

# **HP CloudSystem Chargeback for CSA**

For the Windows<sup>®</sup> operating system

Software Version: 9.40

## **User Guide**

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# Chapter 1

## Introduction

Enterprise customers today are looking to the cloud to help them better deliver existing as well as new, innovative services on demand across network, computing, and storage resources—at reduced cost.

The HP CloudSystem Chargeback (CSC) provides a method of accounting for technology-related expenses that applies the costs of services, hardware and software to the business unit in which they are used. Cloud chargebacks are sometimes called “responsibility accounting” because this sort of accounting demonstrates which departments or individuals are responsible for significant expenses.

CSC reporting systems that leverage chargeback provide end users with more transparency into which business decisions are creating expenses and help management identify how to achieve greater efficiency.

CSC shares the same code base, and leverages the existing capabilities of HP Asset Manager which has decades of experience providing financial and cost management, infrastructure services management, Software Asset Management (SAM) as a completed infrastructure asset management solution specifically to cater for converged infrastructure strategy.

## Who is this guide intended for?

This guide is intended for the consumers, department managers, and IT managers who wish to utilize CSC for HP Cloud Service Automation (CSA) to:

- View and analyze the statuses of the cloud services that are requested in CSA.
- Achieve chargeback and budget management across multiple departments.

## Business overview

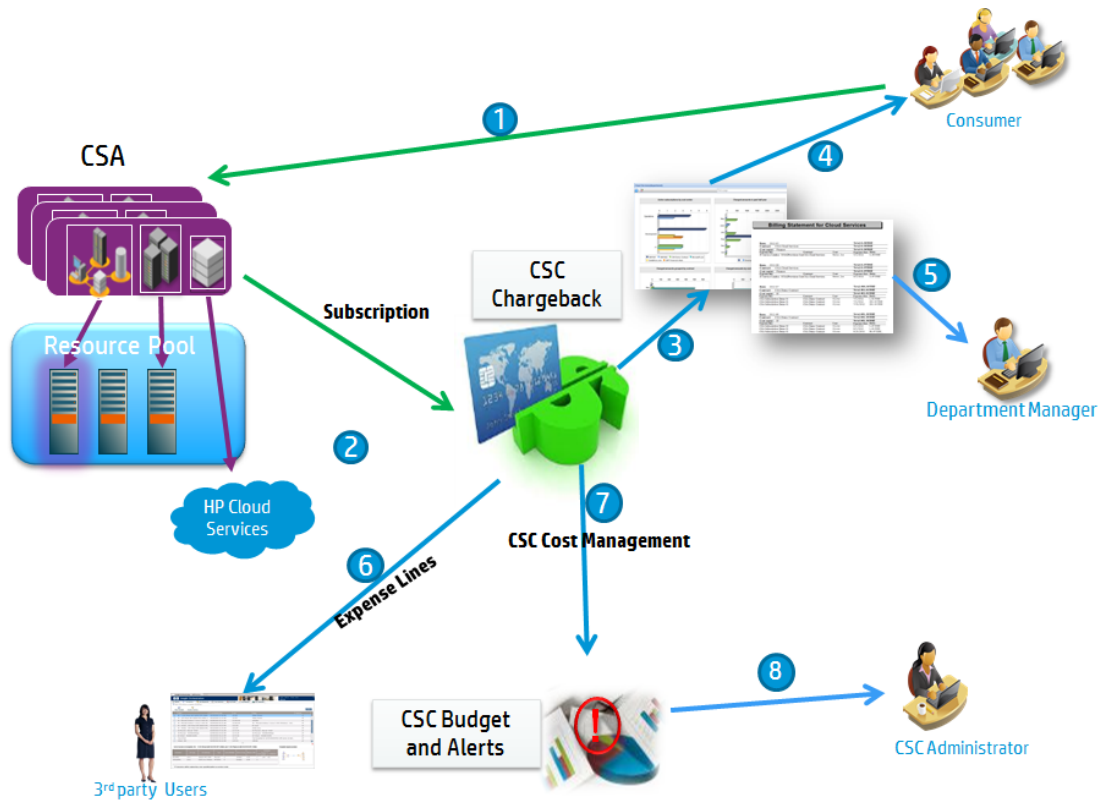
This section introduces the business case and background information of CSC for CSA.

## HP Cloud Service Automation

HP Cloud Service Automation is the industry’s most comprehensive, unified cloud management platform for brokering and managing enterprise-grade application and infrastructure cloud services. Increase agility, reduce cost and risk, and improve time-to-market of application services with a self-service portal and management platform for multiple cloud environments. The open, extensible architecture allows you to easily adapt to changing business requirements while supporting heterogeneous IT environments. HP Cloud Service Automation is available as part of HP CloudSystem or as a standalone software solution.



## CloudSystem Chargeback for CSA



CSC utilizes the capabilities of HP Asset Manager financial management to serve as a consolidated place to manage the cloud service billing, budget management, and provisioned IT resources. It provides the visibility to the IT management level users to manage and control the cost to deliver the service with the resource information in HP CloudSystem products such as CSA. The most important, with the exposure usage and billing information through CSA, CSC plays the IT cost engine role given the chargeback reporting and tailor-able billing statements capabilities.

CSC is an important part of the supporting infrastructure and best practices that should be in place to support IT's transformation into a Provider of Services in the Hybrid Cloud. CSC focuses on the Cloud billing foundation as a reliable "source of truth," supporting chargeback for cost and budget management and finally on infrastructure assets and services portfolio to increase data accuracy, integrity, increase customer time to value.

CSC provides various reports and statistics that enable you to improve your cost strategy, and provides data for budgeting and gives your finance group the information they need to re-define their financial model.

# Chapter 2

## General concepts

This chapter introduces the main terms used in CSC.

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## Chargeback

Chargebacks are used to re-allocate an expense paid by a (source) billing center to the (target) billing centers that were really at the origin of the expense. CSC for CSA enables you to define chargeback rules to automate the creation of chargeback expense lines.

The source billing center is credited with the amount of the chargeback, whereas the target billing centers are debited with the same amount. The amount credited and the sum of the amounts debited cancel each other out.

## Expense line

An expense line is the full description of an expense (debit amount, credit amount, date, tax, etc.).

## Chargeback rule

A chargeback rule is a set of parameters used to define how to reallocate expenses:

- Triggering conditions.
- Source and target billing centers.
- Calculation method and chargeback amount.

For more information about how chargeback rules work, refer to ["How chargeback rules work" on page 47](#).

## Budget

A budget gives you a central location to manage revenues and expenses according to a time division (one fiscal year, for example). A budget consists of multiple budget lines.

To achieve budget management in CSC, you need to manually create budgets in a budget center.

## Budget center

A company's budgets are normally defined in the period of one financial year, which lasts an entire calendar year. However, there is something that lasts even longer than the one-year budget: the budget center. A budget center is a perpetual structure that houses the budgets for a particular entity in your company. For example, you can have a budget center for each department in your company.

A budget center is made up of budgets and billing centers. The budget center does not need to be bounded in time to a given type of expense. Budgets, on the other hand, are specific to a period and a type of expenses. A budget center enables you to plan and track expenses for a set of billing centers.

You can create new budget centers in CSC.

## Billing center

A billing center (as known as cost center) is used to group together expenses generated by a business unit. To implement budget management, each billing center must belong to a budget center.

The ID of the billing center is called billing code.

When importing data to CSC, the chargeback rules are triggered to calculate initial expenses. The chargeback rules rely on the proper setting of these billing centers:

- The subscriber's billing center
- The billing center from which the subscription cost is initially deducted

In this way, the subscription cost is re-allocated from the billing center where the cost is initially deducted to the billing center of the user who actually subscribed to the cloud service.

Make sure these billing centers are populated with the correct value. Otherwise, some unresolved chargeback events may be generated. To handle these unresolved events, refer to "[Unresolved chargeback events](#)" on page 38.

## Financial year

A financial year is the time span covered by a budget.

A given financial year can be divided into a set of periods. Each set of periods corresponds to a time division.

## Time division

A time division is a way of dividing a financial year into a set of periods.

A given financial year can have several associated time divisions (semesters, quarters, and so on).

Time divisions are used to delimit the scope of budgets.

By linking a budget to a time division, the budget is indirectly linked to the financial year covered by the time division.

For example, a time division can be **Monthly**, **Bimonthly**, **Quarterly**, **Semiannually**, and so on.

# Chapter 3

## User roles

This chapter introduces the user roles of the CSC.

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### Consumer

A consumer can view his subscribed service billing. People of this persona can perform self-service to request and subscribe cloud services in CSA.

A consumer can leverage the following CSC functionalities:

- After logon, the personal business home page (My cloud) is presented.
- The consumer can view his service list and details, but cannot modify them.

### Department manager

When user information is imported from Active Directory to CSA, a department is created for each organization unit in the Active Directory that manages the CSA users.

A department manager manages the users and organization units in the department (the corresponding organization unit in the Active Directory). A department manager can also view the costs of the entire department.

A department manager can leverage the following CSC functionalities:

- A department manager manages the department and employee information by:
  - Viewing the employee list
  - Performing user management by:
    - Adding or changing the billing center for consumers and other department managers
- After a department manager logs on, the business home page of the department (My department's cloud) is presented.
- A department manager can view the department's service list and details, but cannot modify them.
- A department manager can view his personal business home page (My cloud).
- A department manager can view his service list and details, but cannot modify them.

## CSC administrator

A CSC administrator manages the basic financial settings of the billing centers, budget centers, chargeback rules, and departments. You must use the built-in **Admin** account to grant the CSC administrator role to a user after the user information is ported from the LDAP server.

For more information about the built-in **Admin** account, refer to **Installation and Configuration** guide, Chapter **Configuring CSC**, Section **The built-in Admin user account**.

For more information about how to grant the CSC administrator role to a user, refer to ["User/Department" on page 39](#).

By default, this CSC administrator has high privilege and is able to manage all the departments. You can create new CSC administrators by using this user account, the CSC administrators created in CSC may be able to manage all the departments, or may only be able to manage certain specified departments.

A CSC administrator can leverage the following CSC functionalities:

- A CSC administrator manages the department and employee information by:
  - Viewing the details of the employee information
  - Performing user role management by:
    - Assigning user role to certain users. Note that a CSC administrator can assign any role to a user.
    - View the details of the user roles.
- A CSC administrator can view and modify the chargeback rules for his departments by:
  - Viewing the list of chargeback rules.
  - Enabling and disabling chargeback rules. By default, a global (out-of-box) chargeback rule is created and enabled.
  - Viewing and modifying the chargeback rules.
  - Viewing and resolving unsolved chargeback events.

**Note:** A CSC administrator can only view and modify the chargeback rules on the CSC Windows client.

- A CSC administrator manages the budgets and costs of his departments by:
  - Viewing and modifying the billing centers.
  - Viewing and modifying the budget centers.
  - Viewing and modifying the budgets and budget lines.

- Setting an alert threshold for each budget line and designating supervisors who can receive budget alarms when the expense crosses the threshold.
- Viewing and modifying the financial years.
- Viewing and modifying the currencies.
- Viewing and modifying the exchange rates.
- After a CSC administrator logs on, the business home page of the departments he manages (My department's cloud) is presented.
- A CSC administrator can view the departments' service list and details, but cannot modify them.
- A CSC administrator can view his personal business home page (My cloud).
- A CSC administrator can view his service list and details, but cannot modify them.
- A CSC administrator can view the cloud billing report.

# Chapter 4

## CSC functionalities and user interfaces

This chapter introduces the CSC user interfaces and shows you how to leverage the CSC functionalities.

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## Start using CSC

This section shows how you can start using CSC. In particular, it details the basic actions that you can perform the first time you launch this application.

### Configuring the Web browser

You must define the security settings to enable the CSC Web application to run properly.

Adapt the security settings that enables the Web browser to:

- Execute JavaScript.
- Display pop-up windows.
- Accept cookies.

Security settings are defined at several levels:

- Globally, by the administrator of the IT department
- Locally, by each user's local browser security settings

**Note:** You must define the security settings of the zone in which your company has placed the CSC Web application (Internet, Local intranet, Trusted sites).

### Starting the Web application

To start CSC using a Web browser, follow these steps:

1. Start the Web browser.
2. Enter a URL using the following syntax:  
`http://<CSC Web Tier server name>:<Port used by CSC Web Tier>/AssetManager`

**Note:** By default, the port used by CSC Web tier is 30101. In addition, you have to use the full host name of the CSC server instead of the IP address to run the reporting service correctly.

3. Populate the following fields:

Field	Value
Login	The user account used to connect to CSC
Password	Password associated with the user account

## Disconnecting from CSC

Click **Logout** at the upper right of the Web page.

**Note:** Save the modifications before you log out because the CSC will not remind you to do so.

## Operations on records

This section explains how to create, modify and delete records in CSC.

Only a department manager or a CSC administrator may need to perform operations on records when configuring financial or user settings.

### *Use of record detail*


A record's detail contains the full set of information that is related to this record. This information is divided into tabs organized by subject matter.

For example, a budget record's may be detailed as follows:

---

**Modify** **New** **Duplicate** **Save** **Cancel** [List of budgets](#)

 \* **Name:** HP\_EMEA Cloud Service Budget

**General** | **Lines**

---

\* **Budget center:** HP\_EMEA budget center  
Code: TestBudget2

\* **Division:** 2013: Monthly

\* **Classification:** IT activity  
Status: In preparation

Comment:

**Modify** **New** **Duplicate** **Save** **Cancel** [List of budgets](#)

## ***Creating a record***

1. Open the list in which you want to create the record.  
For example, to create a budget line, select the **Finance management/ budget lines** link on the navigation bar.
2. Click **New**.
3. Populate the fields and links of the record detail.
4. Do one of the following:
  - Click the **Cancel** button to cancel creation of the record.
  - or
  - Click **Save** to add the record to the database.

## ***Modifying a record***

1. Open the list which contains the record to modify. For example, the **Budget lines** list under **Financial management**.
2. Click a record to display the details of the record.
3. Click **Modify**.
4. Make changes to the record.
5. Do one of the following:
  - Click the **Cancel** button to cancel modification of the record.
  - or
  - Click **Save** to update the record in the database.

## ***Duplicating a record***

1. Open the list in which you want to duplicate the record.  
For example, to duplicate a budget line, select the **Finance management/ budget lines** link on the navigation bar.
2. Click the record you want to duplicate.
3. Make changes to the new record that is duplicated from the record you selected.
4. Do one of the following:

- Click the **Cancel** button to cancel creation of the record.
- or
- Click **Save** to add the record to the database.

## Deleting a record

1. Open the list of records to delete.

For example, to delete a budget line, select the **Finance management/ budget lines** link on the navigation bar.

2. Display the details of the record to delete.
3. Click the **Delete** button.
4. Confirm the deletion (**Yes** button).

## Actions

An action is an operation that calls on a CSC program.

A contextual action is triggered by selecting the action from the contextual **Actions** drop-down list at the top of the list screens. For example, you can use the following action to create a budget period for a financial year.

Welcome to HP Asset Manager > List of financial years > Detail of financial year '2015'

Find a page

Modify New Duplicate Delete Save Cancel List of financial years

Actions...

\* Name: 2015  
Code: FYNNEXT

General Divisions

\* Start: Thursday, January 01, 2015  
\* End: Thursday, December 31, 2015

Comment:

Modify New Duplicate Delete Save Cancel List of financial years

Create budget periods for an existing financial year  
Actions...  
Create budget periods for an existing financial year

## My cloud

The CSC **My cloud** module enables any CSA users to have an overview of the status and charges by requesting the cloud IT services on the users' part.

The **My cloud** module is presented to the following user roles:

- Consumer
- Department manager
- CSC administrator

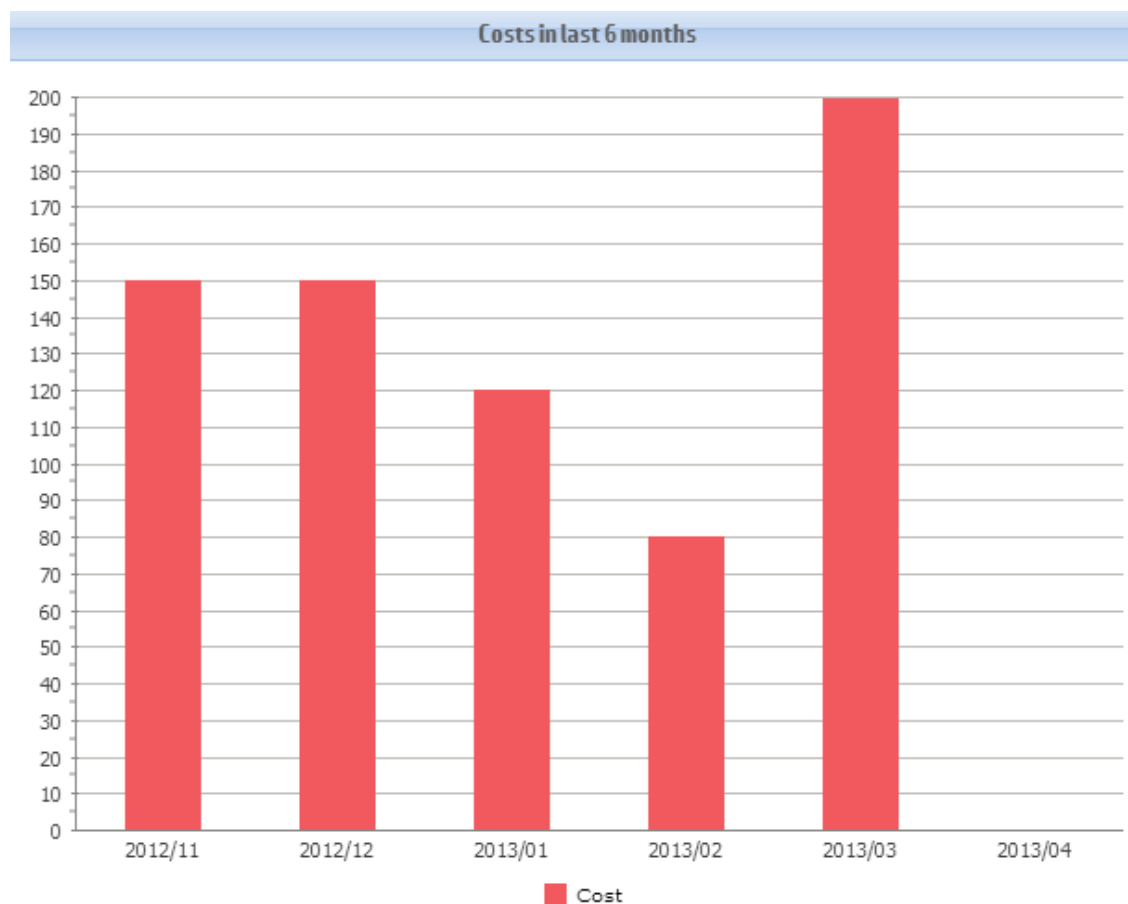
## Business homepage

The business homepage of the **My cloud** module provides the statistics that illustrate the budget, cost, and service conditions of an individual user. You can also click on the bars/slices/lines to drill down into the corresponding lists.

To view the business homepage of **My cloud**, click the **My cloud** node in the navigation pane.

### *Cost in the last 6 months*

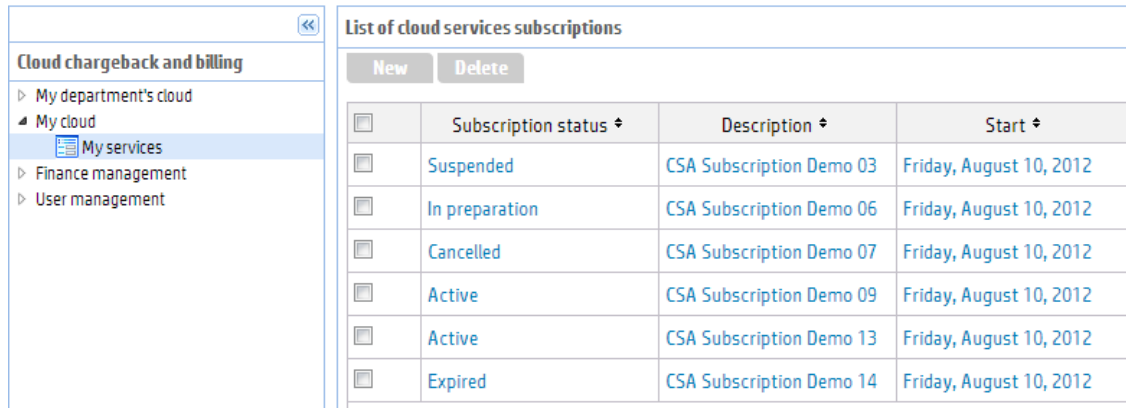
This chart illustrates the expenses charged for the CSA services you requested in the last 6 months.



## My services

The **My services** page of **My cloud** shows a table that lists the details of all your cloud services. The data in this table cannot be modified.

To view this page, expand the **My cloud** node in the navigation pane, and then click **My services**.



	Subscription status ▾	Description ▾	Start ▾
<input type="checkbox"/>	Suspended	CSA Subscription Demo 03	Friday, August 10, 2012
<input type="checkbox"/>	In preparation	CSA Subscription Demo 06	Friday, August 10, 2012
<input type="checkbox"/>	Cancelled	CSA Subscription Demo 07	Friday, August 10, 2012
<input type="checkbox"/>	Active	CSA Subscription Demo 09	Friday, August 10, 2012
<input type="checkbox"/>	Active	CSA Subscription Demo 13	Friday, August 10, 2012
<input type="checkbox"/>	Expired	CSA Subscription Demo 14	Friday, August 10, 2012

## My department's cloud

CSC leverages chargeback rules to re-allocate expenses from the source billing center to the target billing center that is really at the origin of the expense. The CSC **My department's cloud** module analyzes the chargeback data and enables the department managers and CSC administrators to have an overview of the status and charges by requesting the IT cloud services from the department's perspective.

The **My department's cloud** module is presented to the following user roles:

- Department manager
- CSC administrator

If a CSC administrator logs on, he will see the data of all the organizations that he manages.

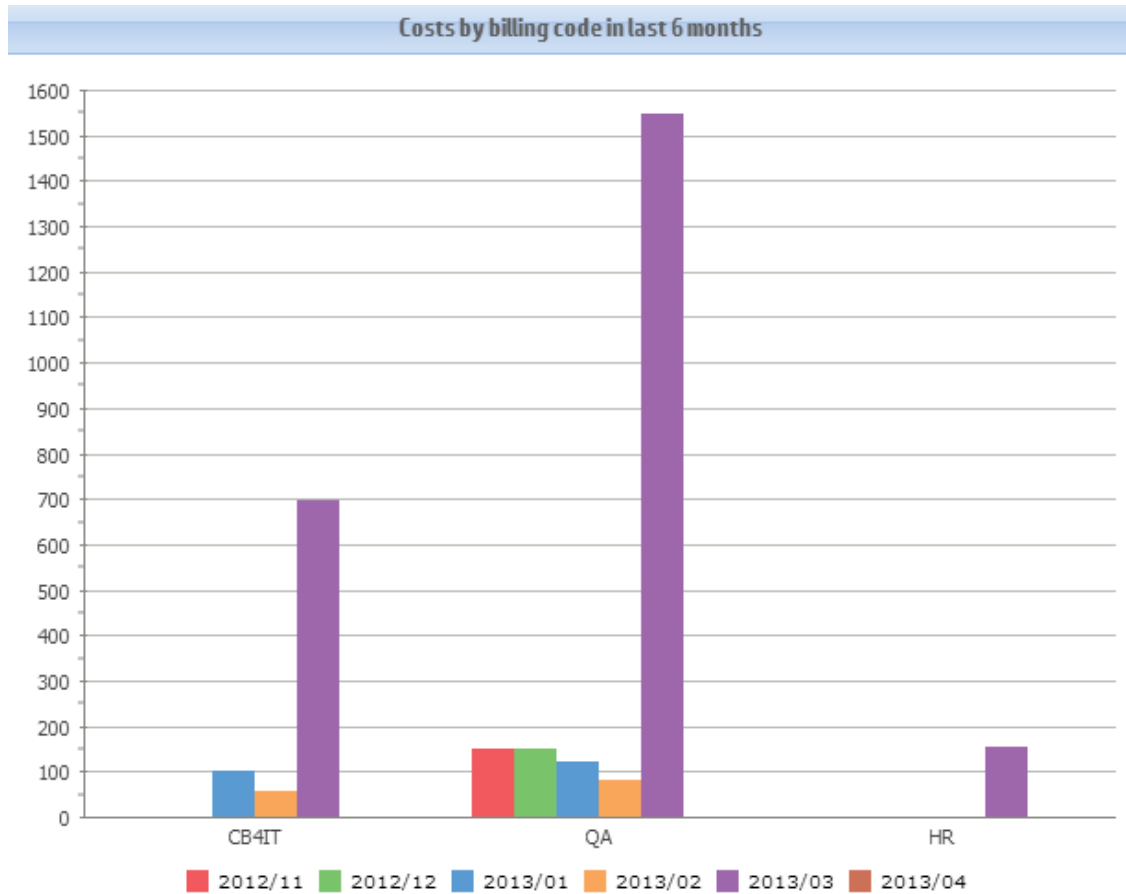
## Business homepage

The business homepage of the **My department's cloud** module provides the statistics that illustrate the budget, cost, and service conditions of a department/departments. You can also click the bars/slices/lines to drill down into the corresponding lists that detail the service data.

To view the business homepage of **My department's cloud**, click the **My department's cloud** node on the navigation bar.

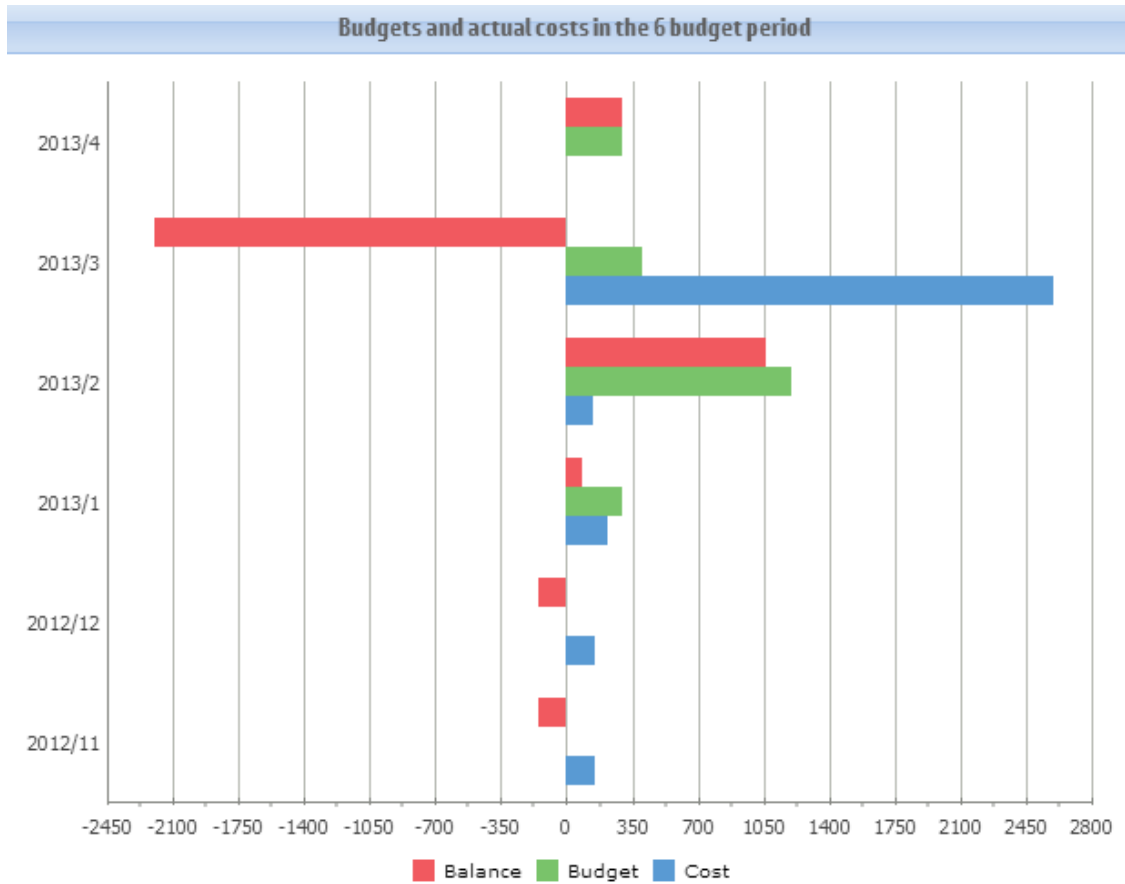
## Costs by billing code in the last 6 months

This chart illustrates the expenses generated by your department's billing centers in the last 6 months.



### ***Budgets and actual costs in the last 6 budget periods***

This chart illustrates the condition of the services, expenses, and budgets of the department in the last 6 budget periods.



### ***Number of active subscriptions by billing code***

This chart shows the active subscriptions of the billing centers in the department.





## Finance management

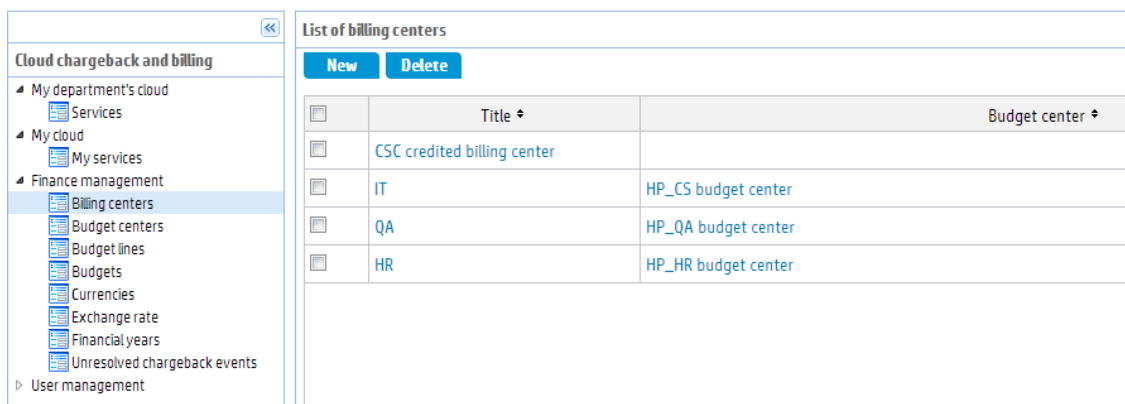
The **Finance management** module enables CSC administrators to monitor and configure financial settings.

### Billing centers

The **Billing centers** page lists the billing centers of the organization.

To access this page, expand the **Finance management** node on the navigation bar, and then click **Billing centers**.

**Note:** By default, the **CSC credited billing center** is created by the built-in chargeback rule as the credited billing center. You must not modify this record.



List of billing centers		
	New	Delete
<input type="checkbox"/>	Title	Budget center
<input type="checkbox"/>	CSC credited billing center	
<input type="checkbox"/>	IT	HP_CS budget center
<input type="checkbox"/>	QA	HP_QA budget center
<input type="checkbox"/>	HR	HP_HR budget center

### Create a billing center

1. Expand **Finance Management**, and then click **Billing centers**.
2. Click **New** on the **Billing centers** page, the following page appears.

Welcome to HP Asset Manager > List of billing centers > Detail of billing center "

⚙

Modify New Duplicate Delete Save Cancel

\* Title:

Billing code:

Budget center:

Modify New Duplicate Delete Save Cancel

3. On the **Detail of billing center** page, enter or select the values according to the following table:

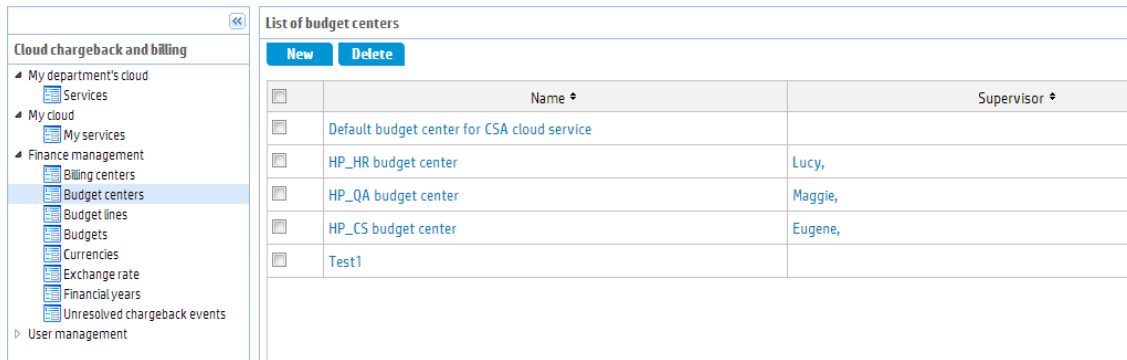
Field	Description
Title	The name of the billing center. For example: APJ Marketing billing center.
Billing code	The ID of the billing center. For example: Billingcenter2
Budget center	The budget center that this billing center belongs to. For example: APJ budget center.  <b>Note:</b> You can only select a budget center that is already created.

4. Click **Save**.

## Budget centers

A department may consist of one or more budget centers. Afterwards, CSC administrator can choose to create or modify the budget centers for the department.

To access the **Budget centers** page, expand the Finance management node, and then click the **Budget centers** node.



## Create a budget center

1. Expand **Finance Management**, and then click **Budget centers**.
2. Click **New** on the **Budget centers** page, the following page appears.

Welcome to HP Asset Manager > List of budget centers > Detail of budget center "

⚙

Modify New Duplicate Delete Save Cancel

\* Name:

Code:

Supervisor:

**Budgets** | Billing centers

⏪ ⏩ ⏴ ⏵

Budgets	Financial year(FYDivision)
<input type="text"/>	<input type="text"/>

⏪ ⏩ ⏴ ⏵

Modify New Duplicate Delete Save Cancel

3. On the **Detail of budget center** page, enter or select the values according to the following table.

Field	Description
Name	The name of the budget center. For example, HP_APJ budget center.

Code	The ID of the budget center. For example, BudgCenter2.
Supervisor	The supervisor of the budget center can receive budget alarms when the actual cost crosses the specified threshold. For example, User 1.

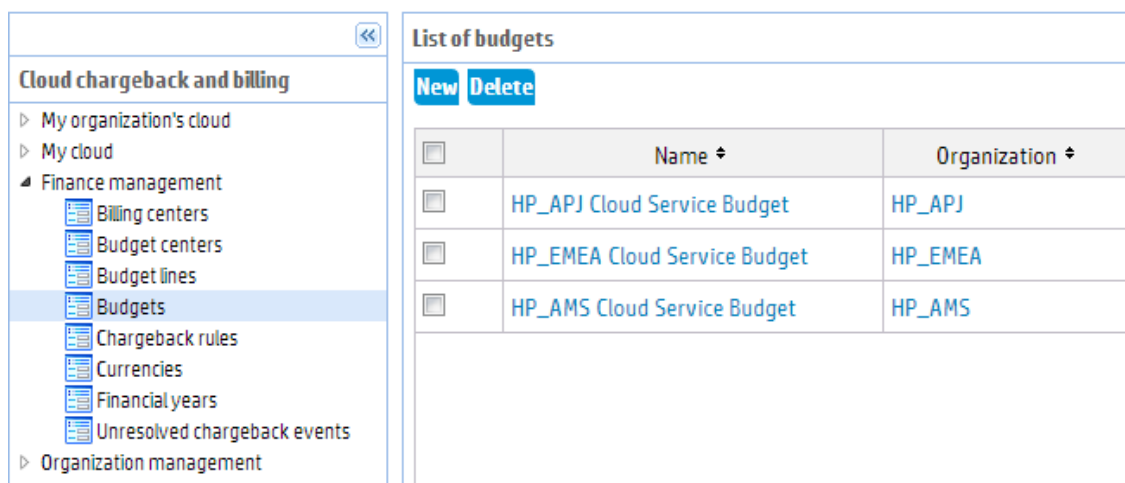
**Note:** The fields on the **Budgets** tab and the **Billing center** tab can only be populated after you create the budget center.

4. Click **Save**.
5. Click the budget center you just created on the **List of budget center** page.
6. On the **Billing centers** tab, click **Add**, and then select the billing center(s) to be added to this budget center.
7. On the **Budgets** tab, click **Add** to create a budget associated to this budget center.  
Alternatively, you can select **Budget** in the **Actions** drop-down list to launch the **Create a budget** wizard to create a budget. For more information about how to create a budget, refer to ["Create a budget" below](#)

## Budgets

To utilize the budget related functionalities, the CSC administrator needs to create budgets for the budget centers.

To access the **Budgets** page, expand the **Finance management** node, and then click **Budgets**.



The screenshot shows the 'List of budgets' page in the HP CloudSystem Chargeback for CSA (9.40) interface. The left sidebar contains a navigation tree with the following structure:

- Cloud chargeback and billing
  - My organization's cloud
  - My cloud
    - Finance management
      - Billing centers
      - Budget centers
      - Budget lines
      - Budgets**
      - Chargeback rules
      - Currencies
      - Financial years
      - Unresolved chargeback events
    - Organization management

The main content area displays a table titled 'List of budgets' with the following data:

	Name ↕	Organization ↕
<input type="checkbox"/>	HP_APJ Cloud Service Budget	HP_APJ
<input type="checkbox"/>	HP_EMEA Cloud Service Budget	HP_EMEA
<input type="checkbox"/>	HP_AMS Cloud Service Budget	HP_AMS

## Create a budget

To create a budget for a department, follow these steps:

1. Expand **Finance Management**, and then click **Budgets**.
2. Click **New** on the **Budgets** page, the following page appears.

3. On the **Detail of budget** page, enter or select the values according to the following table:

Field	Description
Name	The name of the budget. For example, HP_APJ Cloud Service Budget.
Budget center	The budget center that the budget belongs to. For example, HP_APJ budget center.
Code	The ID of the budget. For example, 000011.
Division	The time division of the budget. For example, 2013: Monthly.
Status	The status of the budget. For example, In preparation.

4. Click **Save**.

5. On the **List of budgets** page, click the budget you just created.
6. On the **Lines** tab, click **Add** to create budget lines for the budget. For more information about how to create budget lines, refer to ["Create a budget line" below](#)

## Budget lines

To utilize the budget related functionalities, the CSC administrator needs to create budget lines for budgets.

To access the **Budget lines** page, expand the **Finance management** node, and then click **Budget lines**.

	Name *	Name(Budget) *	Allowance *	Threshold *
<input type="checkbox"/>	2013/04 budget	HP_HR Cloud Service Budget	100.00 USD	80%
<input type="checkbox"/>	2013/04 budget	HP_QA Cloud Service Budget	100.00 USD	80%
<input type="checkbox"/>	2013/04 budget	HP_CS Cloud Service Budget	100.00 USD	50%
<input type="checkbox"/>	2013/03 budget	HP_HR Cloud Service Budget	200.00 USD	80%
<input type="checkbox"/>	2013/03 budget	HP_QA Cloud Service Budget	100.00 USD	80%
<input type="checkbox"/>	2013/03 budget	HP_CS Cloud Service Budget	100.00 USD	50%
<input type="checkbox"/>	2013/02 budget	HP_HR Cloud Service Budget	100.00 USD	80%
<input type="checkbox"/>	2013/02 budget	HP_QA Cloud Service Budget	100.00 USD	80%
<input type="checkbox"/>	2013/02 budget	HP_CS Cloud Service Budget	1,000.00 USD	50%

## Create a budget line

1. Expand **Finance Management**, and then click **Budget lines**.
2. Click **New** on the **List of budget lines** page. The following page appears.

Welcome to HP Asset Manager > List of budget lines > Detail of budget': Cloudusage/

Modify New Duplicate Delete Save Cancel

\* Name: Cloudusage/ Number: 000016

\* Budget: Allowance: USD 0.00

\* Period: Threshold: 80%

Comment:

Modify New Duplicate Delete Save Cancel

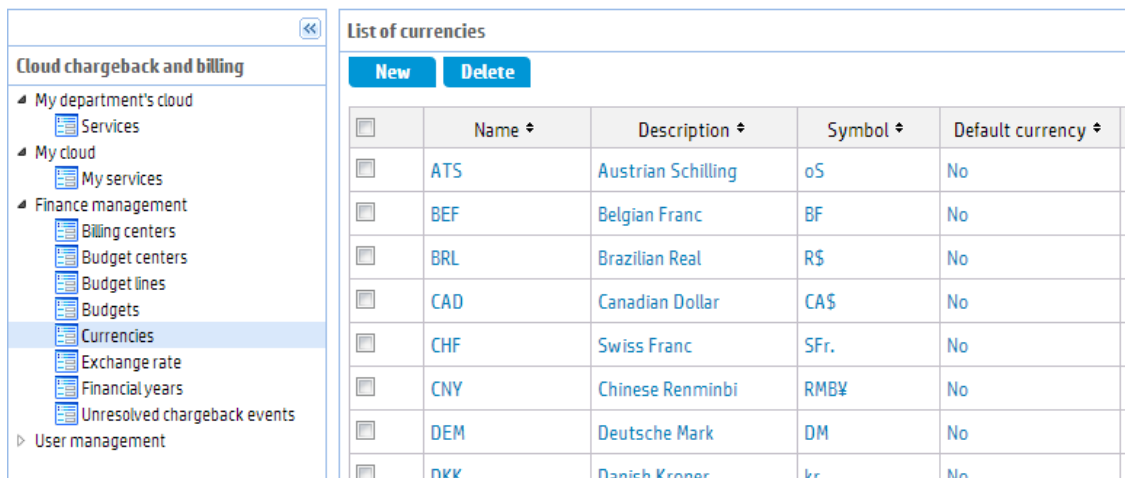
- On the **Detail of budget lines** page, enter or select the values according to the following table:

Field	Description
Name	The name of the budget line. For example, 2013/03 budget.
Allowance	The allowance of the budget line. For example, US\$100.00.
Budget	The budget that the budget line belongs to. For example, HP_APJ Cloud Service Budget.
Period	The period of the budget line. For example, 2013 / Monthly: M3.
Threshold	The threshold that defines when a supervisor or a CSC administrator receives an budget alarm.

- Click **Save**.

## Currencies

By default, CSC creates the currencies that are supported by CSA. A CSC administrator can view the currency details on the **Currencies** page. To access this page, expand the **Finance management** node, and then click the **Currencies** node.



	Name	Description	Symbol	Default currency
<input type="checkbox"/>	ATS	Austrian Schilling	oS	No
<input type="checkbox"/>	BEF	Belgian Franc	BF	No
<input type="checkbox"/>	BRL	Brazilian Real	R\$	No
<input type="checkbox"/>	CAD	Canadian Dollar	CA\$	No
<input type="checkbox"/>	CHF	Swiss Franc	SFr.	No
<input type="checkbox"/>	CNY	Chinese Renminbi	RMB¥	No
<input type="checkbox"/>	DEM	Deutsche Mark	DM	No
<input type="checkbox"/>	DKK	Danish Kroner	kr	No

## Create a currency

- Expand **Finance Management**, and then click **Currencies**.
- Click **New** on the **Currencies** page. The following page appears.



Welcome to HP Asset Manager > List of currencies > Detail of currency '0'

Find a page

Modify New Duplicate Delete Save Cancel

Description:

\* Name:

\* Symbol:

Precision:

☐ Default currency

☐ Reference currency 1

Position of symbol:

Modify New Duplicate Delete Save Cancel

3. On the **Detail of currency** page, enter or select the values according to the following table:

Field	Description
Description	The description of the currency. For example: US Dollar.
Name	The name of the currency. For example: USD.
Symbol	The symbol of the currency. For example: US\$.
Precision	<b>Before the figure</b> or <b>After the figure</b> .
Default currency	The default currency is applied to all monetary fields for which the user does not associate a currency. It is unique and can be selected by enabling the <b>Default currency</b> check box in the detail of a currency.
Reference currency	<p>You must define a reference currency for CSC. All the reports, statistics, and expense lines in CSC are generated with this reference currency. To do this, select the <b>Reference currency 1</b> check box in the detail of a currency. We recommend that you define your the reference currency before saving data in the database. If you define the reference currency after records have been already been added in the database, the exchange values associated with the monetary values in these records will not be updated.</p> <p><b>Note:</b> After the installation of CSC is completed, the CSC administrator need to specify a reference currency. By default, after CSC is installed, USD is used as the default currency and reference currency 1.</p>

4. Click **Save**.

## Exchange rate

After CSC is installed and implemented, the exchange rates for the currencies are created automatically. You need to manually create or modify the exchange rates when they change. To access this page, expand the **Finance management** node, and then click **Exchange rate**.

Cloud chargeback and billing

My department's cloud

Services

My cloud

My services

Finance management

Billing centers

Budget centers

Budget lines

Budgets

Currencies

Exchange rate

Financial years

Unresolved chargeback events

User management

User/Department

Welcome to HP Asset Manager > List of exchange rates

New

Delete

<input type="checkbox"/>	Date of rate ↕	Source currency ↕	Target currency ↕	Exchange rate ↕	Inverse exchange rate ↕
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	ATS (Austrian Schilling)	13.7603	0.072673
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	BEF (Belgian Franc)	40.3399	0.024789
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	CAD (Canadian Dollar)	1.78788	0.559322
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	DEM (Deutsche Mark)	1.95583	0.511292
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	DKK (Danish Kroner)	7.46146	0.134022
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	ESP (Spanish Peseta)	166.386	0.00601
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	FIM (Finnish Markka)	5.94573	0.168188
<input type="checkbox"/>	Friday, January 01, 1999 12:00:00 AM	EUR (European Euro)	FRF (French Franc)	6.55957	0.152449

## Currency conversion rules

Converting an amount expressed in one currency to another requires that you apply an exchange rate when you do the conversion.

This section describes the rules governing conversions and exchange rates. These rules depend on the currencies to be converted.

To select the appropriate exchange rate between a given currency couple A and B, CSC uses the date of conversion and the following rules:

- If there is an exchange rate defined for the date of conversion when A is the source currency and B is the target currency, CSC uses this rate.
- Otherwise, if there is an exchange rate for which currency B is the source currency and currency A is the target currency, CSC uses the inverse rate defined for this rate.
- Otherwise, CSC will not calculate an exchange value.

For example:

- The exchange rate from currency A to currency B on July 1, 2012 is "1 A = 6 B".
- The exchange rate from currency B to currency A on August 1, 2012 is "1 B = 0.2 A".
- On September 1, 2012, to convert 100 A to currency B, CSC uses the exchange rate "1 A = 6 B", the result is 600 B.

## Create an exchange rate

1. Expand **Finance Management**, and then click **Exchange rate**.
2. Click **New** on the **Exchange rate** page. The following page appears.

Welcome to HP Asset Manager > List of exchange rates > Detail of exchange rate '00'

Find a page

Modify New Duplicate Delete Save Cancel

**General**

\* Date of rate: May 07 2013 07:28:25 PM

☐ Belongs to Euro zone

\* Source currency: EUR

\* Target currency: USD

\* Exchange rate: 1.0773

Inverse exchange rate: 0.9286

1 = 0.9286

1 = 0.9286

Modify New Duplicate Delete Save Cancel

- On the **Detail of exchange rate** page, enter or select the values according to the following table:

Field	Description
Date of rate	The date of the exchange rate.
Source currency	The source currency. For example, EUR (European Euro.)
Target currency	The target currency. For example, USD (US Dollar.)
Exchange rate	The exchange rate of the source currency and the target currency. For example, 1.0773.
Inverse exchange rate	The inverse exchange rate is calculated automatically.

- Click **Save**.

## Financial years

After CSC is installed and implemented, the next 4 financial years and the corresponding time divisions (monthly) are created automatically. You need to manually create the next upcoming financial years on the **Financial years** page. You can also create new time divisions for the financial years. To access this page, expand the **Finance management** node, and then click **Financial years**.

If the out-of-the-box time divisions and periods do not match your requirement, for example, you want to use **Quarterly** instead of **Monthly**. The CSC administrator should remove the existing time divisions and periods first, and then create new ones.

Cloud chargeback and billing

My department's cloud

Services

My cloud

My services

Finance management

Billing centers

Budget centers

Budget lines

Budgets

Currencies

Exchange rate

Financial years

Unresolved chargeback events

User management

List of financial years

New

Delete

	Name	Start	End
	2012	Sunday, January 01, 2012	Monday, December 31, 2012
	2013	Tuesday, January 01, 2013	Tuesday, December 31, 2013
	2014	Wednesday, January 01, 2014	Wednesday, December 31, 2014
	2015	Thursday, January 01, 2015	Thursday, December 31, 2015
	2016	Friday, January 01, 2016	Saturday, December 31, 2016

## Create a financial year

1. Expand **Finance Management**, and then click **Financial years**.
2. Click **New** on the **Financial years** page. The following page appears.

Welcome to HP Asset Manager > List of financial years > Detail of financial year "

Modify

New

Duplicate

Delete

Save

Cancel

\* Name:

Code:

General

Divisions

\* Start:

\* End:

Comment:

Modify

New

Duplicate

Delete

Save

Cancel

3. On the **Detail of financial year** page, enter or select the values according to the following

table:

Field	Description
Name	The name of the financial year. For example, 2016.
Code	The code of the financial year. For example, FYPREV.
Start date	The start date of the financial year. For example, Friday, January 01, 2016
End date	The end date of the financial year. For example, Saturday, December 31, 2016

4. Click **Save**.
5. Select the financial, on the **Divisions** tab, click **Add**.
6. On the **Detail of time division** page, enter or select the values according to the following table, and then click **Add**.

Field	Description
Name	The name of the time division. For example, monthly, bi-monthly, or quarterly.
Code	The code of the time division. For example, 000001.
Financial year	The financial year this time division belongs to. This field cannot be modified.

7. Select the time division, on the **Periods** tab, click **Add**.
8. On the **Detail of period** page, enter or select the values according to the following table, and then click **Add**.

Field	Description
Name	The name of the period. For example, January, February, or March.
Division	The time division this period belongs to. This field cannot be modified.
Code	The Code the period. For example, Jan, Feb, or Mar.
Start	The start date of the period.
End	The end data of the period.

9. Repeat step 7 and step 8 to create all the periods for the time division.

You can also use the **Create budget periods for an existing financial year** wizard in the **Actions** drop-down list to create time divisions automatically. After you create a financial year, you can use this wizard to simply create **Monthly**, **Bimonthly**, **Quarterly**, or **Semiannually** time

divisions for the financial year. For example, if you select **Monthly** for the **Periodicity** property in the wizard, 12 financial months will be created automatically.

## Unresolved chargeback events

When the chargeback rules are running, some unresolved chargeback events may be generated (for example, missing billing center). To view and resolve these chargeback events, expand the **Finance management** node, and then click **Unresolved chargeback events**.

	Table	Event	Record label	Chargeback rule
<input type="checkbox"/>	amCntrEmpl	E1	Elaine, - Test Contract9 (CSA Demo Contract)	Cloud Service Chargeback system / Insert subscriptions
<input type="checkbox"/>	amCntrEmpl	E2	Maggie, - Test Contract10 (Test Contract1)	Cloud Service Chargeback system / Insert subscriptions
<input type="checkbox"/>	amCntrEmpl	E3	Arnold, - Test Contract10 (Test Contract1)	Cloud Service Chargeback system / Insert subscriptions
<input type="checkbox"/>	amCntrEmpl	E4	Tom, - Test Contract10 (Test Contract1)	Cloud Service Chargeback system / Insert subscriptions
<input type="checkbox"/>	amCntrEmpl	E5	Jing, - Test Contract9 (CSA Demo Contract)	Cloud Service Chargeback system / Insert subscriptions

The CSC administrator needs to manually resolve these events. To do this, click the record, select **View the record that caused the event**, analyze the record, and then make necessary changes.

For example, if a user did not fill in the billing code in CSA, after data is ported to CSC, his billing center will be missing, and therefore an unsolved record will be generated.

To resolve this event, click the record, select **View the record that caused the event** in the actions drop-down list, you will find that the billing center field is empty. Click **Modify**, specify the billing center, and save. Go back to the record details, select **Reapply the rule that caused the event**.

The CSC administrator needs to look after this every month.

## User management

The CSC **User management** module enables the department managers and CSC administrators to perform user and department management.

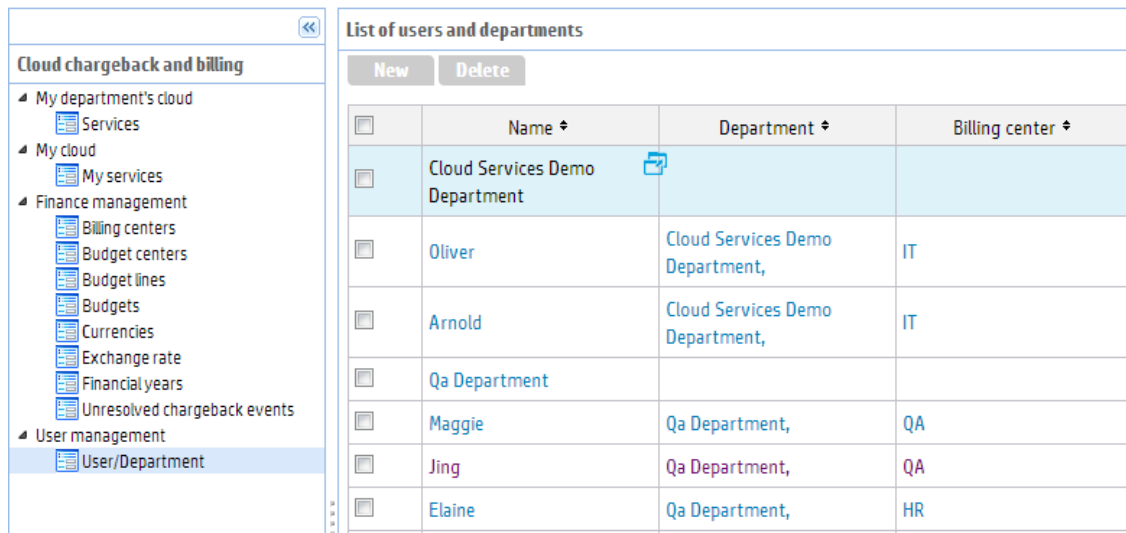
The **User management** module is presented to the following user roles:

- Department manager
- CSC administrator

If a CSC administrator logs on, he will see the information of all the departments that he manages.

## User/Department

The CSC administrator or the department manager can manage user accounts on the **User/Department** page. To access this page, expand the **Department management** node, and then click **User/Department**.



List of users and departments			
<input type="button" value="New"/> <input type="button" value="Delete"/>			
<input type="checkbox"/>	Name ↕	Department ↕	Billing center ↕
<input type="checkbox"/>	Cloud Services Demo Department		
<input type="checkbox"/>	Oliver	Cloud Services Demo Department,	IT
<input type="checkbox"/>	Arnold	Cloud Services Demo Department,	IT
<input type="checkbox"/>	Qa Department		
<input type="checkbox"/>	Maggie	Qa Department,	QA
<input type="checkbox"/>	Jing	Qa Department,	QA
<input type="checkbox"/>	Elaine	Qa Department,	HR

## To modify user information

To modify the user information, follow these steps:

1. Expand the **User management** node on the navigation bar, and then click **User/Department**.
2. On the **List of users and departments** page, click a user.
3. Make the changes according to the following descriptions. For example, you can assign a billing center to a user by specifying the **Billing center** field.
4. Click **Save**.

### General information

The **General** tab includes the basic information of a user such as name, telephone, and e-mail address. The CSC administrator or the department manager can only modify the **Billing center** field on this tab.

### Profile information

The **Profile** tab enables the CSC administrator to modify the user profile of a user.

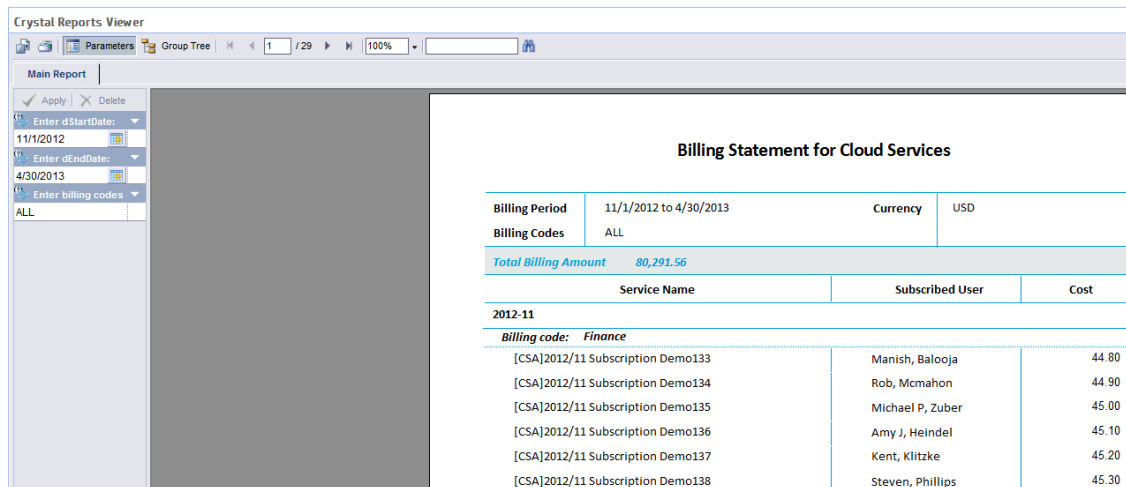
Field	Description
-------	-------------

Access type	Named, floating, or guest user. Note that a department manager or a CSC administrator must not be a guest user.
Status of the user account	Active, locked, or disabled. If the user needs to log on to CSC, the status must be active.
Role used at connection	A CSC administrator can assign any user roles to a user.  If the user role is not in the <b>Description</b> box, click <b>Add</b> , select the user roles, and then click <b>Add</b> .

## Cloud billing expense report

CSC leverages the SAP Crystal Reports integrating with the service cost data to provide users with a more transparency view of the costs generated by their service requests.

To view the expense report, click **Cloud Billing Expense** on the navigation bar.



Billing Statement for Cloud Services			
Billing Period	11/1/2012 to 4/30/2013	Currency	USD
Billing Codes	ALL		
Total Billing Amount	80,291.56		
Service Name	Subscribed User	Cost	
<b>2012-11</b>			
<i>Billing code: Finance</i>			
[CSA]2012/11 Subscription Demo133	Manish, Balooja	44.80	
[CSA]2012/11 Subscription Demo134	Rob, McMahon	44.90	
[CSA]2012/11 Subscription Demo135	Michael P, Zuber	45.00	
[CSA]2012/11 Subscription Demo136	Amy J, Heindel	45.10	
[CSA]2012/11 Subscription Demo137	Kent, Klitzke	45.20	
[CSA]2012/11 Subscription Demo138	Steven, Phillips	45.30	

## Budget alert

A CSC administrator can set the budget allowance of the department.

A CSC administrator can define a user as the supervisor of a budget center. A supervisor can be a consumer, department manager, or a CSC administrator. Only the CSC administrators and supervisors will receive budget alert messages.

If the supervisor of the budget center is set, the supervisor and the CSC administrators can receive budget alerts when the actual cost crosses the specified threshold.

If the supervisor of the budget center is not set, the CSC administrators can receive budget alerts.

The budget alert will be triggered in one of the following three conditions:

- The budget allowance is not set.  
Alarm message: Warning: Year: 2013 / Quarter: Q1



The budget of <Budget center name> is not set.

- The actual expense exceeds the budget allowance.  
Alarm message:  
Critical: Year: 2013 / Quarter: Q1  
The total expense has exceeded the budget of <Budget center name>. The allowance is 1713 USD, while the total expense is 3381996.09 USD.
- The actual expense exceeds 80% of the budget allowance.  
Alarm message:  
Warning: Year: 2013 / Quarter: Q1  
Over 80% of the budget of <Budget center name> has been used. The allowance is 4223713 USD, while the total expense is 3378971.09 USD.

These messages will appear at the top of every page.

By default, only one message is displayed, if there are multiple messages, you can click the + button to view all the messages.

# Chapter 5

## Integration

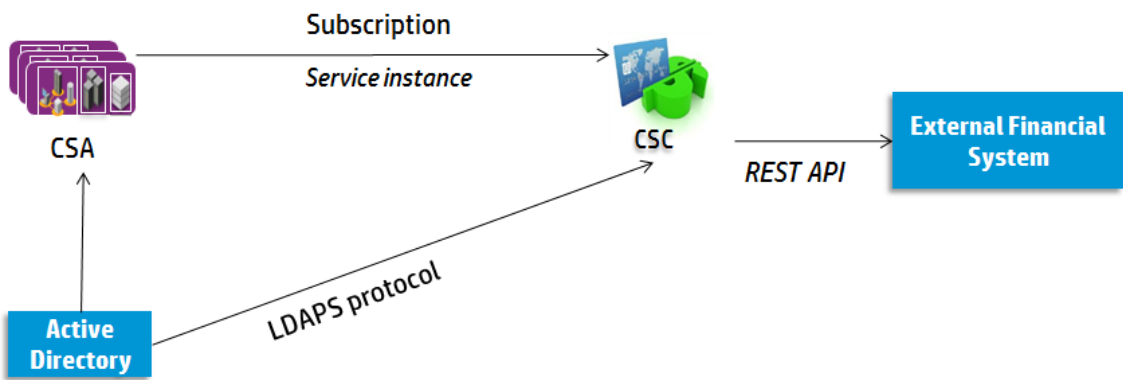
This chapter describes how CSC integrates with third-party financial systems.

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How to use REST APIs ..... 42

## Integrating with external finance system with REST APIs

This section illustrates the Representational State Transfer (REST) APIs that can be used for integration with external finance systems, in addition to exposed APIs.



The following REST APIs expose financial information through Web Services. They are provided to integrate with external finance system to export expense line and cost related data.

REST API Name	Description
costCenters	It gets the billing center information.
costTypes	It gets the cost type information.
expenseLines	It gets the expense line information.

## How to use REST APIs

The REST APIs can be utilized by the third-party products with the built-in **Admin** user account who has full access to CSC or the CSC administrator. For more information about the **Admin** user account, refer to **Installation and Configuration** guide, chapter **Configuring CSC**, section **The built-in Admin user account**.

To use a REST API to retrieve data from CSC, attach the API name along with the parameters to the end of the CSC Web Service URL. For example, `http://<Server>:<Port>/AssetManagerWebService/rs/csc/tenants` returns the department information of CSC. By default, the port used by REST APIs is 30201.

**Note:** The REST APIs are case sensitive.

## *The costCenters API*

The **costCenters** API retrieves all billing center information from CSC.

### Parameters

- **startDate:** Optional, String type, billing centers whose start date are later than the specified value are selected, the format is "YYYY/MM/DD". If you do not set this parameter, the REST API will use the current time.
- **endDate:** Optional, String type, billing centers whose end date are earlier than the specified value are selected, the format is "YYYY/MM/DD". If you do not set this parameter, the REST API will use the current time.
- **lastSync:** Optional, String type, when it is specified, the query will filter out billing centers whose the lastSync is greater than or equal to `amCostCenter.dtLastModif`, the format is "YYYY/MM/DD HH:MM:SS".

**Return value:** The billing center information. The attributes include:

- **code:** String type, the billing code of the billing center.
- **name:** String type, the name of the billing center.
- **startDate:** String type, the start date of the billing center.
- **endDate:** String type, the end date of the billing center.

### Syntax

`<WebServiceURL>/costCenters?<parameter1>=<value1>&<parameter2>=<value2>`

#### Return value example

```
<?xml version="1.0" encoding="UTF-8" ?>
- <Result>
- <Row>
  <Code>Billingcenter1</Code>
  <Name>HP_APJ R&D billing center</Name>
  <endDate>2013-04-09</endDate>
  <startDate>2013-04-07</startDate>
  <tenantCode>HP_APJ</tenantCode>
</Row>
</Result>
```

## The costTypes API

The **costTypes** API retrieves cost type information from CSC.

#### Parameters

- **lastSync**: Optional, String type, when it is specified, the query will filter out cost centers whose the lastSync is greater than or equal to amCostCategory.dtLastModif, the format is "YYYY/MM/DD HH:MM:SS".

**Return value**: The cost type information. The attributes include:

- **code**: String type, the cost category code.
- **name**: String type, the name of the cost category.
- **expenseType**: String type, the expense type.

#### Syntax

<WebServiceURL>/costTypes?<parameter1>=<value1>&<parameter2>=<value2>

#### Return value example

```
<?xml version="1.0" encoding="UTF-8" ?>
- <Result>
- <Row>
  <Code>IT_CLOUD_BILLING</Code>
  <Name>IT cloud billing</Name>
  <cf_seExpenseType>Operational expenditures (OPEX)</cf_seExpenseType>
</Row>
</Result>
```

## The expenseLines API

The **expenseLines** API retrieves expense line information from CSC.

## Parameters

- **costCenterCode**: Optional, String type, the code of the billing center.
- **startDate**: Optional, String type, expense lines whose start date are later than the specified value are selected, the format is "YYYY/MM/DD".
- **endDate**: Optional, String type, expense lines whose end date are earlier than the specified value are selected, the format is "YYYY/MM/DD".
- **lastSync**: Optional, String type, when it is specified, the query will filter out cost centers whose the lastSync is greater than or equal to amExpenseLine.dtLastModif., the format is "YYYY/MM/DD HH:MM:SS".

**Return value**: The expense line information. The attributes include:

- **title**: String type, the title of the expense line.
- **purpose**: String type, the purpose of the expense line.
- **createDate**: String type, the start date of the expense line.
- **billingDate**: String type, the billing date of the expense line.
- **credit**: The credit of the expense line.
- **creditCurrency**: The currency of the credit.
- **taxCredit**: The tax of the credit.
- **taxCreditCurrency**: The currency of credit's tax.
- **debit**: The debit of the expense line.
- **debitCurrency**: The currency of the debit.
- **taxDebit**: The tax of the debit.
- **taxDebitCurrency**: The currency of the debit's tax.
- **costTypeCode**: The cost type code.
- **costCenterCode**: The billing code.
- **expenseType**: The type of the expense line.
- **userId**: The user ID of the expense line.

## Syntax

<WebServiceURL>/expenseLines?<parameter1>=<value1>&<parameter2>=<value2>

### Return value example

```
▼<Result>
  ▼<Row>
    <CostCategory.Code>IT_CLOUD_BILLING</CostCategory.Code>
    <CostCategory.cf_seExpenseType>Operational expenditures (OPEX)</CostCategory.cf_seExpenseType>
    <CostCenter.Code>Billingcenter1</CostCenter.Code>
    <CreditCur>USD</CreditCur>
    <DebitCur>USD</DebitCur>
    <EmplDept.IDNo>U000048</EmplDept.IDNo>
    <TaxCreditCur>USD</TaxCreditCur>
    <TaxDebitCur>USD</TaxDebitCur>
    <Title>CSC cost last month per user :</Title>
    <cf_sePurpose>Free</cf_sePurpose>
    <dBilling>2013-04-30</dBilling>
    <dCreation>2013-05-09</dCreation>
    <mCredit>0</mCredit>
    <mDebit>164</mDebit>
    <mTaxCredit>0</mTaxCredit>
    <mTaxDebit>0</mTaxDebit>
  </Row>
```

# Customizing chargeback rules

**Caution:** In common cases, the chargeback rules have been created and optimized by CSC, you do not need to modify the chargeback rules. If you want to customize the chargeback rule, you must also have strong knowledge of the financial module of Asset Manager.

A CSC administrator can create or modify a chargeback rule to suffice the needs of his own organization(s). You can only customize chargeback rules by using the CSC Windows client.

## Prerequisite

Before you run chargeback rules, make sure that you perform the following tasks so that the expenses are calculated correctly:

- Populate the billing center for each subscriber (amEmplDept.CostCenter) correctly.
- Populate the credited billing center correctly. By default, the "CSC credited billing center" is used.

## How chargeback rules work

When the triggering condition for a chargeback rule is satisfied, it goes through and identifies all the records in the filtered context table :

- With a contract whose type (amContract.seType) is Internal Cloud Services or External Cloud Services.
- Still valid (subscription start date <= current date <= subscription end date).
- With a certain status (refer to each of the following section for the status each specific rule is concerned about).

For each identified subscription, the chargeback rule will create two expense lines allocated to the credited billing center and debited billing center specified in the chargeback rule, respectively. Thus, the subscription cost is reallocated from the billing center where the cost is initially deducted to the billing center of the user who is actually using the subscription.

- If the debited billing center has an empty value, no expense line will be created.
- If the credited billing center has an empty value, one expense line will be created for the debited billing center.

**Note:** It is mandatory that CSC Automated Process Manager runs constantly against the database so that the expense lines are accurately generated for their generation date.

The chargeback rules use the value of the billing frequency (seFrequency) to determine the charging period for the subscription. The rules use monthly as the baseline and a pre-defined coefficient will be applied for different period. For example, if your recurring fee (mRecurringPrice) for a subscription is based on a yearly charging period, a coefficient of 1/12 will be applied when calculating the expense for the subscription. If no billing frequency is specified, the coefficient will default to 3 (months).

**Note:** For the convenience of calculation, the chargeback rules will convert the currency of the subscription cost into the reference currency.

## Built-in chargeback rules for CSA

This section describes the mechanism of the built-in chargeback rules for CSA.

### Generate costs by month

This chargeback rule generates expense lines for the cost incurred between the current date and the latest of the following dates:

- The first day of the last month.
- The subscription start date.
- The latest date when the subscription recurring price is updated.

This chargeback rule is triggered on the first day of each calendar month by default. (as specified by the timer defined for the rule). We recommend that you do not change this time.

### Insert subscriptions

The chargeback rule generates expense lines with a value of the initial price (the mPrice field) of the subscription.

This chargeback rule is triggered when a subscription is imported into CSC.

### Activate subscriptions

This chargeback rule generates expense lines with a value of the initial price (the mPrice field) of the subscription.

This chargeback rule is triggered when a subscription whose mPrice is larger than 0 is activated (status changes to Active).

### Update subscription init. price

This chargeback rule generates expense lines each time price change occurs. The amount is the price difference in the **Reference currency 1**.

If the initial price changes to a lower amount, expense lines with 0 amount are created.



This chargeback rule is triggered when a subscription's initial price (mPrice field) is updated (for example, after you modify the subscription option in CSA.)

## Update subscription unit price

This chargeback rule generates expense lines for the elapsed duration in the current month calculated with the old rate. The cost for the remaining duration of the month will be calculated with the new rate.

This chargeback rule is triggered when a subscription's recurring price (the mRecurringPrice field) is updated (for example, after you modify the subscription option in CSA.)

## Generate expense line for suspended subscription

This chargeback rule generates expense lines for the cost incurred between the suspended time and the latest of the following dates:

- The first day of the current month
- The subscription start date
- The latest date when the subscription recurring price is updated

This chargeback rule is triggered when the subscription status changes from Active to Suspended:

- Manually: by the CSA subscriber
- Automatically: by the work flow when the subscription end date is reached

## Creating or modifying a chargeback rule

To create or modify a chargeback rule, follow these steps:

1. Start the CSC Windows client. To do this, click **Start**, click **All Programs**, click **HP**, click **Asset Manager 9.40 en**, click **Client**.
2. Connect to the **HPCloudChargeBackSystem** database with a CSC administrator.
3. On the navigation bar, expand **Finance management**, and then click **Chargeback rules**.
4. Click **Add** to create a new chargeback rule. Or, click **Modify** to make changes to an existing chargeback rule.
5. On the **General** tab, populate in particular the following fields and links:

Field or link	Value
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General tab	General information
Fields and links in the Amount calculation frame	Define how expense line credits and debits are calculated
Fields and links in the Debited cost center frame	Define how the billing center to which the debit expense line is allocated is selected
Fields and links in the Credited cost center frame	Define how the billing center to which the credit expense line is allocated is selected

- On the **Timer** tab, specify the information used to schedule the chargeback rule. For more information about the schedule of the chargeback rule, refer to the **Installation and configuration** guide, Chapter **Configuring CSC**, section **Automated Process Manager**, section **Automated Process Manager verification schedules**.

**Tip:** You can fill in the fields by following the instructions provided by the **Help on this field**. To open the **Help on this field**, right-click the field, and then click **Help on this field**. For the general chargeback concepts, refer to ["Chargeback" on page 10](#).

**Description:** Generate costs by month ☒ Rule enabled

General **Timer**

Start:  End:

**Event**

☐ Insert

☐ Deletion

☐ Update

☒ **Timer**

**Amount calculation**

Base amount: Script

**Script (amount):** sysCB4SubPricebyMon

Charged object: Contract

**Debited billing center**

Calculation rule: Select from database

Context menu options:

- Help on this field
- Switch to vertical mode
- List only
- Detail only
- ☒ List and detail
- Navigate to

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**Feedback on CloudSystem Chargeback for CSA, 9.40 User Guide**

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to [ovdoc-itsm@hp.com](mailto:ovdoc-itsm@hp.com).