeZone
having sum(CallsHandled) in(3, 5, 13) and avg(CallsHandled) > 0
order by CallTypeID
```

Working with Drilldowns

Users with the Premium license and access to Report Definitions can create drilldowns.

Drilldowns allow you to create links from one report grid to another so that you can launch a sub-report from within the current report window. You cannot drilldown from or to a chart or a gauge.

You can create a drilldown for any field in a report that is not a grouped field. To determine if a field is a grouped field, open [Grid Editor \(page 81\)](#), then click [Grouping \(page 84\)](#).

There is no limit to the number of drilldowns you can define for a field.

Note:

- If several users have added different drilldowns to a field, the field appears as a hyperlink in the grid view. If a field has more than one drilldown associated with it, clicking it opens a popup where you can select the link you need. If you do not want to drilldown to another report, ignore the drilldown link.
- Once you launch a drill-down report, you can save it as a separate report.

Create a Drilldown

To create a drilldown:

-
- | | |
|---------------|--|
| Step 1 | Open the Report Definition for the report in which you want to create a drilldown. |
| Step 2 | Click the Fields tab. |

Step 3 Locate the field from which you want to drill down.

Step 4 Click **Drilldowns**.

This displays the All Drilldowns panel. It shows any drilldowns that already exist for that field.

Step 5 Click **Create**.

Step 6 Enter a Name for the drilldown.

Step 7 Click the > arrow next to the *Report to Drilldown into* to display the list of reports.

Note: You cannot drill down to or from a report based on an Anonymous Block or a Stored Procedure

Step 8 Select a report by clicking the radio button next to the report name.

This opens a panel showing all the fields in that report.

Step 9 Highlight a field and click **Edit**.

Doing this presents two options:

- *Any value* - Select this to drilldown into the report that shows any value of the field you selected.
- *Filter according to the following criteria* - Select this to drilldown into the report that shows filtered values of this field.

Filter criteria for fields of type *string* are:

- Match field in originating report
- Equal to (value)
- Not equal to (value)
- Matches the pattern

Filter criteria for fields of type *date* are:

- Match field in originating report
- Match date range in originating report (available only if the originating report is a historical report)
- Set date

Filter criteria for fields that are associated with a Value List are:

- Match field in originating report

- Set values

Filter criteria for fields that are of type *boolean* are:

- True
- False

Step 10 Scroll up and click **OK**.

Edit a Drilldown

To edit a drilldown:

Step 1 Open the Report Definition for the report in which you want to edit a drilldown.

Step 2 Click the Fields tab.

Step 3 Locate the field from which you want to drill down.

Step 4 Click **Drilldowns**.

This displays the All Drilldowns panel. It show any drilldowns that already exist for that field.

Step 5 Select a drilldown and click **Edit**.

Step 6 Edit the Name for the drilldown.

Step 7 Click the > arrow next to the *Report to Drilldown into* to display the list of reports.

Step 8 Change the report by clicking the radio button next to the report name.

This opens a panel showing all the fields in that report.

Step 9 Highlight a field and click **Edit**.

Edit the filter values.

Step 10 Click **OK**.

Step 11 Scroll up and click **Save**.

Delete a Drilldown

To delete a drilldown:

Rename a Report Definition

1. Open the Report Definition for the report in which you want to delete a drilldown.
2. Click the Fields tab.
3. Locate the field from which you want to delete a drilldown.
4. Click **Drilldowns**. This displays the All Drilldowns panel. It show any drilldowns that already exist for that field.
5. Select the name of the drilldown you want to delete.
6. Click **Delete**.

Best Practices for Drilldowns

As a best practice, create drilldowns first in cloned (Save As) reports - not in the Cisco stock template reports.

You can drill down from grids only. You cannot drill down from - or to - a Chart view or a Gauge view.

Be aware that you cannot drill down from grouped fields. To determine if a field is grouped:

- Open the [Grid Editor \(page 81\)](#) for the report.
- Click **Grouping**.
- From the [Grouping \(page 84\)](#) dialog box, determine if the field appears in any of the Grouped By fields.

The Drilldown interface does not monitor your selections for Drilldown from and Drilldown into. It is your responsibility to be familiar with the reports and their fields and to understand the business reasons for drilling from one report into another.

Rename a Report Definition

Note: Not enabled for stock Report Definitions.

To rename a Report Definitions, right-click its icon and select **Rename**.

This opens a dialog box with a Rename To field.

Enter a new name (using a maximum of 50 characters) and click **Rename** to proceed.

Click **Cancel** to keep the original name.

Delete a Report Definition

Note: Not enabled for stock Report Definitions.

To delete a Report Definition, right-click its icon and select **Delete**.

Click **Yes** to confirm the deletion. Click **No** to cancel.

Both Yes and No generate another dialog box confirming your action to delete or to cancel the deletion. Click **OK** to close this dialog box and to complete the action.

You can delete a report definition *only if* you have the user role of a **System Configuration Administrator**

Note: You cannot delete a Report Definition if it is referenced by one or more Reports or Value Lists.

Import a Report Definition

Note: Not enabled for stock Report Definitions.

This page opens when you click Import Definition on the [Available Report Definitions Page \(page 108\)](#).

Use it to import custom Report Definition files saved to your computer. Stock Report Definitions are imported automatically with the stock report templates.

You can import a report definition *only if* you have the user role of a **System Configuration Administrator**

To import a Report Definition:

1. Click the Browse button to the right of the File Name (With Full Path) field, and navigate to the Report Definition file.
2. Select the Data Source for this Report Definition from the dropdown.
3. Click the dropdown in the Save To field to select the category in which you want this Report Definition saved.
4. Click **Import**.
5. Return to the Report Definitions page and click **Refresh**. The imported Report Definition displays only after you refresh the page.

Export a Report Definition

You can export a report definition *only if* you have the user role of a **System Configuration Administrator**

To export a Report Definition:

1. Right-click a Report Definition and select **Export** to open the Export Report Definition dialog box, which gives you the option to rename the Report Definition file name.

You can change the name but do not change the file extension.

2. Click **OK** to open the Windows file download dialog box.
3. Click **Save** and navigate to the location where you want to save the report definition.



Chapter 7

Value Lists and Collections

Users with the Value List Collection Designer user role can open the Value List drawer to access Value Lists and Collections.

See also:

[Troubleshooting Value Lists and Collections](http://docwiki-dev.cisco.com/wiki/Troubleshooting_Value_Lists_and_Collections) (http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0)

This chapter contains the following topics:

- [Data Collections, page 135](#)
- [Value Lists, page 136](#)

Data Collections

Unified IC uses Value Lists and Collections as filtering tools to collect and control the data that are available for display in reports.

Value lists are based on database queries and contain all reportable items of the same type, for example, all agents or all skill groups.

Collections are subsets of Value Lists that can be created to control the amount of data shown to specific users and user groups. For example, you could create a Collection of Skill Groups that would display only the Skill groups in a region or line of business. No *stock* collections are installed with Unified IC. Users with permissions to do so can create *custom* collections.

Note: Value Lists and Collections that use collection queries are refreshed every night at midnight (using the server's time zone). The refresh operation is performed on the primary node in a cluster and propagated to other nodes..

Agent and Agent Team collections are created automatically when you implement the Unified CCE User Integration feature. These imported collections are identified as *system* collections, once they are imported from Unified ICM/CCE.

When users run reports, they are presented with Value Lists and Collections by which they can filter reports. The ability to filter by Value Lists or by Collections is determined by Group/User permissions.

See Also

[Value Lists \(page 136\)](#)

[Collections \(page 140\)](#)

[Associating a Value List with a Report \(page 139\)](#)

Value Lists

Value lists contain *all* reportable items of the same type, for example, all agents or all skill groups. Unified IC is installed with stock Value Lists, and users with the Value List Collection Designer User Role can create custom Value Lists.

A Value List is associated with the key criteria field of a report. See [Associating a Value List with a Report \(page 139\)](#).

Once associated with a report, the Value List becomes a filter for that report. See [Filtering Reports \(page 61\)](#).

The ability to filter by Value List or by Collections is determined by User Roles and by Group/User permissions.

Table 20: Rows on this page

Field	Description
Name	The name of the Value List
Data Source	The data source from which the values are retrieved.
Status	The status of the data source. A green checkbox means the data source is online. A red X means it is offline.
Type	<p>The type of Value List: Stock or Custom. Stock lists are added by the installation. Custom lists are created by users with the Value List Collection Designer role.</p> <p>The stock Value Lists are:</p> <ul style="list-style-type: none"> • Agent • Agent Team • Call Type

Field	Description
	<ul style="list-style-type: none"> Enterprise Services Enterprise Skill Groups Services Skill Group Trunk Groups
Description	The description entered for the Value List.

Actions for Value Lists:

- **Filter/Clear** - type one or more characters and click **Filter** to narrow the list. Click **Clear** to remove the filter.
- **Create** - opens the [Create/Edit Value List \(page 138\)](#) page where you can define a new custom Value List.
- **Edit** - enabled when the radio button for a row is selected. Opens the [Create/Edit Value List \(page 138\)](#) page where you can review and edit the properties of a custom Value List. You can edit only the Permissions for a stock Value List.
- **Values** - enabled when the radio button for a row is selected. Opens a box that shows all the values in a list and has a **Refresh Value List** button. See [Display and Refresh Value List \(page 139\)](#).
- **Collections** - enabled when the radio button for a row is selected. Refreshes the Value Lists page to display [All Collections \(page 140\)](#) for that Value list.
- **Delete** - enabled when the radio button for a row is selected. Requests confirmation; then deletes the custom Value List.

Note:

- You cannot delete a stock Value List.
- You cannot delete a custom Value List if it is referenced by a field in the Report Definition.
- You cannot delete a custom Value List that contains Collections.
- **Refresh** - updates the page to show changes another user might have made, such as creating or deleting a Value List.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Create/Edit Value List

Value lists are based on MS SQL Queries that retrieve data for a report.

As a best practice, base custom value lists on queries where the VALUE is indexed in the underlying database. Providing filters on non-indexed columns can have an adverse affect on the performance of the system.

Once defined, Value Lists are kept as static snapshots in the database. They remain exactly as defined until the list is manually refreshed. After configuration changes, you must refresh any Value Lists affected so the new values will be displayed in the list. See [Display and Refresh Value List \(page 139\)](#).

Value Lists are automatically refreshed at midnight.

Table 21: Rows on this page

Field	Description
Value List Name	Enter the name of the Value List.
Version	Enter the version of value list entity currently deployed in CUIC. Note: Version can be composed of decimal points. Version should not start or end with a decimal point. Valid Version number examples: 8, 9.0 or 11.15
Type	Types are Custom or Stock.
Data Source	From the dropdown, select the data source from which the values are retrieved.
Description	Enter an optional description of the Value List.
Value List Query	Enter the SQL query for the Value List. Then click Validate . The query must return an ID and a VALUE.
Collection Query	Required only for Collections of the type Identifier. Enter a SQL query to set up the Collection Identifier. For example: <code>SELECT Skill_Group.SkillTargetID AS ID, Skill_Group.EnterpriseName AS VALUE FROM Skill_Group where Skill_Group.SkillTargetID=<COLLECTIONIDENTIFIER> ORDER BY Skill_Group.EnterpriseName ASC</code> When the query is run, it takes the value from the Collection Identifier on the Create/Edit Collections Page (page 140) .
Default Permissions	View or edit the permissions for My Group and for the All Users group. See About Permissions (page 167) .

Actions from this page:

- **Validate** - validates the syntax of the SQL query.

- **Save** - saves the Value List.
- **Cancel** - cancels your entries on the page and does not save the Value List.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Display and Refresh Value List

Select any Value List from the [Value Lists \(page 136\)](#) page and click the **Values** button.

This opens a new window that displays the values of all the items that are called by the Value List.

Click **Refresh Value List** to update the list to display new values that have been configured. A message appears, indicating that the list is being refreshed.

For example, if a new Agent Team has been created in Unified ICM/CC Configuration Manager, the Agent Team Value List will include a collection for that team after you refresh.

Associating a Value List with a Report

Value Lists (and their collections) are properties of the key criteria field of the Report Definition. Follow these steps to identify the key criteria field and its Value List.

-
- Step 1** If the Report Definition is based on a simple query, identify the key criteria field for a report on the Report Definition [Properties tab \(page 126\)](#). The key criteria field is required and is selected from a dropdown on the Properties tab.
- Locate the field on the Report Definition Fields tab and click [Edit Field Properties \(page 121\)](#).
- Step 2** If the Report Definition is based on an Anonymous Block or a Stored Procedure, identify the parameter with which you want to associate a Value List.
- Select the parameter on the Parameters tab and click **Edit** to display the Edit Parameters field.
- Step 3** In the Edit Field / Edit Parameters panel, locate the Value List dropdown. In stock report templates, this field is populated with the stock Value List for the Report Definition. In custom Report Definitions, you can select a Value List from the dropdown.

Once you have associated the key criteria field or the parameter with a Value List, the report user sees that Value List or Collection on the Basic Filters tab provided he or she has Execute permission for the Value List or Collection.

Note: Only fields of type string and decimal can be associated with a Value List.

Collections

Collections are subsets of Value Lists that can be used to control the amount of data that users can select to populate a report.

Value lists typically contain *all* the items in the enterprise (for example, all Skill Groups) whereas Collections are used to narrow the scope of data returned in the selection list.

For example, you could create a Collection that would display only the Skill Groups in a region or line of business.

When you use the UCCE User Synchronization feature, the Agent and Agent Team Value Lists are populated with collections for all agents and agent teams that were imported for all Unified ICM supervisors. See [Collections from UCCE User Integration \(page 142\)](#).

The ability to filter by Value Lists or by Collections is determined by Group/User permissions.

All Collections

The **All Collections** panel displays when you select a Value List and click **Collections**.

Doing this extends the Value List page so that it displays All Collections (if any) for that Value List. The collections are presented in two panels: Collection Name and Collection Type.

Note: Collections are imported by UCCE User Integration are called System collections, and they cannot be deleted or modified, as they are pulled from Unified ICM configuration data.

Actions for Collections

- **Create** - click this to open the [Create/Edit Collection Page \(page 138\)](#).
- **Edit** - select a collection name and click this to open the [Create/Edit Collection Page \(page 138\)](#). Disabled for System collections imported by UCCE User Integration.
- **Delete** - select a collection and click this to display a message asking you to confirm the deletion. If you delete a Collection, it no longer appears as a filtering option for a report. Disabled for System collections imported by UCCE User Integration.
- **Populate Values** - This button is enabled only for Collections of Type Identifier and Wildcard. Disabled for System collections imported by UCCE User Integration.
- **Show Values** - select a collection and click this to see all the values in that collection; for example, to see all the agents in an Agent Team collection.

Create/Edit Collection Page

Use this page to create a collection or to edit an existing one.

Table 22: Rows on this page

Field	Description
Collection Name	Enter the name of the Value List.
Description	Enter an optional description of the Value List.
Collection Types	<p>From the dropdown, select</p> <ul style="list-style-type: none"> • Identifier • Wildcard • Values <p>See Collection Types (page 142).</p>
Identifier	<p>This field displays if you select the Collection Type of Identifier. Enter a value for identifier you want the collection to retrieve in the Collection Query.</p> <p>For this type of Collection to succeed, the Value List must have a Collection Query on the Create/Edit Value List Page (page 138). For instance, if you needed to create Collections on the Agent Value list for each supervisor, you could enter their <i>SupervisorSkillTargetID</i> in this field to populate the Collection from the awdb tables.</p>
Values	<p>These fields display if you select the Collection Type of Values.</p> <ul style="list-style-type: none"> • Search fields - enter text in these fields to move directly to a value in the Available or Selected panel that begins with that string. • Available panel - show all values that are available to be included in the collection. • Selected panel - show values that are currently included in the collection. • Arrow buttons (<, >, <<, and >>) - Use to move values between the Available and Selected panels.
Wildcard	This field displays if you select Wildcard as the Collection Type. Enter a string to create a collection that includes that string.
Default Permissions	View or edit the permissions for My Group and for the All Users group. See About Permissions (page 167) .

Actions on this page are:

- **Save** - saves the collection and returns you to the Value List page.
- **Cancel** - does not save the collection, and returns you to the Value List page.
- **Help** - opens online help for Create/Edit Collections.

Collections from UCCE User Integration

If you choose to implement UCCE User Integration, the stock Agent and Agent Teams Value Lists are updated with collections of agents and agent teams that are automatically created from the synchronization.

The collections that are imported from the synchronization are identified as *system* collections and do not affect any *custom* collections you might have created for the Agent or Agent Teams Value Lists.

Supervisors who are imported with UCCE User Integration become Unified IC Dashboard Designer and Report Designer Users. As Report Designer Users, they have read access for the Value List drawer and automatically are granted Execute permission for the Agent and Agent Team collections for which they are supervisors.

All imported Supervisors have Read permission for *all* Value Lists. However, for the imported team collections under the Agents and Agent Teams Value Lists, only the Supervisors for *those teams* have Read permission to those Collections.

The *system* collections for Agent and Agent Team that are created by UCCE User Integration are distinguished from the *custom* Agent and Agent Team collections in that you cannot edit, delete, or modify the system collections.

Collection Types

Collections are built according to the Collection Type you choose, as follows:

Identifier

When you create an **Identifier** Collection, you define one identifier value on the Add/Edit Collection Page. That value is a database identifier for a specific object; for example, a skill group or a supervisor.

When the Populate Values action occurs, the collection query uses *that* identifier value to retrieve items from the database and to populate the collection. The Collection filter will contain *only* the returned values for that identifier.

Identifier is the most restrictive collection type. Use it, for example, to build a collection of one skill group.

Values

When you create a **Values** Collection, you manually choose from a list of possible values to include in the collection. All items that you select are part of the Collection filter. Values collections are not updated automatically by the system. The only way to update them is by using the collection interface.

A Values collection is less restrictive than an Identifier collection. Use it, for example, to build a collection of several skill groups.

Wildcard

When you create a **Wildcard** Collection, you define a wildcard string that is used to identify which items belong to the collection. When the Populate Values action occurs, all items are compared against the wildcard pattern. If they match the pattern, then they will be part of the collection, otherwise, they will not be part of the collection.

Wildcard is the least restrictive collection. Use it, for example, to build a collection of all skill groups that begin with a certain string.

Wildcard collections use java regular expressions. Some simple examples of regular expressions are included below. Note that the expressions are case-sensitive, and that 'character' is alphanumeric.

- **Exact match:** To match one item, enter the item you want in the Wildcard field. For example: *Agent_10*.
- **Any character:** Specifying "." as part of the pattern will match any character. For example: the pattern "*p.g*" will match "*p*" followed by any other single character and then a "*g*" character: *pig, pag, peg, ptg*.
- **List of valid characters:** Use brackets [] to specify a list of valid characters. For example: the pattern "*p[ie]g*" will match "*p*" followed by an "*i*" OR an "*e*" character and then a "*g*" character. For example, *pig, peg*.
- **Negation:** Using a caret ^ specifies that the pattern can contain any character except the specified characters. For example: the pattern "*p[^ie]g*" will match "*p*" followed by anything except an "*i*" or "*e*" character and then a "*g*" character. For example, *pag, pbg*.
- **Range:** Use brackets and a range to specify a range of valid characters. For example, the pattern "*p[0-9]g*" will match "*p*" followed by 0,1,2,3,4,5,6,7,8, or 9 followed by a "*g*" character: *p0g, p1g, p2g, p3g, p4g, p5g, p6g, p7g, p8g, p9g*.
- **Zero or more match:** Specifies that the preceding expression will be repeated 0 or more times. For example, the pattern "*p.*g*" will match the character "*p*", followed by 0 or more characters, followed by a "*g*" character: *pg, pig, peg, piig, peeg*.
- **One or more match:** specifies that the preceding expression will be repeated 1 or more times. For example, the pattern "*p.+g*" will match the character "*p*", followed by 1 or more characters, followed by a "*g*" character: *pig, peg, piig, peeg*.
- **Escape character:** Specifies that the character following the backslash character should not be interpreted. This allows brackets, periods, and other characters to be part of the pattern. For example: the pattern "*p\[ie\]g*" match "*p*" followed by a "*[*", followed by a "*i*", followed by an "*e*", followed by a "*]*", and then followed by a "*g*" character: *p[ie]g*.

For more information, please refer to Java Regular Expressions documentation for more examples and how to build more complex patterns.



Chapter 8

Scheduler

You can automate the generation of reports on a regular and recurring basis by setting up a schedule.

You can configure scheduled reports in the following ways:

- To run at predetermined times
- To be automatically sent to e-mail recipients
- To be added to the dashboard
- To be saved to remote location

Scheduling lets you run large dataset reports *once* to be sent to, and viewed by, *many users*.

Click the Scheduler drawer in the left panel to open the [Schedule List \(page 146\)](#). Only users with Report Designer and System Configuration Administrator roles are allowed to access the Scheduler drawer.

- System Configuration Administrators can perform all scheduler function on any reports. They can read, edit and run any scheduled report and can create a schedule for any report.
- Report designers can see the list of scheduled reports for which they have READ permission. Report designers can create a schedule only for those reports that they created or for which they have EXECUTE permission.

Note:

- READ means being able to see the scheduled report on the Schedule List. EDIT means being able to select the scheduled report on the Schedule List and Edit, Delete, Enable, or Disable it. EXECUTE means being able to select the scheduled report on the Schedule List and perform the **Run Now** operation.

- **Configure Email Settings!**Scheduled reports can be sent by email only if the email server has configured in the Administration Console. The administrator does this in **Cluster Configuration > Reporting Configuration > Report Scheduler Email Settings**.
- All actions on the Scheduler interface are based on User Role and on the user's object Permissions for schedules. See [About Permissions \(page 167\)](#).

See also:

[Troubleshooting Report Schedules](http://docwiki-dev.cisco.com/wiki/Troubleshooting_Report_Schedules) (http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0)

This chapter contains the following topics:

- [Schedule List, page 146](#)
- [Scheduler Create/Edit , page 148](#)
- [Daylight Savings Time and Scheduled Reports, page 151](#)

Schedule List

This page opens when you click the Scheduler drawer.

System Configuration Administrators can create, review, and manage all report schedules.

Report Designers can create, review, and manage all report schedules that they own. Report Designers can also create schedules from the [Available Reports page \(page 48\)](#) by right-clicking a report and selecting **Schedule**.

Table 23: Rows on this page

Field	Description
Schedule Name	The name of the scheduled report.
Schedule Execution	<p>The field displays the last run and the last Status of the scheduled report.</p> <p>Note:</p> <ul style="list-style-type: none"> • Last Run specifies the date and time that the schedule report ran for the last time. • Last Status specifies the status of the last schedule report that ran.
Destination	<p>The field specifies the destination type and the result of the corresponding destination type.</p> <p>Type - specifies the mode through which the result is sent.</p> <p>The mode through which the result is sent can be through any one of the following:</p> <ul style="list-style-type: none"> • E-mail

Field	Description
	<ul style="list-style-type: none"> Remote location Dashboard <p>Note: If the Scheduled report is sent through an e-mail then the type field displays <i>E-mail</i>. If the Scheduled report is saved in a remote location then the type field displays <i>Remote Location</i>. If the Scheduled report is not sent through an e-mail or saved to a remote location then the type field displays <i>Dashboard</i>. (However the other types also can be added to the dashboard)</p> <p>Result - specifies the status of the destination type.</p> <p>Note: If e-mail is sent successfully or the Scheduled report is saved to a remote location then will be a tick mark in this field. If e-mail is sent not successfully or the Scheduled report is not saved to a remote location then their will be a cross mark in this field. If the Scheduled report is saved to the dashboard then this field will be empty as it would be the same status as scheduler Last Status.</p>
Next Scheduled Run	The date and time for the next time this schedule will run.
Scheduled By	The user who created this schedule.
Frequency	The frequency for this schedule (Daily, Monthly...)

Actions from this page:

- **Filter/Clear** - type one or more characters and click **Filter** to narrow the list. Click **Clear** to remove the filter.
- **Create** - opens the Report Schedule Create/Edit page with blank fields for defining a new schedule.
- **Edit** - enabled when a row is selected, opens the Report Schedule Create/Edit page where you can modify a schedule.
- **Delete** - enabled when a row is selected, prompts for a confirmation and then deletes the schedule. If schedule is deleted, you see an error if you try to open it. You can, however, retrieve the data by running the report with the same date and time range represented in the deleted scheduled report.
- **Enable** - Enables the schedule.
- **Disable** - Disables the schedule.
- **Run Now** - Executes the scheduled report immediately. Does not affect the next scheduled job.
- **Refresh** - updates the schedule list page to reflect changes anyone has made to it.

- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Scheduler Create/Edit

Use this page to create or to edit a schedule for emailing a report or displaying it on a dashboard, and saving a CSV file to remote location.

Table 24: Rows on this page

Field	Description
General Settings	
Schedule Name	Enter a name that identifies the Scheduled Report (for example, <i>Sales Team End of Week Report</i>).
Report	From the dropdown, navigate to and select the report you want to schedule.
Set Filter	<p>You cannot schedule a report that does not have a filter</p> <p>Leave the check box blank to use the default filter.</p> <p>Check the box to enable the <i>Set filtering criteria</i> link. This opens either the Basic Filters Tab (page 61) or the Basic Filter Tab for Anonymous Block/Stored Procedure (page 64), depending on the type of query in the Report Definition.</p>
Duration	<p>To set the timeframe for this scheduled report:</p> <ol style="list-style-type: none"> 1. Use the calendar icon to select a Start Date. 2. Check No End Date, or use the calendar icon to select an End Date.
Recurrence Pattern	<p>Specify how frequently you want this scheduled report to be run. Choose from:</p> <ul style="list-style-type: none"> • Once - Opens a field where you select the time of day for the single occurrence. • Daily - Opens a field where you select a number for recurrence of days; for example, every 4 days. • Weekly - Opens fields where you select the recurrence of weeks (for example, every two weeks) and the days of the week you want the scheduled report to be run. • Monthly - Opens fields where you select a specific day of the month OR the frequency during the month (for example, every second Wednesday) AND the recurrence of months (for example, every three months) that you want the scheduled report to be run.

Field	Description
	One option for Monthly, in the Day field, is Last. This accounts for a range of months that might have different last days (31, 28, 30).
Daily Frequency	<p>Specify how often you want the report to run on the day (days) you have scheduled. Select from either:</p> <ul style="list-style-type: none"> Occurs once at: the time of day <p>Note: The maximum frequency with which you can schedule a report is once every five minutes.</p>
Email tab Information	
Email	<p>Click Email tab to send the file through an email.</p> <ul style="list-style-type: none"> Email Distribution - click Add to display a popup where you can enter an email addresses. Click OK to add that address to the Email Distribution field. Repeat to add multiple email addresses. <p>Note: Email page validation will occur when the email id is entered in the 'email distribution' field. No validation will be performed if there is no email id entered in the 'email distribution' field.</p> <p>Select an email address and click Delete to remove that address from the distribution.</p> <ul style="list-style-type: none"> Email View - from the drop down, select the name of the view that you want to email. Email Subject - enter text for the subject line. File Type - Select the type of file to be sent through mail from the drop down list. <p>Choose from:</p> <ul style="list-style-type: none"> – INLINE HTML - Send the email in inline html format. – PDF - Send the email with a PDF file attachment. Based on the page orientation selected, that is either Landscape or portrait, the PDF of the report will be generated (Landscape is selected by default). Only 8000 rows are supported for PDF file attachment. If scheduled report exceeds 8000 rows, then PDF is not generated and an email is sent stating that the number of rows exceeded the PDF generation limit. <p>Note:</p> <ul style="list-style-type: none"> The generated PDF always uses standard font size (10px for Landscape orientation and 8px for portrait orientation) and it will bypass the font size set in grid view editor so as to keep the PDF printer friendly. The user can use the

Field	Description
	<p>zoom in and zoom out facility to view the PDF in their convenient size.</p> <ul style="list-style-type: none"> The PDF output retains only those rows which fit within the page for the selected orientation other rows that does not fit within the page will be truncated. <p>– XLS - Send the email with an Microsoft Excel file attachment.</p> <p>Note: Only http images are supported for threshold images in the scheduled report for both PDF and XLS file attachment.</p> <p>Note: Email settings must be configured in the Administration application (Cluster Configuration > Reporting Configuration > Report Scheduler Email Settings tab).</p>
Save To Remote Location Information	
Save to Remote Location	<p>Click on the Save to Remote Location to save the file in a remote location</p> <ul style="list-style-type: none"> Protocol - Select SFTP protocol from the dropdown to establish a secured connection to the remote location. <p>Note: Save to remote location validation will occur when the protocol is selected from the protocol dropdown list. No validation will be performed if there is no protocol selected.</p> <ul style="list-style-type: none"> Host - Enter the IP address of the remote location. Port - Enter the port number (default value is 22). User name - Enter the user name of the host. Password - Enter the password of the host. Directory Path - Enter the directory location on the host where the .csv file must be saved.

Note: The Scheduler uses the timezone of the user who creates the schedule. User Timezone is set for each user on his or her [User List Page \(page 155\)](#).

Actions on this page::

- Save** - saves your new entry or changes to the fields.
- Cancel** - cancels your changes and closes the page.
- Refresh** - refreshes the fields to the previously saved values.

- **Help** - opens online help.
- **X** on the tab heading - closes the page.

Timezone considerations for Scheduled Reports

The system considers all the time specific data in the scheduled report filter as local to the timezone of the last modified user. The System then converts this time to data source timezone when the filter query is formed.

Similarly the system considers all the time specific data the scheduler fetches from the data source as local to datasource timezone. The system then converts this time to timezone of the last modified user before preparing the date and time in the scheduled report.

However if the user or data source does not have a timezone set, then it considers the Cisco Unified Intelligence Center server timezone. For more information see [Timezone considerations for Reports \(page 104\)](#).

Daylight Savings Time and Scheduled Reports

The daylight saving affect the scheduled reports in the following ways:

1. The report that are scheduled to run daily during a particular time of the day will be skipped for the day when the clock advances (i.e. during daylight saving). For example let us consider that a report is scheduled to run at 10:30 pm daily. During daylight saving if the clock advances by 1 hour let us consider 10:00 pm to 11: 00 pm than the report that is scheduled to run at 10:30 pm will be skipped for that day.
2. The report those which are scheduled to run only once, will be updated with new schedule time with some offset if it falls in the period that would be advanced. For example let us consider that a report is scheduled to run once at 10:30 pm. During daylight saving if the clock advances by 1 hour let us consider 10:00 pm to 11: 00 pm, than the schedule report run time will be updated to 11:30 pm (consider the original schedule time is: 10:30 pm, due of daylight saving the clock advances by 1 hour, and the new schedule time will be: 11:30 pm.)



Chapter 9

Security

Clicking the Security drawer expands to show nested links that open pages where you can manage and view User Lists, User Groups, and User Permissions.

Every user can open the Security drawer to access the User List and see his or her own User Information page. Users who have the Security Administrator role can access *all* Security pages and functions.

Note: All actions on the Security interface are based on User Role and on the user's object Permissions. See [About Permissions \(page 167\)](#).

See also:

[Troubleshooting Security Center](http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0) (http://docwiki-dev.cisco.com/wiki/Troubleshooting_Tips_for_Unified_IC_8.0)

This chapter contains the following topics:

- [About Unified IC Security, page 154](#)
- [User List Page, page 155](#)
- [User Groups Page, page 159](#)
- [User Permissions Page, page 162](#)
- [Unified IC Reporting: Unified IC User Roles, page 164](#)
- [About Permissions, page 167](#)
- [About User Groups, page 168](#)
- [Run As, page 170](#)
- [Audit Trail Logging in CUIC, page 170](#)
- [Audit Trail Report, page 171](#)
- [Best Practices for Security, page 173](#)

About Unified IC Security

Unified IC security offers multi-layered and flexible functionality that allows a security administrator to create a flat or a tiered structure of access to Unified IC functions, based on the needs of the organization.

A user's access to Unified IC functions is tied to:

- His [login authentication \(page 8\)](#).
- The [license type \(page 107\)](#) under which his organization runs Unified IC. For example, organizations that use a Standard license cannot access the Report Definition functions.
- His User Role (a user can have one, some, or all of seven User Roles).
- The User Groups in which he is a member. See [About User Groups \(page 168\)](#).
- For an object the user can access, the *object-level permissions* assigned by the person who created that object. See [About Permissions \(page 167\)](#).

Administrative Overview

Access to the functions in the Unified IC reporting application is controlled by the one or more users who have the User Role of Security Administrator.

The initial, default Security Administrator is the user defined as the System Application User during the installation.

Security Administrators can:

- Create and maintain users.
- Assign User Roles - User roles are assigned to users to control what drawers the user can access and what objects the user can create.
- Assign users to User Groups.
- Create and maintain user groups.
- Assign Permissions - Whereas User Roles are associated with people, permissions are associated with objects (Dashboards, Reports, Report Definitions, Data Sources, Value Lists, and Collections).
- Use the [Run As \(page 170\)](#) feature to verify other users' permissions.

User List Page

This page opens from the Security drawer. If a user who does not have the Security Administrator user role accesses this page, he can see only his name and can open his page to modify some parameters such email and phone number. He cannot change his role or group membership.

When Security Administrators access this page, they can see all existing users; can create users, modify or delete users, review or edit user information, and "Run As" a user.

The first time the Super User administrator who installed the system opens this page, the list is populated with his or her name and with the names of all Supervisors who integrated from Unified CCE (if the initial User Integration has been run).

Note: Unified CCE User Integration is configured and scheduled in the Unified IC Operations Console (**Cluster Configuration > ICM User Integration**). It is documented in the online help for the Operations Console.

Table 25: Fields on the User List

Field	Explanation
Only show currently active users	Click this to narrow the list so that it displays only those users who are active.
Name Contains	Use this filter field to narrow the list of names or to move to a specific name.
User Name	The domain and user name (domain\name).
First Name	The user's first name.
Last Name	The user's last name.
User Role check boxes	Checks in these boxes show the User Roles that apply to this user.

Actions on this page:

- **Create** - opens the [User Information Page \(page 156\)](#).
- **Edit** - select the button to the left of the user name and click to open the [User Information Page \(page 156\)](#).
- **Delete** - select the button to the left of the user name and click to delete the user.
- **Run As** - select a user, then click this button to click to refresh the Unified IC reporting interface as that user would see it at login. See [Run As \(page 170\)](#) for details.
- **Refresh**- refreshes the page to show changes another person might have made to the User List.
- **Page** - click the arrow to move to the next page of the User List, when it consists of more than one page.

User List Page

- **Help** - opens online help.
- **X** on the tab heading - closes the page.

User Information Page

This page opens when you click **Create** or **Edit** from the [User List Page \(page 155\)](#).

This page has two tabs: [General Information \(page 156\)](#) and [Groups \(page 158\)](#).

A user can see his or her own User Information page to review and edit the information on it.

Actions on this page:

- **Save** - saves your new entry or changes to the fields.
- **Cancel** - cancels your changes and closes the page.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

General Information

Security Administrators use this tab to enter or modify general characteristics for a user.

The Editable column in the table indicates whether a user can, or cannot, edit his own information for a field.

Table 26: Fields on the General Information tab

Field	Editable	Explanation
User Name	No	<p>The domain and user name (domain\name)</p> <p>When you create a user, be sure to enter the domain\name exactly as it exists for that user's Active Directory identity. See Creating a User on the User List Page (page 159).</p> <p>This field is available only when the security administrator creates a new user. It is protected in Edit mode.</p>
Alias	Yes	<p>The alias name for this user.</p> <p>For Supervisors who are integrated from Unified ICM, use this field to enter the user's name in Unified ICM.</p>

Field	Editable	Explanation
User is Active	No	If this box is checked, the user is active and available to login. If it is unchecked, the user is not able to log in.
First Name	Yes	The user's first name.
Last Name	Yes	The user's last name.
Organization	Yes	The company name or other descriptive text to be associated with the user, such as region or Line of Business.
Email	Yes	The user's email address.
Phone	Yes	A phone number for the user. This can be the user's personal phone number or an emergency contact.
Description	Yes	Text that describes this user.
Time Zone	Yes	<p>From the dropdown, select the time zone the user would like to use in the report. This time zone is also used for the user's scheduled reports and takes precedence over the time zone used by CUIC server.</p> <p>If this field is left blank, the system uses the timezone that is set for the CUIC Data Source.</p>
Roles	No	<p>Assign one or more roles for this user.</p> <p>Note: If the Security Administrator adds or changes User Roles, the change does not take effect until the user logs out and then logs in again.</p>
Permissions	Yes	<p>These boxes show this user's permission setting preference for "My Group" and "All Users" when he creates new objects. A user can always change the permissions for all the objects created by the user.</p> <p>"My Group" is this user's default Group.</p> <p>Checks for My Group configure whether all other users who belong to this user's default group can read, write, or execute the objects that <i>this user creates</i>.</p> <p>Checks for AllUsers configure whether ALL other users can read, write, or execute the objects that <i>this user creates</i>.</p> <p>Higher level permissions prevail.</p>

User List Page

Field	Editable	Explanation
		See also: User Permissions Page (page 162) About Permissions (page 167)

Adding or Changing User Roles

If a user is given new roles of Report Designer, Report Definition Designer, or Dashboard Designer, or if those roles are removed, the change is not reflected in the interface.

The user must log out and log back in.

Groups

Use this tab to see what groups this user is a member of and to add group membership(s) for a user.

There is no limit to the number of groups a user can belong to.

Users who view their own User Information can see this tab but cannot edit it.

Table 27: Fields on Groups tab

Field	Explanation
My Group	This field shows the user's default group. The Security Administrator can change it. The group is represented as "My Group" for the user.
Available Groups	This column shows all the groups that have been created and that the user is not yet a member of.
Selected Groups	This column shows all the groups that the user is a member of. By default, every user has <i>AllUsers</i> in their Selected Groups column. You cannot remove the <i>AllUsers</i> group from the Selected Groups column.

Actions on this page:

- **Arrow buttons** - to move groups between columns

Highlight one or several groups and click > or < to move just that group or groups.

Click >> or << to move all groups.

Creating a User on the User List Page

Although you can create a user on the Unified IC User List page, an entry on the User List is not sufficient for that user to be able to sign in to Unified IC.

The user can sign in only if he or she exists in the Administration console as a Super User or if Active Directory has been configured in the Administration console for that user's domain.

One reason to create users on the User List page is to set up roles and permissions for users before they log in.

For example, if the Security Admin is aware that ten new users will be activated in the Administration console, then the Security Admin can create those users in the Unified IC User List, assigning them User Roles and Permissions and entering information about their email address, organization, timezone, and so forth on the [General Information \(page 156\)](#) tab.

Note: Be aware that the User Name (domain\name) on the General Information tab must *match exactly* with that user's domain and user name (all uppercase letters for the domain name; all lower case for the username). If they do not match, when the user signs in, he will be considered a different user.

User Groups Page

This page opens from the Security drawer. Use it to see the existing groups, to create or delete groups, and to review or edit group information.

This page always includes two default groups that are created by the system. These are:

- The *AllUsers* group, which is supplied by Unified IC and which all users belong to by default.
- The *Administrators* group, that administrators are members of.

Table 28: Fields on the User Groups page

Field	Explanation
Name Contains	Use this filter field to narrow the list of group names or to move to a specific name.
Name	The name of the group
Full Name	<p>The full name shows the child relationship of a group, if any, as indicated by a dot separator.</p> <p>For example, if the default group for Group3 is Group1, and Group1 is a top level group (does not have a parent, then the Full Name of Group1 is <i>Group1</i>. The Full Name of Group 3 is <i>Group1.Group3</i>.</p>
Description	Text that was entered to describe the group.

Actions on this page:

- **Create** - opens the [Group Information \(page 160\)](#) page.
- **Edit** - select the button to the left of the group name and click to open the [Group Information \(page 160\)](#) page.
- **Delete** - select the button to the left of the group name and click to delete the group.
- **Refresh**- refreshes the page to show changes another person might have made to the Group List.
- **Help** - opens online help.
- **X** on the tab heading - closes the page.

See also [About User Groups \(page 168\)](#).

Group Information

This page opens when you click **Create** or **Edit** from the [User Groups Page \(page 159\)](#).

This page has three tabs for most groups: General Information (which describes the group), Groups (where you can establish the group as a child group), and Group Members (where you can add or identify children for the group).

The *AllUsers* and *Administrators* groups do not have a Groups tab.

Actions on this page:

- **Save** - saves your new entry or changes to the fields.
- **Cancel** - cancels your changes and closes the page.

General Information

Use this tab to enter general information about a user group.

Table 29: Fields on the User Group General Information tab

Field	Explanation
Group Name	The name of the group. This field is available only when you create a new group. It is protected in Edit mode.
Description	Enter or modify text to describe this group

Groups

Use this tab to establish the groups for this user group.

Once you do this, this group becomes a child of those parent groups, and one of the parent groups is identified as its Default Group.

Note:

- The default *Administrators* and *AllUsers* groups do not have this Groups tab.
- It is not necessary to complete this tab if you do not want this group to be a child.

Table 30: Fields on Groups tab

Field	Explanation
Default Group	From the dropdown, select the default group for this group.
Available Groups	This column shows all the groups that have been created and that are available for this group to become a child of.
Selected Groups	This column shows all the groups that this group is a child of.

Actions on this page:

- **Arrow buttons** - to move groups between columns

Highlight one or several groups and click > or < to move just that group or groups.

Click >> or << to move all groups.

- **Save** - saves your new entry or changes to the fields.
- **Cancel** - cancels your changes and closes the page.

Group Members

Use this tab to add users to a group and to add child groups to this group. This page has two sections: **Users** and **Groups**.

Table 31: Fields on the Group Members tab

Users	
Available Users	This column shows all the users that have been created and that are available to be children of this group.

Selected User Members	This column shows all the users that are currently children of this group.
Groups	
Available Groups	This column shows all the groups that have been created and that are available to be children of this group.
Selected Group Members	This column shows all the groups that are currently children of this group.

Actions on this page:

- **Arrow buttons** - to move groups between columns

Highlight one or several groups and click > or < to move just that group or groups.

Click >> or << to move all groups.

User Permissions Page

Use this page to set extra permissions to Groups or to individual users

This page has two tabs: [Assigned Group Permissions \(page 162\)](#) and [Assigned User Permissions \(page 163\)](#).

See also: [About Permissions \(page 167\)](#).

Assigned Group Permissions

This page has four panels and one button.

To assign permissions to a group:

1. Select the object type in the Permissions For panel. For Dashboard, Report or Report Definition type, you can select a category or an object within a category. For other object types, select an object from the list. All the groups that have already been assigned permission for the object will be displayed in the Group permissions for the selected item panel.
2. Select a group in the All Groups panel. All user members of this group are displayed in the AllUsers for the selected group panel.
3. Click **Set Permissions**. Check the level you want for the group (READ, EXECUTE, WRITE), and click **OK**.
4. The **Group Permissions for the selected item** panel updates to include the group and its assigned permission you defined in Step 3.

Note: If the Security Administrator adds or changes User Permissions, the change may not take place immediately.

Table 32: Fields on the Group Members tab

Field	Explanation
Permissions For panel (top left)	<p>Click the dropdown arrow to select the kinds of object for which you want to set permissions. Options are Data Sources, Report Definitions, Reports, Dashboards, Value Lists, Collections and System Collections (UCCE).</p> <p>System Collections (UCCE) are the collections of agents and agent teams that are created and updated by UCCE User Synchronization.</p> <p>Selecting an object type refreshes the panel to show the list of items or categories for that object.</p>
All Groups panel (top right)	This panel shows all available User Groups. Highlighting a user group refreshes the page to display an AllUsers for Selected Group panel that lists the member of the group.
All Users for the Selected Group panel (bottom right)	This panel shows all members in the group that is highlighted in the All Groups panel directly above.
Set Permissions button	Click this to open a dialog box where you select the permission level for the selected object in the Permissions For panel and the selected group in the All Groups panel.
Group Permissions for the selected item	This panel shows all the groups that have already been assigned permission for the selected object, and their permission level.

Assigned User Permissions

To assign permissions to a user:

1. Select the object type in the Permissions For panel. For Dashboard, Report, or Report Definition type, you can select a category or an object within a category. For other object types, select an object from the list. All the users that have already been assigned permission for the object will be displayed in the User permissions for the selected item panel.
2. Select a user name in the User List panel.
3. Click **Show Groups** to see all groups for which this user is a member.
4. Click **Set Permissions**, check the level you want for this user (READ, EXECUTE, WRITE), and click **OK**.

The **All Permissions for the selected item** panel refreshes to show the user and permission you have added or changed for this user in steps 3 and 4.

Field	Explanation
Permissions For panel (top left)	<p>Click the dropdown arrow to select the kinds of object for which you want to set permissions. Options are Data Sources, Report Definitions, Reports, Dashboards, Value Lists, Collections, and System Collections (UCCE).</p> <p>System Collections (UCCE) are the collections of agents and agent teams that are created and updated by UCCE User Synchronization.</p> <p>Selecting an object type refreshes the panel to show the list of items or categories for that object.</p>
User List panel (top right)	This panel shows all current users. Filter the list and select one or many user names.
Show Groups button	Click this to show the All Groups for the selected user panel.
All Groups for the selected User (bottom right)	This panel shows all groups of which the username that is highlighted in the User List panel directly above is a member.
Set Permissions button	Click this to open a dialog box where you select the permission level for the object (READ, EXECUTE, WRITE).
All Permissions for the selected item	This panel shows all users who currently have permission for the object, and what level of permissions they have.

Note : You cannot change the permission for the owner of an object and owner always has Write Permission for the object. For example if User Lee is the owner of Report 1, he has WRITE permission for Report 1, and no one can change his permission to EXECUTE or READ.

Actions on this page:

- **Save** - saves your new entry or changes to the fields.
- **Cancel** - cancels your changes and closes the page.

Unified IC Reporting: Unified IC User Roles

There are seven User Roles, and a user can be assigned to one, any, or all of them.

Depending on the size, staff, geographical distribution, and security practices of your call center, you might prefer to assign multiple user roles to a few people or to distribute user roles to many people.

These are the User Roles for Unified IC:

- **Login User**

By default, everyone who signs in to Unified IC for the first time is a Login User. Login Users have that role and only that role until the Security Administrator assigns additional roles or deactivates (removes) the Login User role.

Only a Security Administrator can assign additional user roles to a user or remove any role including Login role from any user. If a user does not have the Login Role, he can no longer access the reporting interface..

An active login user can:

- Log in to Unified IC
- Open the Security drawer, access the User List, and edit his own User Information page; for example, to change his alias or phone number.

- **System Configuration Administrator**

This user has all the rights of an active Login User and also:

- Has full access to the Data Sources drawer and its functions.
- Has full access to the Scheduler drawer and its functions.
- Has full access to import, export, or delete Cisco provided stock templates.

- **Security Administrator**

This user has all the rights of an active Login User and also has full access to the Security drawer and its functions.

- **Dashboard Designer**

This user has all the rights of an active Login User and also has full access to the Dashboard drawer.:

- **Report Designer**

This user has all the rights of an active Login User and also:

- Has full access to the Reports drawer.
- Has View (Read) access to the Data Sources and Value Lists drawers
- Can access the Scheduler drawer to work with own reports.

- **Report Definition Designer**

This user has all the rights of an active Login User and also:

- Has full access to the Report Definition drawer.
- Has View (Read) access to the Data Sources and Value Lists drawers

- **Value List Collection Designer**

This user has all the rights of an active Login User and also:

- Has full access to the Value List drawer.
- Has View (Read) access to the Data Sources drawer.

Other Users

In addition to the seven designated Unified IC User Roles, the following individuals have access to Unified IC as follows:

[UCCE Supervisors \(page 166\)](#)

[System Application User \(page 166\)](#)

[System Administration User \(page 167\)](#)

UCCE Supervisors

Supervisors who are imported when UCCE User Integration is enabled. They become Unified IC users and are automatically give these roles. They:

- Are Active Login Users.
- Are Dashboard Designers.
- Are Report Designers and can run and schedule reports for the agents and agent teams they supervise.
- Can view their own Agent and Agent Team collections that are imported during UCCE User Integration.

System Application User

This is not a Unified IC role. This role is defined during installation. You set credentials for this user during the installation of all nodes. As a best practice, use the same Application User credentials for all nodes.

The Application user who is configured during the installation of the *Controller* node is by default the initial Super User for the Administration console and has full rights to all functions in the Administration and Unified IC reporting applications.

This user:

- Is the user who is configured as the Application User during installation.

- Is the initial Super User in the Administration console.
- Can create additional Super Users in the Administration application.
- Can sign in to Unified IC and has full rights to all functions in Unified IC.
- Is the initial Security Administrator user in the Unified IC reporting application
- Can create additional Security Administrator users in the Unified IC reporting application.
- Cannot have any role taken away from him.
- Cannot take any role away from himself.

System Administration User

This is not a Unified IC role. This role is defined during installation.

System Administrator User credentials are node-specific. As a best practice, use the same System Administrator User credentials for all nodes.

This user cannot sign in to Unified IC OAMP or Unified IC Reporting applications.

The Admin User credentials for the Controller node are used to:

- Access the CLI for the Controller node.
- Log in to the Disaster Recovery System, the Cisco Unified OS Administration, and Cisco Unified Serviceability applications from the Navigation menu in the Administration console.

The Admin User for a Member node can:

- Access the CLI for that Member node.

About Permissions

Whereas User Roles are associated with people, permissions are associated with objects. Unified IC objects are Dashboards, Reports, Report Definitions, Data Sources, Categories, Value Lists, and Collections.

There are three levels of permissions, represented by three check boxes:

- **READ:** When a user has READ permission for an object, the user can see that object in the object list or under a category. READ is the lowest level of permission.
- **EXECUTE:** When user has EXECUTE permission for an object, he can perform some actions with the object. The type of action depends on the type of object.

For example, with EXECUTE permission, a user can run, print, and refresh a report, can open and refresh a dashboard and run a dashboard slideshow, can see a Value List query. EXECUTE permission includes the READ permission.

- **WRITE:** When the user has WRITE permission for an object, he can alter, rename or delete the object. For example, With WRITE permission, you Save As, import, and export reports; you can edit a data source and can delete a custom Value List. WRITE permission also includes EXECUTE and READ permission.

Note: If no check boxes are selected when setting permission for an object, the user has no access privileges to the object.

Permissions are combined and the highest level prevails.

A user receives permission for an object from different sources. Permission can be inherited from the AllUsers group, from the Default Group (My Group), or from the permission assigned by the Security Administrator. Among all these permissions, the highest level permission is used when user access the object.

See also: [Permissions for Categories \(page 182\)](#).

User Roles and Permissions

Your User Role allows you to "open" the drawer that corresponds to that role. If you have EXECUTE permission, you can create objects for that drawer. For example, if you are a Dashboard Designer, you can create dashboards on the Available Dashboards page.

When you create an object, you are the *owner* of that object. You have WRITE permission for the object, and you can set the permissions for that object for AllUsers and for users in your Group.

If the object is still a work-in-progress and you do not want anyone to access it yet, you can make it "private" by leaving all permissions unchecked for both the AllUsers and the Groups.

When the object is ready, you might set the AllUsers permissions to READ and your default Group (My Group) permissions to EXECUTE or even WRITE. For example, if you create a Dashboard for your Group and the dashboard has notes, you might want others in your Group to update the notes.

Even though *you* are a Dashboard Designer, if the Available Dashboards page contains dashboards created by (owned by) other Dashboard Designers, you may or may not be able to see those dashboards, based on your Group permissions and on the object-level permissions those owners have set for their dashboards.

About User Groups

User Groups are constructs that allow security administrators to partition Unified IC functionality.

Creating User Groups expedites the process of provisioning users when multiple users need the same access to dashboards and reports, or when users require distinct permissions and features based on regional or organizational requirements.

User groups have no impact on how data is stored in the database. They are used only for assigning permissions to all the user members of the group through one operation instead of repeating the same operation for each user.

System-Defined AllUsers Group

All users are automatically a member of the system-defined *AllUsers* group.

AllUsers always appears on the Manage User Groups window. The security administrator cannot delete it.

System-Defined Administrator User Group

The security administrator is automatically a member of the system-defined Administrators group and can add other security administrators to it.

Additional Security Administrators must be added to the Administrators group. Having the role does not automatically make them members of that group.

Customer-Defined User Groups

Security administrators can create any number of user groups and can add users to them. From those other user groups, one is designated as the user's *Group* (also called *My Group*).

The Default Group

After creating the customer-defined groups, the security administrator can add a user to any number to these groups and can configure one of them as the user's default Group (*MyGroup*). The All Users group can also be selected as the default group.

The owner of an object can set permission for its Group, and the All Users group. Only the Security Administrator can set extra permission to other groups or individual users on the [User Permissions Page \(page 162\)](#). A user's access permission to an object is the highest level of the permission that user gets from all the permission "sources."

Groups and Child Groups

Rules for Groups and Child Groups

- A group can be both a Parent and a Child. For example, Group 2 can be child of Group 1. Group 2 can also be a parent of Group 3.
- A Group is not required to have Child Groups.
- A Group may have any number of Child Groups.

Run As

- A Child Group cannot be a Parent to its own Parent Group and similarly, a Parent Group cannot be a Child of its own Child Group. For example, Group 3 is a child of Groups 1 and 2. Group 3 cannot also be a parent of Group 1 or Group 2.
- A Group can have both Groups and Users as children. For example, Group 2 can be a child of Group 1. User Lee can be a child of Group 1.
- A Group is not required to have a Parent Group.
- **Child Groups Do Not Inherit the Members of their Parent Groups.** - Adding a user as a member of a group does not mean that user is also a member of its children. For example, Group 2 and Group 3 are children of Group 1. The security administrator adds User A as a member of Group 1. User A does not automatically become a member of Group 2 or Group 3. To make User A as a member of Group 2, the security administrator must add User A as a member of Groups 2.

Run As

Security Administrators can select a name on the User List page and click **Run As**. This refreshes the Unified IC web page so that it reflects the interface that user has when he logs in.

Use this tool to verify that the User Roles and permissions that are configured for that user are as you expect them.

Note:

- When you Run As another user, the top of the page shows both your Logged In identity and your Run As identity.
- You cannot Run As yourself.
- You can Run As one level of user. A Security Admin cannot *Run As* User A and, as User A, then *Run As* User B.

To leave Run As mode, click **Stop Run As** at the top of the page.

Audit Trail Logging in CUIC

Cisco Unified Intelligence Center now supports Audit Trail Logging. This feature allows you to view the sequence of audit records of each of the transaction or action that is performed on a Cisco Unified Intelligence Center server. You can view the audit trails using the Audit Trail stock report. Only System Administrators can access and view this feature by default. However, a System Administrator can then give permissions to other CUIC users to use this feature.

Note: Localization of Audit Trail report is not supported.

Viewing the Audit Trail Logging in CUIC

-
- Step 1** Log in to the Unified IC Reporting Interface.
- Step 2** Navigate to **Reports > Stock > Intelligence Center Admin** and click **Audit Trail**. The system opens the **Audit Trail Report Filter window**.
- Step 3** Specify the required filter criteria and click **Run**. The system displays the Audit Trail report based on the filter criteria that you specified.
-

Audit Trail Report

Views: This report has three grid views - Non-grouped, Groupby ‘EntityName’, Groupby ‘Username’.

Grouping: This report has two grouped views - grouped and sorted by User and Entity Name. The third view is un-grouped which is also the default view for this report.

Value List: CUIC Users, CUIC Operations, CUIC Entity Types.

Database Schema Table(s) from which data is retrieved:

- CUICAUDITLOG
- CUICLOGEDENTITY

See also:

[Current Fields in the Audit Trail Report Grid View \(page 171\)](#)

Current Fields in the Audit Trail Report Grid View

Current fields are those fields that appear by default in a report grid view generated from the stock template. You can change them.

Current fields are listed here in the order (left to right) in which they appear by default in the stock template.

Column (Field)	Description
Event Time	The date and time when the user performed the operation in the CUIC system. Derived from cuicauditlog.loggedtime

Column (Field)	Description
User	Domain name and the Login ID of the user who logged in. Derived from cuicauditlog.userid
Operation	The action that the user had performed on the system. Derived from: cuicauditlog.operation
Entity Type	The type of entity on which the user performed the action. Derived from: cuicauditlog.category
Entity Name	The name of the specific entity that the user accessed. Derived from: cuicloggedentity.entityname
Status	The outcome of the user operation. Derived from cuicauditlog.status
Description	A brief description of the action that the user performed. Derived from cuicauditlog.description
RunAs User	The RunAs User for this action. For more details, see Run As (page 170) . Derived from cuicauditlog.runasuserid
Server IP	The IP address of the CUIC system that this user accessed. Derived from cuicauditlog.serverip
Server Name	The name of the CUIC system that this user accessed. Derived from cuicauditlog.servername

Sample Audit Trail Report

This illustration is a sample of the report generated from the Audit Trail Report template.

Figure 54: Audit Trail Report

Event Time	User	Operation	Entity Type	Entity Name	Description	RunAs User
9/27/11 11:52:19 AM	CUIAdministrator	UPDATE	DATASOURCE	UCCE Historical	User CUIAdministrator updated datasource UCCE Historical at Tue Sep 27 11:52:19 IST 2011	CUIAdministrator
9/27/11 11:53:01 AM	CUIAdministrator	UPDATE	DATASOURCE	UCCE Realtime	User CUIAdministrator updated datasource UCCE Realtime at Tue Sep 27 11:53:01 IST 2011	CUIAdministrator
9/27/11 11:53:56 AM	CUIAdministrator	CREATE	DATASOURCE	DataSource-Migration-178	User CUIAdministrator created datasource DataSource-Migration-178 at Tue Sep 27 11:53:56 IST 2011	CUIAdministrator
9/27/11 12:28:02 PM	CUIAdministrator	LOGOUT	USER		User CUIAdministrator logged out at Tue Sep 27 12:28:02 IST 2011	CUIAdministrator
9/27/11 12:28:15 PM	CUI-LDAP-237veport_team_1	LOGIN	USER		User CUI-LDAP-237veport_team_1 logged in at Tue Sep 27 12:28:15 IST 2011	CUI-LDAP-237veport_team_1
9/27/11 12:44:27 PM	CUI-LDAP-237veport_team_1	CREATE	DASHBOARD	>venkat	User CUI-LDAP-237veport_team_1 created dashboard venkat at Tue Sep 27 12:44:27 IST 2011	CUI-LDAP-237veport_team_1
9/27/11 12:45:20 PM	CUI-LDAP-237veport_team_1	SAVE	DASHBOARD	venkat	User CUI-LDAP-237veport_team_1 saved dashboard venkat at Tue Sep 27 12:45:20 IST 2011	CUI-LDAP-237veport_team_1
9/27/11 12:49:35 PM	CUI-LDAP-237veport_team_1	LOGOUT	USER		User CUI-LDAP-237veport_team_1 logged out at Tue Sep 27 12:49:35 IST 2011	CUI-LDAP-237veport_team_1
9/27/11 12:51:11 PM	CUIAdministrator	SAVE	REPORT	[Hi Report]	User CUIAdministrator saved report [Hi Report] at Tue Sep 27 12:51:11 IST 2011	CUIAdministrator

Best Practices for Security

If you make the user a member of one or more other groups, make one of those groups, the user's default group, and set the permissions for the default group higher than those of the AllUsers group.

Higher permissions for the default group prevail over permissions in the AllUsers group. Individual user permissions prevail over group permissions.



Chapter 10

System Concepts and Navigation Controls

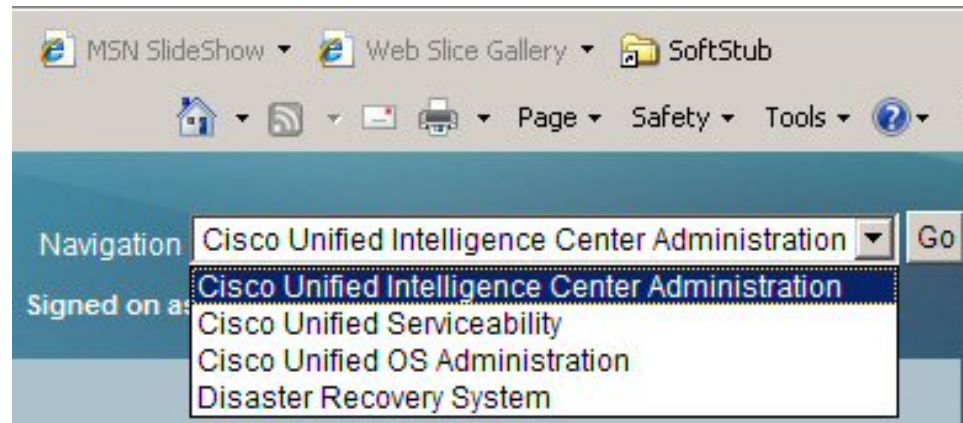
This chapter contains the following topics:

- [Accessing Cisco Unified Communications Solutions Tools from Unified IC, page 175](#)
- [Categories, page 181](#)
- [Drawers, page 183](#)
- [Filtering, page 184](#)
- [Multiple Delete, page 184](#)
- [Online Help, page 185](#)
- [Refresh, page 185](#)
- [Sorting, page 185](#)
- [Stock and Custom Objects, page 186](#)
- [Tabs, page 186](#)

Accessing Cisco Unified Communications Solutions Tools from Unified IC

The Navigation dropdown menu at the top right of the Unified IC Administration page has three Cisco Unified Communications Solutions tools:

Figure 55: Navigation dropdown



To access these tools from a Member node, where x.x.x.x is the IP address of the member:

- To access Unified Serviceability: <http://x.x.x.x/ccmservice/>
- To access Unified OS Administration: <http://x.x.x.x/cmplatform>
- To access Disaster Recovery System: <http://x.x.x.x/drf>

To sign in to these tools, use the user name and password for the Installation Administrator account.

Cisco Unified Serviceability

Cisco Unified Serviceability is one of three system-level tools that Unified IC shares with Cisco Unified Communications Solutions. The other two are [Disaster Recovery System \(page 180\)](#) and [Cisco Unified OS Administration \(page 177\)](#)

To access Cisco Unified Serviceability, select it from the Navigation dropdown in the upper-right corner and click **Go**.

Cisco Unified Serviceability is a web-based troubleshooting tool, with four menus (Alarms, Trace, Tools, and Snmp). Unified Serviceability features are supported by and applicable to Unified IC with exceptions noted in Unified IC Notations.

Cisco Unified Serviceability features include the following:

- Provides information on configuring alarms, traces, and SNMP
- Saves alarms and events for troubleshooting and provides alarm message definitions.
- Saves trace information to various log files for troubleshooting.
- Monitors real-time behavior of components through the Cisco Unified Real-Time Monitoring Tool (RTMT).

- Provides feature services that you can activate, deactivate, and view through the Service Activation window.
- Provides an interface for starting and stopping feature and network services.
- Generates and archives daily reports; for example, alert summary or server statistic reports.
- Allows Cisco Unified Communications Manager and Cisco Unity Connection to work as a managed device for SNMP remote management and troubleshooting.
- Monitors the disk usage of the log partition on a server.
- Monitors the number of threads and processes in the system; uses cache to enhance the performance.

All information in the Cisco Unified Serviceability documentation is applicable to Unified Intelligence system.

Cisco Unified OS Administration

Cisco Unified OS Administration is one of three system-level tools that Unified IC shares with Cisco Unified Communications Solutions. The other two are [Disaster Recovery System \(page 180\)](#) and [Cisco Unified Serviceability \(page 176\)](#).

To access Cisco Unified OS Administration select it from the Navigation dropdown in the upper-right corner and click **Go**.

Use Cisco Unified OS Administration to perform many common system administration functions. Unified OS Administration menus are the following:

- **Show:** How to view information on Cluster Nodes, Hardware Status, Network Configuration, Installed Software, System Status, and IP Preferences.
- **Settings:** How to display and change IP settings, host settings, and Network Time Protocol (NTP) settings.
- **Security:** How to manage certificates and how to set up and manage IPSec policies
- **Software Upgrades:** How to perform an upgrade and how to revert to a previous version.
- **Services:** How to use the Ping and Remote Support features

Install Custom Certificates

Cisco Unified OS Administration allows you to install custom certificates.

Install a certificate:

-
- | | |
|----------------|--|
| Step 1 | Log in to Cisco Unified Operating System Administration (for e.g.: -https://localhost:8443/cmplatform). |
| Step 2 | Navigate to Security > Certificate Management . The Certificate List window displays. |
| Step 3 | Click Generate CSR . The Generate Certificate Signing Request dialog box opens. |
| Step 4 | Select tomcat from Certificate name list. |
| Step 5 | Click Generate CSR to generate a certificate from a custom or third party certificate generation authority. |
| Step 6 | Download the CSR to your PC and use this CSR to obtain the Public certificate and primary certificate from CA. |
| Step 7 | Log in to OS platform again and navigate to Security > Certificate Management . |
| Step 8 | Click Upload Certificate/Certificate chain . The Upload Certificate dialog box opens. |
| Step 9 | To upload public certificate, select tomcat-trust from certificate name list drop down. |
| Step 10 | Select the file to upload by performing one of the following steps: <ul style="list-style-type: none">• In the Upload File text box, enter the path to the file.• Click the Browse button and navigate to the file; then, click Open. |
| Step 11 | Click Upload File button. |
| Step 12 | Navigate to Security > Certificate Management and Click Upload Certificate/Certificate chain . |
| Step 13 | To upload primary certificate, select tomcat from certificate name list drop down. |
| Step 14 | Enter Root certificate name. This is a .pem file that is generated when the root/public certificate was installed. To view this file Navigate to certificate management > Click Find . In the certificate list .pem file name will be listed against tomcat-trust. |
| Step 15 | Follow step 10. |
| Step 16 | After successfully uploading the certificate, navigate to Security > Certificate Management . |
| Step 17 | Click Find to open the list of certificates. |
| Step 18 | Click on .pem links against tomcat and tomcat-trust to see Certificate File Data. |
| Step 19 | Restart the server settings using the following commands: |

- `utils service restart cisco tomcat`
- `utils service restart Intelligence Center Reporting service`

Note: To avoid the certificate exception warning you must access the servers using the Fully qualified domain name (FQDN) name.

Install Intermediate Certificate

Unified Intelligence Center supports only one level of intermediate certificate. To install intermediate certificate you need to install root certificate first and then upload the signed certificate.

- Step 1** Log in to Cisco Unified Operating System Administration.(for eg:-https://localhost:8443/cmplatform)
- Step 2** Navigate to **Security > Certificate Management**. The Certificate List window displays.
- Step 3** Click **Upload Certificate**. The Upload Certificate dialog box opens.
- Step 4** Select tomcat-trust from Certificate name list drop down to install the public certificate from CA.
- Step 5** Select the file to upload by performing one of the following steps:
- In the Upload File text box, enter the path to the file.
 - Click the **Browse** button and navigate to the file; then click **Open**.
- Step 6** To upload the file to the server, click the **Upload File** button.
- Step 7** In Cisco Unified Operating System Administration, navigate to **Security > Certificate Management**.The Certificate List window displays.
- Step 8** Click **Upload Certificate**. The Upload Certificate dialog box opens.
- Step 9** In the Upload certificate pop up window, to upload the intermediate certificate, select tomcat-trust from Certificate name list drop down and enter the root certificate name.
- The root certificate name is the .pem file name that was generated when the public certificate was installed.
- Step 10** Follow step 5.
- Step 11** To upload the file to the server, click the **Upload File** button.
- Step 12** In Cisco Unified Operating System Administration, navigate to **Security > Certificate Management**.The Certificate List window displays.

- Step 13** Click **Upload Certificate**. The Upload Certificate dialog box opens.
- Step 14** In the Upload certificate pop up window, to upload the primary certificate, select tomcat from Certificate name list drop down and enter the root certificate name.

The root certificate name is the .pem file name that was generated when the intermediate certificate is installed.

- Step 15** Follow step 5.

- Step 16** To upload the file to the server, click the **Upload File** button.

Note: After Installing customer certificate, access the Cisco Unified Intelligence Center URL using FQDN. If you access using IP address you will get the message **Click here to continue** even after successfully installing custom certificate.

Disaster Recovery System

The Disaster Recovery System (DRS) is one of three system-level tools that Unified IC shares with Cisco Unified Communications Solutions. The other two are [Cisco Unified OS Administration \(page 177\)](#) and [Cisco Unified Serviceability \(page 176\)](#).

To access Disaster Recovery System, select it from the Navigation dropdown in the upper-right corner and click **Go**.

The Disaster Recovery System provides backup and restore capability for all servers in a Unified IC cluster and allows you to perform regularly-scheduled automatic backups as well as user-invoked data backups.

Refer to the DRS online help for topics including:

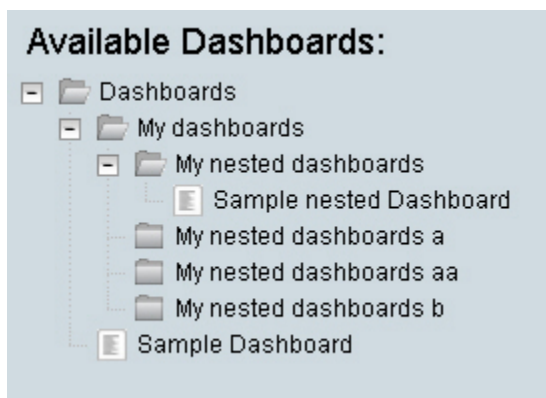
- Backup and Restore procedures
- Creating and editing backup schedules
- Starting a manual backup
- Restoring a backup version and viewing restore status
- Restoring a cluster
- Error messages that can occur during a backup or a restore

All information in the DRS online help is applicable to Unified Intelligence system. See the topics below for DRS-related information that pertains to Unified IC.

Categories

Certain Unified IC Reporting objects are grouped in categories. Categories display in a "tree" format, where categories and sub-categories are represented as folders and items within categories are represented as pages.

Figure 56: Categories



There cannot be two objects with the same name within a category or a subcategory. There can be objects with the same name in two different sub-categories.

See also:

[Create a Sub-Category \(page 181\)](#)

[Delete a Sub-Category \(page 182\)](#)

[Drag and Drop within Categories \(page 182\)](#)

[Rename Categories \(page 182\)](#)

[Permissions for Categories \(page 182\)](#)

Create a Sub-Category

To create a category or a sub-category, right-click the parent (category or sub-category) and select **Create**.

This opens a dialog box asking for:

- The category or sub-category name. Enter a name (using a maximum of 50 characters).
- The permissions for the Parent User group and the All Users group.

Click **OK** to save the category.

Categories

Delete a Sub-Category

To delete a sub-category, right-click its icon and select **Delete**.

This opens a dialog box stating that deleting will delete all of its children sub-categories and dashboards.

Click **Yes** to confirm the deletion. Click **No** to cancel.

Both Yes and No generate another dialog box confirming your action to delete or to cancel the deletion. Click **OK** to close this dialog box and to complete the action.

Drag and Drop within Categories

Use standard drag-and-drop actions to move items such as dashboards and reports from one category to another. You can also move an entire sub-category with all its component items.

To use drag and drop, a user must have Execute permissions for the object.

Rename Categories

To rename a category or a sub-category, right-click the sub-category icon and select **Rename**.

This opens a dialog box with a Rename To field.

Enter a new name (using a maximum of 50 characters) and click **Rename** to proceed.

Click **Cancel** to keep the original name.

To rename, a user must have Write permissions for the object.

Permissions for Categories

Categories are Unified IC "objects", as are Reports, Report Definitions, Dashboards, Data Sources, Value Lists, and Collections.

Permissions are set for all objects when you create them and for categories are enforced as follows:

- **READ** = you can see the category and all objects in it.
- **WRITE** = you can view a category, add a sub-category to it, move objects into it, rename it, delete it, and set permissions for it.
- **EXECUTE** = you can add a sub-category and move (drag and drop) an item such as a dashboard into this category. To add an item, you must have **WRITE** permission to that item. After you move the item into a category, the original owner of that item can access it only if that user has **WRITE** permission to the category that you modified.

There are impacts for the permissions a user has for a category with respect to the permission that user has for the object/drawer. For example:

- If the user has the Dashboard Designer role but does not have READ permission to a dashboard category, he cannot see that category or any dashboards it contains.
- If a user has the Report Definition Designer role and has WRITE permissions for a category, he can delete the category. The delete operation will fail if any of the objects are not eligible for deletion. They might be stock Report Definitions. They might be custom Report Definitions that are referenced by reports.
- If a user does not have access to a drawer, for example, to Dashboards, the user's permission to a category in that drawer is irrelevant. For example, if a user has WRITE permission in the *AllUsers* group for a dashboard category, but that user does not have the Dashboard Designer role, no harm can come unless that user is subsequently given the Dashboard Designer role. He could then delete that dashboard category.

See also: [About Permissions \(page 167\)](#).

Drawers

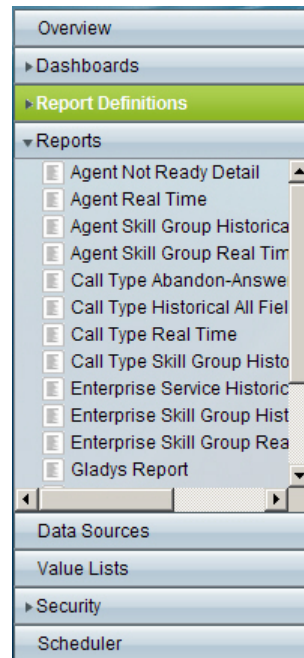
The left panel of the Unified IC Reporting interface contains *drawers*.

Drawers are similar to menus: they group logically-related functions. Clicking (opening) a drawer in the left panel might immediately open a page in the right panel or it might expand to show a list or tree of nested links.

The tree display under some drawers replicates the display on the page that drawer opens. For example, the tree that displays when you expand the Dashboards drawer shows the same categories and dashboards as the Dashboard page.

Filtering

Figure 57: Drawers in Unified IC Reporting



The User Roles assigned to you determine what drawers are enabled for you. For example, if you do not have the Dashboard Designer user role, the Dashboards drawer is dimmed and you can see an message that you cannot see the Available Dashboards.

All users can see the Overview drawer and the Security drawer.

Filtering

Many pages let you filter items to limit the number of results that appear in a given list. You can also filter items to find a specific item or a subset of items with similar values.

Note: Quickly clear a filter by clicking the **Clear Filter** button.

Multiple Delete

Some pages that contain lists of items allow you to delete one or more items at once. To delete multiple items:

-
- | | |
|---------------|---|
| Step 1 | Check the box to the right of the item(s). |
| Step 2 | Click the Delete button on the bottom left of the page. |
| | A confirmation dialog appear. |
| Step 3 | Click OK in the confirmation dialog to delete the item(s). In some cases a deletion confirmation page may appear after the confirmation dialog pop-up. Click OK or Yes on the deletion confirmation page to delete the item. |
-

Online Help

There is a Help icon on each page.

Clicking Help opens a new window with a topic relevant to the window you are on.

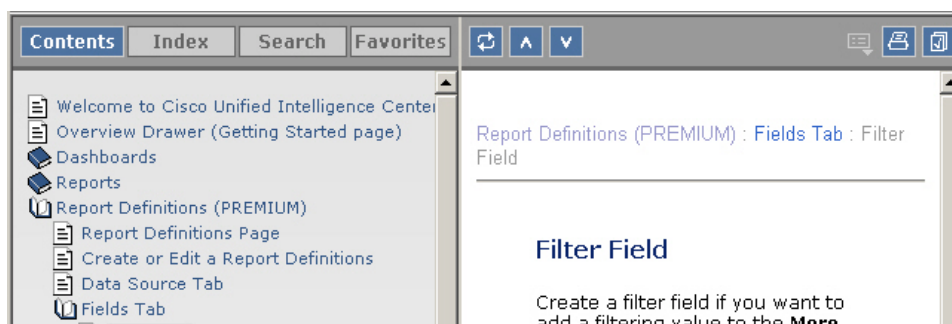
From a help topic, click the Navigation icon

Figure 58: Online Help Navigation Icon



This opens the Table of Contents and exposes the help functions such as Index and Search.

Figure 59: Online Help Features



Refresh

The Refresh button on many Unified IC Reporting pages allows you to update (refresh) a page to see any changes another user might have made to it.

Sorting

Any page that contains lists of items can be sorted by any field name. To sort a list of items:

Step 1 Click the name of the field on the top of the column that you want to sort.

The listed is sorted in ascending order for that column.

Step 2 Click the name of the field again to sort the list in descending order.

Step 3 Click any other field name at the top of the column to sort on that column.

Stock and Custom Objects

Unified IC uses the terms Stock and Custom as follows:

Stock objects are supplied by Cisco and are either installed with CUIC or can be imported and used with CUIC. Stock objects include:

- Reports: To be imported and used with CUIC
- Report Definitions for each of the Stock Reports
- The CUIC data source
- The UCCE Historical data source
- The UCCE Real Time data source
- Value Lists for each of the Stock Reports
- Agent Team Collections created through the UCCE User Integration feature.

Note: There are no stock dashboards.

You *cannot* make changes to the Cisco stock objects and then save those changes.

You *can* make changes to stock Reports and Report Definitions and then **Save As** to create new, cloned and renamed versions of them.

There is no Save As function for the stock Value Lists. To create a custom version of a stock Value lists, create a custom Value List, copy the query from a stock Value List, and then make edits to it.

Custom Custom objects are any objects that were not installed with the product and include new reports and report definitions that were designed by a third party and imported into Unified Intelligence Center

Your support provider cannot assist you in troubleshooting custom objects.

Tabs

Tabs organize content and facilitate navigation.

When you open a drawer, or click an item within a drawer, the panel that opens pops up a tab at the top of the page, if that tab is not already opened.

To close a tab in the *Reporting* application, click the **x** at the right of the tab label.

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