Oracle Construction Intelligence Cloud Analytics Administration Guide

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Getting Started

This chapter provides an overview of:

- the CIC Analytics Administration application
- the navigation options available for managing CIC Analytics
- a roadmap for setting up CIC Analytics

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Construction Intelligence Cloud Analytics Administration Application Overview

CIC Analytics is managed using the CIC Analytics Administration application. The administration application allows you to configure and manage users, and CIC Analytics data sources for your organization.

The following applications can be used as data sources in CIC Analytics:

- ▶ P6 EPPM
- Primavera Unifier
- Primavera Cloud

This document describes how to administer CIC Analytics by accomplishing the above tasks.

Intended Audience

Cloud administrators responsible for managing CIC Analytics should use this document.

Accessing CIC Analytics Administration Application

When your organization is provisioned with CIC Analytics, as a cloud administrator, you will receive the CIC Analytics Administration Application URL in a Welcome email.

Note: Cloud administrators can only be setup when CIC Analytics is initially provisioned for your organization. Ensure you provide contact details of resources you plan to designate as administrators.

To sign in as an administrator to CIC Analytics Cloud Administration Application:

1) In your Welcome email, click the Administration Application URL available in the format:

https://<host>:<port>/p6rdb/login

where

<host>: Enter the host name or the server IP address of CIC Analytics.

<port>: Enter the unique port number associated with CIC Analytics.

Note: For a list of supported browser versions, see the *Construction Intelligence Cloud Analytics Client System Requirements* document.

- 2) In the **Username** field, enter the user name of the cloud administrator.
- 3) In the **Password** field, enter a unique alphanumeric password.
- 4) Click Sign In.

Navigating the CIC Analytics Administration Application

Select a staretl process to manage any of the following data sources in the administration application:

- ▶ P6 EPPM
- Primavera Unifier
- Oracle Primavera Cloud



Depending on the data source set up in the administration application and the ETL you select in the **A Home** menu (*P6* as shown above), the following icons display in the sidebar of the administration application.

Icon	Description
♣ Home	Shows currently running STARETL processes for all data sources and enables you to stop a currently running STARETL process.
User Management	Setup and manage CIC Analytics users.
≊ Status	Manage and schedule ETL runs and ODI load plans, view ETL logs and status reports for a selected data source.

Icon	Description
⟨→ Codes	Displays a list of codes which have been enabled for project, activity, and resource data. Use this menu option to add or remove codes for a data source.
ii\ UDFs	Displays a list of available UDFs which have been enabled for project, activity, resource assignment, resource, and WBS data.If applicable, use this menu option to add or remove UDFs in a data source.
■ PublicationStatus	View the status of recent publication runs for a selected data source.
Config Config	Configure the properties of the STARETL process for each data source.

CIC Analytics Application Setup Roadmap

CIC Analytics can be configured for projects managed and tracked in the following source applications:

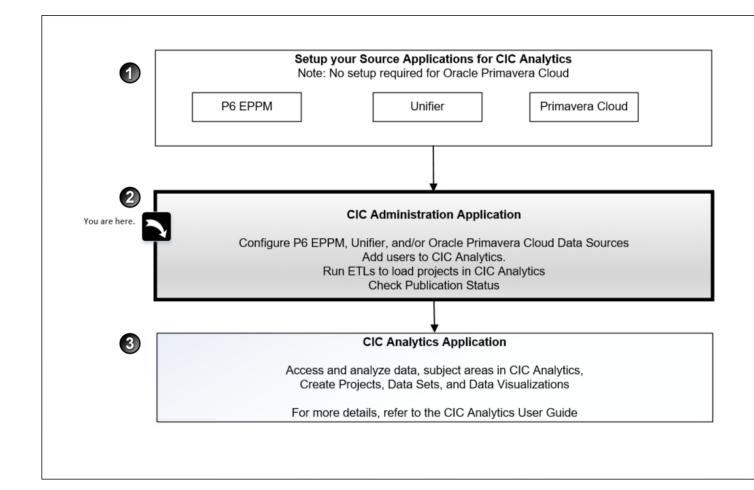
- ▶ P6 EPPM cloud
- Primavera Unifier
- Oracle Primavera Cloud

To connect CIC Analytics with your source application, you have to setup the following applications as listed in the order listed below:

- 1) The source applications you wish to connect with CIC Analytics listed above.
- 2) CIC Analytics Administration application

The application setup roadmap illustrates the applications you need to setup to display projects in CIC Analytics.

Note: At this point in the setup sequence, you must have completed and configured your source applications if applicable (step 1). For more details, see **Setting Up Source Applications for CIC Analytics** (on page 9).



Setting Up Source Applications for CIC Analytics

This administration guide is meant for CIC Analytics administrators who manage data displayed in CIC Analytics from any of the following source applications:

- ▶ P6 EPPM
- Unifier
- Primavera Cloud

Setting Up P6 EPPM for Analytics

If you plan to use CIC Analytics for P6 projects, then configure and publish your P6 EPPM projects to bring data into CIC Analytics.

For more details see Construction Intelligence Cloud Analytics P6 EPPM Application Setup Guide.

Setting Up Primavera Unifier for Analytics

If you plan to stage Primavera Unifier data in CIC Analytics then configure analytics settings in Unifier to bring data into CIC Analytics.

For more details, see the Construction Intelligence Cloud Analytics Primavera Unifier Application Setup Guide.

Setting Up Oracle Primavera Cloud for Analytics

No specific settings need to enabled to publish Primavera Cloud data in CIC Analytics.

Managing CIC Suite Users

CIC Suite refers to the group of the following CIC applications:

- CIC Advisor
- CIC Analytics

If your organization is provisioned with CIC Advisor as well as CIC Analytics, as a cloud administrator, you can additionally:

- create suite administrators and suite users who have access to both CIC applications
- ▶ In addition to the **standard groups** (see "**About Standard Groups**" on page 11), create new custom groups which are a combination of the standard groups associated with each CIC application

For example, create a new custom group by selecting the Analytics Creator standard group in CIC Analytics and the Advisor Consumer standard group in CIC Advisor.

assign users to custom groups

You can assign access to CIC suite applications to users of any of the following products:

- ▶ P6 EPPM
- Primavera Unifier
- Oracle Primavera Cloud
- Oracle Aconex

This chapter describes how to create custom groups and assign users to these groups to control their level of access in CIC Advisor and CIC Analytics.

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About Standard Groups

When your organization is provisioned with both, CIC Advisor and CIC Analytics, you can assign a user to any of the following standard groups:

Advisor Administrator

Advisor administrators can manage data sources, benchmarking groups, threshold settings, schedule ETLs, and add users and additional administrators to CIC Advisor.

Advisor Consumer

Advisor consumers can only view projects in CIC Advisor corresponding to the data sources that they have been given access to.

Analytics Administrator

Analytics administrators can manage data sources, schedule ETLs, and add users to CIC Analytics. They can also create data visualizations if required.

Analytics Creator

Analytics creators can access and create projects, data sets, and data visualizations in CIC Analytics.

Analytics Consumer

Analytics consumers can only view projects, data sets, and data visualizations in CIC Analytics.

Suite administrator

Suite administrators are super users of CIC applications. They are a combination of Advisor administrator and Analytics administrator, and therefore. can administer both applications.

Note: Assign this role judiciously in your organization.

Suite Consumer

Suite consumers are a combination of Advisor consumer and Analytics consumer. users of this group can only view data visualizations that have been given access to in CIC Analytics, and also view analyses of projects evaluated in CIC Advisor for data sources they access to.

Unassigned (default)
 Initially, uses are not assigned to any group by default.

Creating Custom Groups

Custom groups can be created only if your organization is provisioned with:

- CIC Advisor and
- CIC Analytics

Being provisioned with the CIC application suite gives your organization greater flexibility to create custom groups of users with specific permissions based on their needs for accessing any of the CIC applications.

For example, you can create a custom group of users with access to cost and budget information data sets in CIC Analytics who can view analyses shared with them in CIC Advisor.

Create a custom group if none of the **standard groups** (see "**About Standard Groups**" on page 11) meet the needs of your organization.

To create a custom group:

- 1) Use any of the following methods to sign in to the administration application:
 - In your **Welcome** email, click on the CIC Advisor administration application URL and sign in with administrator credentials or
 - Sign in from the Primavera Administration Application portal and click on the Administration application URL.

https://<host>:<port>/p6rdb

2) In the side bar, click **User Management** and then select the **Groups and Permissions** tab.

To sync users added using the Primavera Administration Application portal with users added using the CIC Analytics Administration application, the following message displays: *Sync in in progress, please wait.* Once sync is completed, the following message displays: *<n> users synced*, where n is the number of users synced.

- 3) Click Add new group.
- 4) In the **Create custom group** pane, enter the following information:
 - a. In the **Group Name** field, enter the name of the custom group.
 - b. In the **Group Description** field, briefly explain the purpose of the group.
 - c. In the **Analytics Standard Groups**, select at least one standard group. Choices include:
 - Analytics Administrator
 - Analytics Creator
 - Analytics Consumer
 - d. In the **Advisor Standard Groups**, select at least one standard group. Choices include:
 - Advisor Administrator
 - Advisor Consumer
 - e. Click Save.

The new custom group displays in the Custom Groups table in the bottom section of the **Groups and Permissions** tab.

You can also:

- Edit Custom Groups (see "Editing Custom Groups" on page 13)
- Delete Custom Groups (see "Deleting Custom Groups" on page 14)
- 5) Proceed to assign users to this custom group.

For more details, see *Enabling User Access to Custom Groups* (on page 14)

Editing Custom Groups

To edit a custom group:

- 1) Sign in to the CIC Advisor Administration application.
- 2) In the side bar, click <a> User Management and then select the Groups and Permissions tab.

To sync users added using the Primavera Administration Application portal with users added using the CIC Analytics Administration application, the following message displays: *Sync in in progress, please wait.* Once sync is completed, the following message displays: *<n> users synced*, where n is the number of users synced.

- 3) In the Custom Groups table, for a specific group, click the **Overflow menu** and then click **Edit Group**.
- 4) Make the necessary changes and click **Save**.

A confirmation message displays the changes have been saved successfully.

Deleting Custom Groups

To delete a custom group:

- 1) Sign in to the CIC Administration application.
- 2) In the side bar, click <a> User Management and then select the Groups and Permissions tab.

To sync users added using the Primavera Administration Application portal with users added using the CIC Analytics Administration application, the following message displays: *Sync in in progress, please wait.* Once sync is completed, the following message displays: *<n> users synced*, where n is the number of users synced.

- 3) In the Custom Groups table, for a specific group, click the **Overflow menu** and then click **Delete Group**.
- 4) In the Confirm Delete Group dialog box, click OK.
 All users belonging to this group will now be desisgnated with an unassigned role.

Enabling User Access to Custom Groups

After *creating custom groups* (on page 12), assign user access to custom groups as follows:

- 1) In the side bar, click **User Management**.
 - To sync users added using the Primavera Administration Application portal with users added using the CIC Analytics Administration application, the following message displays: *Sync in in progress, please wait.* Once sync is completed, the following message displays: *<n> users synced*, where n is the number of users synced.
- 2) Click the **All Users** tab to view a list of *existing* users from the following source applications who have been ported into CIC Advisor and CIC Analytics:
 - ▶ P6
 - Unifier
 - Oracle Aconex
 - Primavera Cloud
- 3) (Optional) In the search bar, click **Filter** to view a subset of users of a particular data source and a group.
 - a. Select a **Data Source** and a **Group** of users to filter on.
 - b. Click Apply.
 - Note: At least one data source and a group must be selected.
- 4) Assign the user to the custom group.
 - All initially created users belong to an *unassigned* group by default.
- 5) Click **Change Group** to save the updates made to all users on this page.
- 6) Click **OK** to confirm the changes in the **Confirm Group Change** dialog box.

To revoke a user's privileges, reset the user's group to *Unassigned*. Note that this user will still be able to sign in to CIC Advisor.

To remove a user from accessing CIC Advisor or CIC Analytics, you will need to change the user's account status. See the *Primavera Administration Application Identity Management Administration Guide*

(https://docs.oracle.com/cd/F33532_01/English/admin/id_mgmt/141597.htm https://docs.oracle.com/cd/F33532_01/English/admin/id_mgmt/141597.htm to complete the following tasks:

- Reset a user's password
- Disable a user account
- ▶ Enable a user account
- Unlock a user account

Managing CIC Analytics Users

When your organization is provisioned with CIC Analytics, as a cloud administrator, you will receive the CIC Analytics Administration Application URL in a Welcome email.

Note: Cloud administrators can only be setup when CIC Analytics is initially provisioned for your organization. Therefore ensure you provide contact details of those individuals you plan to designate as administrators.

As a cloud administrator, you can assign access to CIC Analytics who may be users of any of the following products:

- ▶ P6 EPPM
- Primavera Unifier
- Oracle Primavera Cloud

User-level data access for Construction Intelligence Cloud (CIC) is governed by the following criteria:

- User must be granted access to at least one CIC Data Source Cloud Service
- ▶ For each applicable CIC Data Source Cloud Service granted access, the following applies:
 - If the user is licensed in the source application, CIC data access matches the source application data access privileges of each user unless further restricted within CIC
 - If the user is not licensed in the source application, the user has access to all source application data transferred to CIC unless further restricted in CIC

This chapter describes how to add users, assign roles to users to manage their level of access in CIC Analytics, and also create custom roles to support users with specific privileges.

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Enabling CIC Analytics User Access

Use this procedure to grant CIC Analytics access to users brought over from the source applications.

Assign any of the following groups to give users access to CIC Analytics:

Analytics Creator. Users can access and create projects, data sets, and data visualizations in CIC Analytics Analytics Consumer. Users can only view projects, data sets, and data visualizations in CIC Analytics

To enable user access to CIC Analytics:

- 1) Use any of the following methods to sign in to the administration application:
 - In your **Welcome** email, click on the CIC Analytics administration application URL and sign in with administrator credentials or
 - Sign in from the Primavera Administration Application portal and click on the Administration application URL.
 - https://<host>:<port>/p6rdb
- 2) In the side bar, click **User Management**.
 - To sync users added using the Primavera Administration Application portal with users added using the CIC Analytics Administration application, the following message displays: *Sync in in progress, please wait.* Once sync is completed, the following message displays: *<n> users synced*, where n is the number of users synced.
- 3) Click the **All Users** tab to view a list of *existing* users from the following source applications who have been ported into CIC Analytics:
 - ▶ P6
 - Unifier
 - Primavera Cloud
- 4) (Optional) In the search bar, click **Filter** to view a subset of users of a particular data source and a group.
 - a. Select a **Data Source** and a **Group** of users to filter on.
 - b. Click Apply.
 - Note: At least one data source and a group must be selected.
- 5) Assign each user to a group. Select any of the following groups:
 - Analytics Creator
 - Analytics Consumer

Note: All users initially have an *unassigned* role.

- 6) Click **Change Group** to save the updates made to all users on this page.
- 7) Click **OK** to confirm the changes in the **Confirm Group Change** dialog box.

To revoke a user's privileges, reset the user's role to *Unassigned*. Note that this user will still be able to sign in to CIC Analytics.

To remove a user from accessing CIC Analytics, you will need to change the user's account status. See the *Primavera Administration Application Identity Management Administration Guide* (https://docs.oracle.com/cd/F33532_01/English/admin/id_mgmt/141597.htm https://docs.oracle.com/cd/F33532_01/English/admin/id_mgmt/141597.htm to complete the following tasks:

- Reset a user's password
- Disable a user account

- Enable a user account
- Unlock a user account

Creating CIC Analytics Only Users

Use this procedure if you want to add a new user who has *not been ported from any source application*. Users of this category will automatically have access to CIC Analytics.

- 1) Use any of the following methods to sign in to the administration application:
 - In your **Welcome** email, click on the CIC Analytics administration application URL and sign in with administrator credentials or
 - Sign in from the Primavera Administration Application portal and click on the Administration application URL.
 - https://<host>:<port>/p6rdb
- 2) In the side bar, click **User Management**.
 - To sync users added using the Primavera Administration Application portal with users added using the CIC Analytics Administration application, the following message displays: *Sync in in progress, please wait.* Once sync is completed, the following message displays: *<n> users synced*, where n is the number of users synced.
- 3) Click the **All Users** tab to view a list of existing users from the following source applications who have been ported into CIC Analytics:
 - ▶ P6
 - Unifier
 - Primavera Cloud
- 4) In the **Search** bar, enter or search for a user by their user name or email and click **Search**.
- 5) If the user does not exist click **Create an account** to create an identity management account for this new user.
- 6) In the **Create User** pane, enter the following contact information of the user:
 - In the **Last Name** field, enter the last name of the user.
 - In the **First Name** field, enter the first name of the user.
 - In the **User ID** field, enter the user name that the user will use to sign in to the CIC Analytics application.
 - In the **Email** field, enter the user's email ID that is to be associated with their User ID.
 - In the **Mobile** field, enter the primary phone number to contact the user.
 - In the **Datasource** section, select the corresponding check box to give the user access to all data brought into CIC Analytics from the selected data sources.
- ▶ Caution: Judiciously assign users of this category in your organization as they will have access to *all* data from the source applications in CIC Analytics.
- 7) Click Create to add the new user.
 - The user will be assigned the role of an *Analytics Consumer* by default. To change the user's role, see *Enabling CIC Analytics User Access* (on page 17).

Configuring Data Sources

The CIC Analytics administration application supports the following data sources:

- ▶ P6 EPPM
- Primavera Unifier
- Primavera Cloud

This chapter describes how to configure CIC Analytics for each data source.

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Configuration Settings for P6 EPPM Data Source

Before scheduling ETL runs for P6 EPPM data, you will need to configure a P6 EPPM data source.

To set up P6 EPPM data source:

- 1) Sign in to the CIC Analytics Administration application from the Cloud Landing page of the Primavera Administration Application provided inyour Welcome email. http://<host>:<port>/p6rdb
- 2) In the sidebar, select **Status**.
- 3) In the Home menu, select a staretl<id> or a <Custom Name of a data source>.
- 4) In the sidebar, select Config.
- 5) Set the following properties for a P6 EPPM data source, and then select **Save.**

Configuration Property	Description	
In the Configurable Properties section, set up the following properties as required:		
Custom Name for Datasource	Enter a name for the data source for identification purposes. For example, <i>P6 EPPM Production Data</i> .	

Configuration Property	Description
Enable Activity Period Actuals	Controls the display of past period actuals for activities. Select any of the following values: True (default): Enables pay period actuals for
	activities. False: Disables pay period actuals for activities.
ODI LoadPlan Auto Restart	Controls restart of all real-time ODI Load plans. Select any of the following values: True (default): Auto restarts ODI load plans for a maximum count of 3 if an initial run fails. False: Manually restart is required for all real-time ODI load plans.
Enable Resource Assignment Period Actuals	Controls the display of past period actuals for resources. Select any of the following values: True (default): Enables pay period actuals for resources. False: Disables pay period actuals for resources.
Enable Relationship load	Controls the ETL from processing activity relationships. Select any of the following values: True (default): ETL runs will not process relationship loads. False: ETL runs will process relationship loads.
Turn off all History, keep Slowly Changing Dimensions	Controls history tables. Select any of the following values: True: Turns off history tables. Note: SCDs will continue to be captured at the project level without the history tables. False (default): Keeps history tables with SCDs. Note: To delete SCD data for an effective date or a specific date range, contact Oracle Support with a service request.
Disable Rebuild Index	Controls rebuilding of indexes in the cloud database. Select any of the following values: True: Does not rebuild indexes. Results in improved performance. False (default): Rebuilds indexes.

Configuration Property	Description		
Turn off Resource and Role Limits	Controls resource and role utilization scripts. Select any of the following values: True: Turn the scripts off. False (default): Keeps the scripts running.		
Enabled Spread Snapshot History	Controls the use of spread snapshot history in the advanced analytics dashboard. Select any of the following values: True: Enables spread snapshot history. False (default): Disables spread snapshot history.		
Use project filter in data source 1	Selects filtered projects only. Select any of the following values: True: Ensures the next ETL run includes only projects filtered with the ETLFILTER code = ''Y'. False (default): Does not use project filters		
Include Inactive Resources	 Controls resource filtration. Select any of the following values: True: Ensures Primavera Data Warehouse tables will not filter out inactive resources. Note: If inactive resources are included, then spread data and other dimension tables will also be included. You may not need to process this extra resource assignment information. False (default): Filters out inactive resources. 		
Enable Slowly Changing Dimensions and Spread History	Slowly changing dimensions (SCDs) are used to capture the change history of dimension fields. If SCD is enabled, any change to the field will add a new row to capture the change in the data warehouse. If SCD is disabled, a new row will not be added if a change is made to that field. This property controls the creation of SCD and spread history. Select any of the following values: True (default): Captures SCD and spread history. False: Turns off SCD and spread history. 		

Configuration Property	Description
Load all Hierarchy Codes	Builds code hierarchies. Select any of the following values: True: Builds code hierarchies with all codes that come from the source. False (default): Builds hierarchies with codes from configStar.
ODI Log Level	Controls the level of detail included in the ODI log files. Select any of the following values: Summary: Displays a summarized content in the log file. Detail (default): Displays detailed information in the log file.
Degree of Parallelism for Rebuild Index	If the Disable Rebuild Index property is set to False, then select the number of threads (CPUs) you want to enable to run in parallel to rebuild the index.
	s in real-time, set the following properties to poll for PM. The minimum poll interval is 5 minutes, and the poll interval settings listed below:
ODI Realtime Global Loadplan Poll Interval (in minutes)	Enter the frequency at which changes to global data is to be checked in P6 EPPM and captured in the data warehouse. By default the poll interval is set to 10 minutes.
ODI Realtime On Demand Loadplan Poll Interval (in minutes)	Checks for changes to projects whose Enable Publication flag is selected in P6 EPPM. This process runs when new projects are added and published to the data warehouse by triggering the ODI On Demand load plan to run for the selected projects and include it in the data warehouse. Enter the frequency in minutes to check for changes to the Enable Publication flag for projects in P6 EPPM and send it to the data warehouse. By default the poll interval for running the On Demand ODI load plan is set to 60 minutes. At each check, new projects with the Enable Publication flag will be added to the data warehouse, and projects whose Enable Publication flag is disabled will be deleted in the data warehouse.

Configuration Browning	Description
ODI Realtime Project Loadplan Poll Interval (in minutes)	Checks for changes in current projects in P6 EPPM. This configuration property checks those projects whose Data Warehouse Update Frequency (ODI Only) field is set as <i>Immediate</i> in the Project Preferences dialog box in P6 EPPM.
	Enter the frequency in minutes to send changes directly to the data warehouse. By default the poll interval value is set to 1440 minutes (24 hours).
In the OBIEE Settings section, s	etup the following properties:
Mail Prefix	Customize the text that will be displayed in the subject line of email notifications that are sent regarding the status of ETL runs.
	For example, enter <i>Analytics</i> for status updates on ETL runs in CIC Analytics.
P6 Base URL	Enter the URL in the following format: http:// <host>:<port>/p6</port></host>
OBIEE Cache Purge	OBIEE cache entries are used to as a method to improve response times of OBIEE dashboards. This property controls the clearance of OBIEE cache entries.
	Select any of the following values:
	True: Clears OBIEE cache entries.
	False (default): Retains the cache entries.
Send Email Notification	Enter the email IDs of the personnel to be notified regarding the status or issues with the STARETL runs. Also select the type of events for which they are to be notified:
	Failure: Email notifications are sent only for failed ETL runs.
	 Success: Email notifications are sent only for successful ETL runs.
	Both: Email notifications are sent for successful and failed ETL runs.

Configuration Settings for Unifier Data Source

Before scheduling ETL runs for Unifier data, you will need to configure a Unifier data source.

To set up Unifier data source:

- Sign in to the CIC Analytics Administration application from the Cloud Landing page of the Primavera Administration Application provided inyour Welcome email. http://<host>:<port>/p6rdb
- 2) In the sidebar, select **Status**.
- 3) In the Home menu, select a staretl<id> or a <Custom Name of a data source>.
- 4) In the sidebar, select Config.
- 5) Set the following properties for a Unifier data source, and then select Save.

Configuration Property	Description		
In the Configurable Settings sectio	n, setup the following properties:		
Custom Name for Datasource	Enter a name for the data source for identification purposes. For example, <i>Unifier Production Data</i> .		
Disable Rebuild Index	Controls rebuilding of indexes in the cloud database. Select any of the following values: True: Does not rebuild indexes. Results in improved performance. False (default): Rebuilds indexes.		
Degree of Parallelism for Rebuild Index	If the Disable Rebuild Index property is set to False, then select the number of threads (CPUs) you want to enable to run in parallel to rebuild the index.		
ODI Log Level	Controls the level of detail included in the ODI log files. Select any of the following values: Summary: Displays a summarized content in the log file. Detail (default): Displays detailed information in the log file.		
Enable Unifier EVM	Controls the usage of Unifier Earned Value Management data. Select any of the following values: True: Populates the cloud database with EVM data. False (default): Does not populate the cloud database with EVM data. Results in improved performance.		

Configuration Property	Description
Store Unifier History	Controls Unifier history tables. Select any of the following values: True (default): Keeps the history tables running.
	False: Disables all history tables.
If Store Unifier History is set to <i>True</i> , yo	ou can set the history levels for the following:
Use P6 project Name for Unifier Project	Controls the source that will be used for naming a Unifier project.
	Select any of the following values:
	 True (default): If the Unifierproject ID is identical in P6 and Unifier, then the project name from P6 will be used for the Unifier project. False: Uses the project name from Unifier.
Unifier BP Data History Level	Controls BP data history level.
	Select the frequency of BP history tables as Week (default) or Month to capture the history of BP dimensions.
Unifier Level Data History Level	Controls level history (Facility and Asset Management, FAM).
	Select the frequency of data history tables as Week or Month (default).
Unifier Cash Flow and Cost Sheet Data History Level	Controls the cash flow history and cost sheet history tables.
	Select the frequency of history tables as <i>Week</i> (default) or <i>Month</i> .
Unifier Space Data History Level	Controls space history tables. Set this value to Month (default).

Configuration Property	Description	
Enable Unifier Slowly Changing Dimensions	Controls the capability to see how business process has changed over time. A business process history can then be generated weekly or monthly. When you select Refresh All , it overwrites all previous history and only the latest history data is made available. Use this setting for Project / Shell, BP and BP Line Items and BP UDFs to generate reports based on historical data.	
	 Select any of the following values: True (default): Captures history for all projects and business processes. This includes non-dynamic Business process related dimensional data, and dynamic dimensional data for Business process (UDFs) metadata. 	
	False: Disables business process history.	
Unifier Project Shell History Level	Controls project shell history levels. Select the frequency of BP history tables as <i>Week</i> (default) or <i>Month</i> .	
In the OBIEE Settings section, setup t	he following properties:	
Mail Prefix	Customize the text that will be displayed in the subject line of email notifications that are sent regarding the status of ETL runs. For example, enter <i>Analytics</i> for status updates on ETL runs in CIC Analytics.	
Unifier Base URL	Enter the URL in the following format: http:// <host>:<port>/unifier</port></host>	
OBIEE Cache Purge	OBIEE cache entries are used to as a method to improve response times of OBIEE dashboards. This property controls the clearance of OBIEE cache entries. Select any of the following values: True: Clears OBIEE cache entries. False (default): Retains the cache entries.	

Configuration Property	Description
Send Email Notification On	Enter the email IDs of the personnel to be notified regarding the status or issues with the STARETL runs. Also select the type of events for which they are to be notified:
	 Failure: Email notifications are sent only for failed ETL runs.
	 Success: Email notifications are sent only for successful ETL runs.
	Both: Email notifications are sent for successful and failed ETL runs.

Configuration Settings for Primavera Cloud Data Source

Before scheduling ETL runs for Primavera Cloud data, you will need to configure a Primavera Cloud data source.

To set up Primavera Cloud data source:

- Sign in to the CIC Analytics Administration application from the Cloud Landing page of the Primavera Administration Application provided inyour Welcome email. http://<host>:<port>/p6rdb
- 2) In the sidebar, select **Status**.
- 3) In the Home menu, select a staretl<id> or a <Custom Name of a data source>.
- 4) In the sidebar, select **Config**.
- 5) Set the following properties for a Primavera Cloud data source set the following properties and then select **Save.**

Configuration Property	Description
In the Configurable Settings se	ection, setup the following properties:
Custom Name for Datasource	Enter a name for the data source for identification purposes. For example, <i>Primavera Cloud Production Workspace</i> .
Enable Loading Primavera Cloud UDFs	Controls the ability to load user defined fields (UDFs) in a future release. Select any of the following values: True: Loads UDFs. False (default): Does not load UDFs.

Configuration Property	Description		
ODI Log Level	Controls the level of detail included in the ODI log files.		
	Select any of the following values:		
	Summary: Displays a summarized content in the log file.		
	Detail (default): Displays detailed information in the log file.		
In the OBIEE Settings section, setup the following property:			
OBIEE Cache Purge	OBIEE cache entries are used to as a method to improve response times of OBIEE dashboards. This property controls the clearance of OBIEE cache entries.		
	Select any of the following values:		
	True: Clears OBIEE cache entries.		
	False (default): Retains the cache entries.		
Send Email Notification	Enter the email IDs of the personnel to be notified regarding the status or issues with the STARETL runs. Also select the type of events for which they are to be notified:		
	 Failure: Email notifications are sent only for failed ETL runs. 		
	 Success: Email notifications are sent only for successful ETL runs. 		
	Both: Email notifications are sent for successful and failed ETL runs.		

Connecting to Primavera Cloud Data Service

To run the Primavera Cloud ETL for the initial load using the CIC Analytics Administration application, you will need to connect to Primavera Cloud data service.

Note: Although this is a one-time setup, you will need to sign in any time you change your password for Primavera Cloud data service.

To sign in to Primavera Cloud data service for the first time:

- 1) Sign in to CIC Analytics Administration application: http://<host>:<port>/p6rdb
- 2) From the **Home** menu, select a **staretl<id>** or a **<Custom Name of a data source>** for Primavera Cloud.

- 3) In the sidebar, select Restful Credentials.
- 4) In the **Username** field, enter the username to connect to Primavera Cloud data service.
- 5) In the **Password** field, enter the password for the user specified in the **Username** field.
- 6) Select **Test Credentials** to check the connection to Primavera Cloud data service is established.
- 7) Upon receiving a successful validation message, select Save.
- 8) Select Initial Load to start the ETL run for the initial load.

Standard Administration Tasks

To bring data from a source application into CIC Analytics, you need to run or schedule ETLs and ODI load plans (if applicable to your data source) from the **Status** page of the CIC Analytics Administration application.

To select a data source, from the **A Home** menu, select a STARETL or a **<Custom Name for DataSource>** such as *P6*, as shown below.



The following source applications are currently supported:

- ▶ P6 EPPM
- Unifier
- Oracle Primavera Cloud

This chapter describes the standard administration tasks that you will perform to manage the source data displayed in CIC Analytics.

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Scheduling STARETL Runs	
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Running the STARETL Process

The CIC Analytics Administration application contains a staretl section for each data source. To run the STARETL process:

- 1) Select a data source.
 - a. Sign in to the CIC Analytics Administration application. http://<host>:<port>/p6rdb
 - b. From the Home menu, select a staretl<id> or a <Custom Name for DataSource>.

Note: <id> is the identifier of the data source.

- c. In the sidebar, click **Status**.
- 2) Click **Actions** and select **Run ETL** to run the STARETL process immediately.

Stopping the STARETL Process

To stop the STARETL process run for a data source:

- 1) Select a data source.
 - a. Sign in to the CIC Analytics Administration application. http://<host>:<port>/p6rdb
 - b. From the Home menu, select a staretl<id> or a <Custom Name for DataSource>.

Note: <id> is the identifier of the data source.

- c. In the sidebar, click **Status**.
- 2) Click **Stop** for a currently running STARETL process.

Scheduling STARETL Runs

To schedule a STARETL process run for a data source:

- 1) Select a data source
 - a. Sign in to the CIC Analytics Administration application. http://<host>:<port>/p6rdb
 - b. From the Home menu, select a staretl<id> or a <Custom Name for DataSource>.

Note: <id> is the identifier of the data source.

- c. In the sidebar, click **Status**.
- 2) Click Actions and select Schedule ETL.
- 3) In the **Schedule Frequency** field, select the frequency for the STARETL process run as *Daily*, *Weekly* or *None*.

If you select Daily:

- a. In the Run ETL at field, enter the start time for the daily ETL run and click Save.
- To schedule multiple ETL runs daily, click Add and enter a date and time for each ETL run.

Note: Schedule multiple ETLs daily at least two hours apart.

If you select Weekly:

- c. In the Run ETL at field, enter the time for the process run.
- d. Select the days for running the STARETL process, and click Save.

If you select None, no STARETL process run will be scheduled for a data source.

Schedule Auto Restart of Load Plans

To schedule automatic restart of load plans:

- 1) Select a data source
 - a. Sign in to the CIC Analytics Administration application. http://<host>:<port>/p6rdb
 - b. From the Home menu, select a staretl<id> or a <Custom Name for DataSource>.

Note: <id> is the identifier of the data source.

- c. In the sidebar, click **Status**.
- 2) Click Actions and select Schedule Auto Restart.
- 3) From the **Auto Restart On** list, select the week day to restart the load plan. Initially, the Auto Restart is set to *None* by default.
- 4) In the At field, scroll and schedule the restart time.
- 5) Click Save.
- 6) Click **OK** to close the success message, Restart Load Plans Scheduled Successfully.
- 7) Click Close.

Reviewing Log Files of STARETL Runs

To view a *list of recently run* STARETL processes across all data sources, and access their respective log files:

- 1) Sign in to CIC Analytics Administration application. http://<host>:<port>/p6rdb
- 2) In the sidebar, click **Status**.
- 3) On the Global Status page, the following information displays each STARETL process:

- **Custom Name**: The custom name given to a data source.
- **ETL Name**: The identifier for the data source for the STARETL process.
- **ETL ID**: The unique identifier for the STARETL process run.
- **ETL Start Date**: The start date and time for the STARETL process run based on the server time.
- ▶ ETL End Date: The end date and time for the STARETL process run based on the server time.
- > Status: The status of the STARETL process run. These include:
 - OK: The STARETL process completed successfully.
 - Running: The STARETL process is currently running.
 - Stopped: The STARETL process has been manually intervened to stop
 - Failed: The STARETL process has failed. View the report and log for more information about the failure.
- Log: Click View Log to access details of the STARETL run.

Note: Alternatively, to view the log file from the **Status** page of a specific staretl process run, from the **A Home**, menu select a staretl and, and then click **Status**.

Additional Procedures for Scheduling P6 EPPM ETL Runs

P6 projects can be set up for:

- Burn Down calculations
- Work Planning calculations or
- Graded approach for schedule adherence

Ensure specific project settings are enabled in P6 EPPM if you plan to have any of the above metrics calculated in CIC Analytics.

For more details on how to enable the project settings, see the *Construction Intelligence Cloud Analytics P6 EPPM Application Setup Guide*.

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Configuring User-Defined Codes for P6 EPPM Data Source

To extract and load a subset of P6 EPPM user-defined codes (UDFs) to CIC Analytics:

- Sign in to CIC Analytics Administration Web Application: http://<host>:<port>/p6rdb
- 2) In the sidebar, select **Status**.
- 3) In the All list, select staretl<id> or a <custom name for data source>.
- 4) In the left pane, select in UDFs.
- 5) Select any of the following tabs to migrate the following UDFs for the selected data source:
 - Activity
 - Project
 - Resource Assignment
 - Resource
 - **WBS**

For example, select *Project, Activity, Resource, Resource Assignment*, and *WBS* level UDFs from P6 EPPM.

- 6) Select any of the following tabs to migrate a UDF type. The following UDF types are supported:
 - Cost

- Date
- Non-Cost

Number and Integer UDF types are displayed in the 'Non-Cost' folders.

- Text
- Indicator

Notes:

- Formula-driven UDF values are not brought over during the STARETL process. The calculated UDFs can be selected as columns but the values will be null.
- A limit of approximately 220 UDFs for each supported level (Project, WBS, Activity, Resource, and Resource Assignment) and data type (Cost limit is 220, Non-Cost limit is 220, and a combination comprising Date, Text, and Integer of 220). The limit for Indicator type UDFs for each level is 40. For example, you can select a total of 220 UDFs that includes Project Cost UDFs, WBS Cost UDFs, Activity Cost UDFs.
- By default, CIC Analytics exposes only the UDFs that have been enabled through the administration application.
- 7) To select a UDF to be migrated to CIC Analytics:
 - a. In the Available UDFs list, select a UDF from P6 EPPM.
 - b. Click the right-arrow >.
- 8) To deselect a UDF from being migrated to CIC Analytics:
 - a. In the Enabled UDFs list, select the UDF from P6 EPPM.
 - b. Click the left-arrow <.
- 9) Select Save Changes.

Supporting P6 Projects with Burn Down Calculations

Burn down is a set of calculations that display how a project will progress if everything goes according to plan. CIC Analytics contains an additional way that data can be analyzed outside of the standard P6 EPPM methods.

CIC Analytics includes metrics and key performance indicators (KPIs) for both the current project data, as well as any point in the past for which the data was captured. These metrics and KPIs include both current and historical activity counts, units, and costs. CIC Analytics has the ability to track and monitor how the current schedule is executing in relationship to how it was supposed to progress at the start of the project (T-0). This includes, but is not limited to, any new activities that were added to the current project that did not exist at the start of the project (emergent), activities that have been removed in the current schedule that existed in the point in time capture of the project (deleted), and activities whose start or finish has changed since the point in time capture of the project.

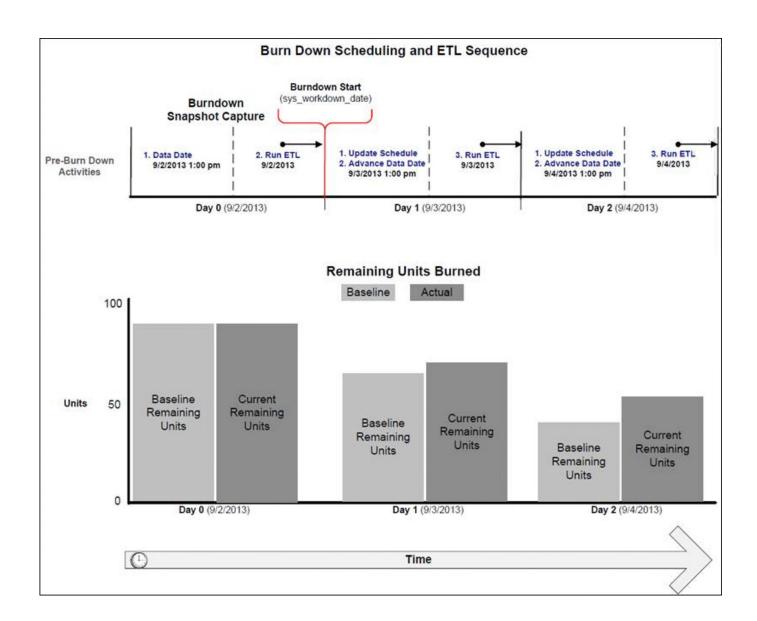
Note: Oracle provides several white papers that detail aspects of Burn Down:

- Burn Down Detail Data Flow: http://www.oracle.com/webfolder/technetwork/tutorials/primavera/OnlineLearning/WhitePapers/BurnDown_Details_DataFlow.pdf
- Burn Down Units Details: http://www.oracle.com/webfolder/technetwork/tutorials/primavera/OnlineLearning/WhitePapers/BurnDown Details Units.pdf
- Burn Down Counts Details: http://www.oracle.com/webfolder/technetwork/tutorials/primavera/OnlineLearning/WhitePapers/BurnDown_Details_Counts.pdf

Scheduling a Burn Down Project

A project can have activities scheduled and completed before a burn down begins. This gives users the flexibility to begin the project burn down on the date specified in the **sys_workdown_date** UDF rather than the **Project Start Date**.

In a Burn Down project, the initial snapshot of the project's activities and assignments is taken the day before the date entered in the **sys_workdown_date** UDF. This snapshot is used as a baseline to compare against actual values. For example, the **Baseline Remaining Units Burned** can be compared to the **Remaining Units Burned**. The STARETL process must be run one day before the **sys_workdown_date** (or the **Project Start Date** if this UDF is not used) to capture this initial snapshot.



STARETL Runs for Burn Down Metrics

When using Burn Down metrics, you must update the schedule and run the STARETL process. Each daily STARETL process updates two sets of daily metrics:

- Metrics for 'Today': All work completed today through the latest schedule update and data date change is recorded as work completed for the current date when the STARETL process occurs.
- Metrics for 'Yesterday': Since the data from yesterday is only current through the latest schedule update and data date change, any additional work completed yesterday but AFTER the update is now added to the daily metrics for 'yesterday'.

For example, a project is updated at 6pm daily and then the STARETL process is run. The next day, these become metrics for 'yesterday' and initially reflect work only through 6pm yesterday. When the STARETL process is run today, any additional work completed between 6pm and midnight is now included under the metrics for 'yesterday'.

Calculating Metrics in Burn Down Subject Area

To capture daily trending information, complete the following steps each day to calculate the metrics in the Burn Down subject area:

- Update the status of activities in the projects you configured in P6 to be included in the Burn Down subject area. For example, update the Actual and Remaining Units and which activities are completed.
- 2) Adjust the data date to correspond to the latest status update.
- 3) Run the STARETL process.

Note: The STARETL run must occur within each calendar date to properly capture daily metrics.

Supporting P6 Projects with Work Planning Calculations

Work Planning is a method of tracking how work is progressing based on a set of user-determined points in time. CIC Analytics supports Work Planning for P6 EPPM data.

Scheduling a Work Planning Project

Scope freeze, schedule freeze, and actual metrics are captured for each week of planned work in a project that has been opted into the Work Planning subject area. Each individual week in the schedule will have these metrics captured leading up to that week's execution, allowing users to monitor their planning performance on a weekly basis for an upcoming week of work.

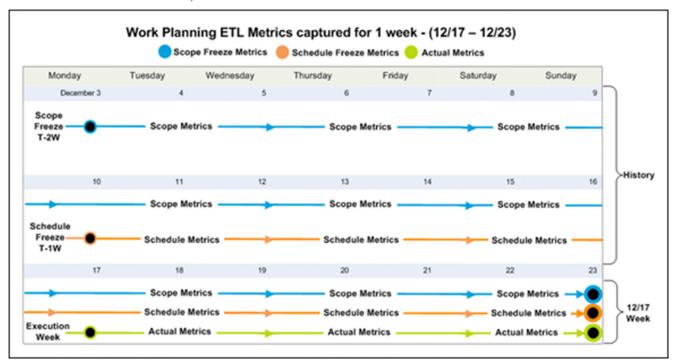
The sys_scope_freeze and sys_schedule_freeze UDFs control the amount of history or the number of weeks these metrics capture for each individual week leading up to the execution week.

The diagram below illustrates how the ETL process would capture Work Planning metrics for the week 12/17/2012 to 12/23/2012 given the following P6 settings:

- ▶ The sys scope freeze equals T-2w
- ▶ The sys_schedule_freeze equals T-1w
- ▶ The Starting Day of Week equals Monday (this is set in the P6 Application Settings)

In this scenario, the **Scope Freeze** for the week starting on Monday 12/17/2012 occurs two weeks prior (T-2w) to that week's planned start date. **Schedule Freeze** occurs one week prior (T-1w) to that week's planned start date. Daily Actual Start and Finish metrics are captured throughout the week.

Once the STARETL process has run on these respective freeze dates, any changes in the schedule for an upcoming week (such as adds, deletes, or planned date changes) are recorded the next time the STARETL process runs.



Using Graded Approach for Schedule Adherence

Graded approach to schedule adherence is a method for tracking adherence using four distinct levels of work scheduling (A, B, C, and D).

The levels of work scheduling are:

- ▶ A (Hourly): Used when you require the most control, adherence, and management oversight. Reasons include risk (probability safety analysis/risk assessment), personnel safety, or other significant concerns. Users must finish Level A activities within one hour of the target planned finish date.
- **B (Daily)**: Used for work requiring multi-discipline coordination, significant tagouts, or risk significant work. Users must finish Level B activities on the same day as the target planned finish date.
- ▶ C (Weekly): Used for non-risk significant and routine work that does not require support from other work groups. Users must finish Level C activities within the week of the target planned finish date.

▶ **D (No Tracking)**: Used for housekeeping, shop work, and other types of work that have no impact to the plant. Level D activities are considered "fill-in" work and are not tracked for schedule adherence.

For graded schedule adherence, ensure history exists for the project as of the scheduled freeze date and T-0 baseline date for the week the STARETL process will run.

During T-0 for a given week when you run the STARETL process, the Baseline Planned Finish Date (as of T-0) and the Schedule Freeze Planned Finish Date (as of schedule freeze UDF) for the activities will be captured. You can use these dates along with the assigned adherence grade to calculate the graded schedule adherence in CIC Analytics.

Managing Personal Information

This chapter describes how to manage personal information (PI) in Construction Intelligence Cloud Analytics.

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About Consent Notices

Consent notices inform users how personal information (PI) is collected, processed, stored, and transmitted, along with details related to applicable regulations and policies. Consent notices also alert users that the action they are taking may risk exposing PI. Oracle Construction and Engineering products help you to ensure that you have requested the appropriate consent to collect, process, store, and transmit the PI your organization holds as part of any source application (P6 EPPM) that can be configured with CIC Analytics.

About Personal Information

Personal information (PI) is any piece of data which can be used on its own or with other information to identify, contact or locate an individual or identify an individual in context. This information is not limited to a person's name, address, and contact details. For example, a person's IP address, phone IMEI number, gender, and location at a particular time could all be personal information. Depending on local data protection laws, organizations may be responsible for ensuring the privacy of PI wherever it is stored, including in back-ups, locally stored downloads, and data stored in development environments.

As part of your CIC Analytics Cloud Service, you may be using Oracle Identity Cloud Service ("Oracle IDCS") to manage your user access and entitlements across a number of cloud and on-premises applications and services. If you are using or accessing Oracle IDCS, you are responsible for deleting your details and data from the Oracle IDCS environment. You are responsible for retrieving your content in Oracle IDCS during your applicable services period.

Configuring Consent Notices for CIC Analytics

CIC Analytics consumes data from source applications and makes it available to CIC Analytics users. End-users must give their consent in the *source* application to read and agree to the consent message to ensure they:

- have access to the data in CIC Analytics
- understand the responsibilities with regard to data protection and security

P6 EPPM and Unifier source applications can be configured with CIC Analytics. For detailed instructions on how to configure consent notices in either application, refer to the *P6 EPPM Application Administration Guide* and the *Primavera Unifier General Administration Guide* respectively.

Your Responsibilities

Information security and privacy laws can carry heavy penalties and fines for organizations which do not adequately protect PI they gather and store. Data visible to a CIC Analytics user depends on the consent notices configured and accepted by users in the source applications which can be configured with CIC Analytics.

If these laws apply to your organization, it is your responsibility to ensure consent notices are configured in the source applications before they are required.

Ensuring Privacy of Data Collection

Personal information (PI) in CIC Analytics depends on the changes made in source applications such as P6 EPPM. When PI data is modified or deleted in the source applications, run the ETL process to ensure it is automatically reflected in CIC Analytics. If a user is deleted in a source application, they can no longer access CIC Analytics.

Limiting Granular Access to Data

Products provide granular access controls, by record, data element, type of data, or logs. Ensure CIC Analytics adheres to the same user privileges and access rights as any of the source applications supported by CIC Analytics.

Ensuring Data Masking is Supported

Data masking is the ability to display only a portion of a data field or prevent viewing data. Oracle database security policies can hide access to certain columns. Ensure you review this feature for CIC Analytics.

Ensuring IP White-listing

An IP white list is a list of trusted IP addresses from which your users can access domains. CIC Analytics uses Oracle Analytics Server for displaying analyses and data visualizations. For more details on IP white-listing, refer to OAS documentation.

Controlling Access to Special Categories of Data

CIC Analytics has control over some sensitive fields. Control can be regulated to only users that are allowed to login. Data access is generally project level and either cost or no cost, and granularity is provided for those differences. Global data is also visible but honors same security as source applications.

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Oracle Construction Intelligence Cloud Analytics Administration Guide

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