HP IT Business Analytics 10.00 Content Pack 0004 Release Notes



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Installation Instructions

This section provides the installation instructions for IT Business Analytics 10.00 Content Pack 0004.

Before you begin

Review all instructions and the Hewlett-Packard SupportLine User Guide or your Hewlett-Packard support terms and conditions for precautions, scope of license, restrictions, and limitation of liability and warranties, before installing this Content Pack.

Prerequisites

Before you install the Content Pack, perform the following steps:

- 1. Back up your customized files.
- 2. Back up your databases.
- 3. Ensure Java 7 is installed.
- 4. Make sure ITBA 10.00 is working, before starting the Content Pack installation.
- 5. Make sure all ETL and KPI calculation are not currently running.

Content Pack 0004 Installation Steps

Note: If you want to show **Property** in the **Showback Detail for Cloud Services** report, you must install Cloud Service Automation (CSA) 4.50 and 4.50.0001 on the CSA server.

Install the Content Pack by performing the following steps:

Note: Each content pack includes the previous content packs.

- 1. In the ITBA server, backup the entire content pack located in **\$HPBA_Home/Content_Packs** directory.
- 2. Download the ITBA Content Pack 0004 (ITBA10_00_ContentPacks_0004.zip) from (https://hpln.hpe.com/contentoffering/it-business-analytics-content-release).

- 3. Upload the installation file to the ITBA server and unzip it.
- 4. Upgrade the Content Packs:
 - a. In the ITBA server, backup the entire content pack folders located in the **\$HPBA_ HOME\ContentPacks** directory.
 - b. Extract ContentPacks.zip from the root directory of the installation file.
 - c. Unzip **ContentPacks.zip**, and use it to override the contents to the **\$HPBA_HOME** directory.
 - d. Update the common jar file:
 - i. Get the **commons-codec-1.4.jar** file from the **3rd-jars** directory in the installation file.
 - ii. Copy it to the **\$HPBA_Home/glassfish/glassfish/domains/BTOA/lib** directory in the ITBA server.
 - iii. Remove the following files from the ITBA server:
 - \$HPBA_HOME/glassfish/glassfish/domains/BTOA/lib/commons-codec-1.4-14.0.6.1036.jar
 - \$HPBA_HOME/glassfish/glassfish/domains/BTOA/lib/commons-codec-1.3.jar
 - e. Restart ITBA by executing the following script in the ITBA server:

cd \$HPBA_HOME/supervisor/bin

./hpba-restart.sh

- f. Select ADMIN > Data Management > Install Content Pack, select the relevant Content Pack, and:
 - If you had not already installed the Content Pack before installing the Content Pack 0004, click **Install**.

After the installation completes, click **Upgrade**.

• If you had already installed the Content Pack before installing the Content Pack 0004, click **upgrade**.

Note: If you had installed either one of the AWS or AWSCW Content Pack, you must upgrade both.

- g. If you want to work with the latest CMS, install the Content Pack first and then import the contexts (universes) using the following steps :
 - i. Unzip the **content-pack-tool.zip** located in the **tools\dw-content-pack-tool** directory in the installation file.

- ii. Open content-pack-tool, and go to the bin directory.
- iii. Execute the following command:

bash contentPackTool.sh -A

h. Execute SQL in Vertica by modifying the search path of the Vertica logon user:

ALTER USER [ITBA_VerticaUserName] search_path [ApplicationSchemaName], [ExtensionSchemaName], "\$user", public, v_catalog, v_monitor, v_internal;

The values of the parameters must be replaced with the correct values for your environment.

Example:

If the Vertica user is **vertica**, the password is **openview**, the ApplicationShemaName is **BA**, and the ExensionSchemaName is **ext**, then the command to run on the appliance VM is:

- i. cd /opt/vertica/bin
- ii. ./vsql -U vertica -d xsvertica Password: openview
- iii. ALTER USER vertica search_path BA , ext, "\$user", public, v_catalog, v_ monitor, v_internal;
- i. If necessay, clean the ETL data. For details, see "Clean ETL Data After Upgrade" on page 38.
- j. Restart the BOE service.

Working with CMS and CAC

To work with CMS and CAC:

- 1. Backup dw-web.war from the **\$HPBA_HOME/apps** directory.
- 2. Replace dw-web.war in the **\$HPBA_HOME/apps** directory with the provided hotfix dw-web.war.
- 3. Go to the **\$HPBA_HOME/bin** directory, and run: **./deploy.sh –r dw-web**.

How to Upload .BIAR Files

Some Webi reports are supported in ITBA. You can view these reports in the relevant ITBA Dashboard pages. They are provided in the CSA CAP and the CSA_Demo CAP.

You can view these reports through the Dashboard pages that are linked to the BOE server.

Only the CSA CAP reports are imported into the BOE server automatically if you have configured the BOE connection while installing ITBA.

Note:

- Cloud_Billing.biar is needed for the Billing Statement for Cloud Services or Billing Statement for Consumer Organization Admin reports provided in the CSA CAP.
- Cloud_Billing_Demo.biar is needed for the Billing Statement for Cloud Services Demo report provided by the CSA_Demo CAP.

If you did not configure the BOE connection while installing ITBA, or if you want to watch demo reports, run the below steps.

To import the Cloud_Billing.biar or the Cloud_Billing_Demo.biar:

1. Copy the .biar files from the ITBA server:

\$HPBA_HOME /ContentPacks/CSA/INBUILT/BI/BOE/Cloud_Billing.biar

\$HPBA_HOME /ContentPacks/DEMO_CONTENT/INBUILT/BI/BOE/Cloud_Billing_ Demo.biar

 Log on to the SAP BusinessObjects Central Management Console (CMC) at: http://<BOE_ Server_IP>:8080/BOE/CMC. 3. Click Promotion Management.



4. Click **Promotion Jobs > Import > Import file**.



5. Click **Choose File** and select the relevant .biar file.

Import from file	? □ ×
Select file from file system:	
File System FTP Choose File flo file chosen	
OK Cancel	

6. In the **Destination** field, select **Login to a New CMS**.

Promotion Jobs New Job ×	
🔛 🗙 🛅 Properties 🎒 History 🛛 Search for Resources	<i>₽</i> н - 4
🛗 Add Objects 🔩 Manage Dependencies 🖹 Promote 🕲 Rollback	
Fields marked with an asterisk (*) are mandatory fields	
Name*: New Job1	🗁 Copy an Existing I
Description:	This job contains the fo Folders, 1 Web Intellige Connection, 1 Universe
Keywords:	
Save Job in*: Promotion Jobs	🗁 Browse
Source : From File 🔹 🔻	
Destination : Login to a New CMS)

7. Enter the BOE server IP number or server name, user name, and password, and then click Login.

Fields marked with an asterisk	(*) are mandatory fields					
Name*:	New Job1			i (Tony an Existing Job	
Description:			Login To System :	em	:6400 🔻	? 🗆 ×
			User Name : Password :	administrator		
Keywords:			Authentication :	Enterprise	•]
Save Job in*:	Promotion Jobs				Login Cancel	
Source :	From File	•				
Destination :	Login to a New CMS	v				
	Create Cancel					li

8. Click Create to create promotion job.

9. Click **Promote**.

Promotion Jobs New Job1 ×						
📃 🗶 🛅 Properties 🄗 History				Search for Resources	;	🔎 🕅 🖣 🚹 of 1 🕨 M
🐁 Add Objects 🛛 🍓 Manage Dependencies 🌔	🖹 Prom	note 🕽 🕞	Rollback			
New Job1		B	Name 📥	Туре	Created By	Created On
🖶 🦲 All Folders			BA Metrics Reports	Folders	Administrator	Apr 13, 2015 8:13 AM
Connections		-	Billing Statement for Cloud Services Demo	Web Intelligence	Administrator	Apr 13, 2015 8:13 AM
🛨 🔊 Universes			Cloud Billing	Folders	Administrator	Apr 13, 2015 8:13 AM
		8	Cloud Billing Demo	Universes	Administrator	Apr 13, 2015 8:13 AM
			Cloud Billing Reports	Folders	Administrator	Apr 13, 2015 8:13 AM
			XS Metrics	Folders	Administrator	Apr 13, 2015 8:13 AM
		Q	XS_DWH_JDBC	Relational Connection	Administrator	Apr 13, 2015 8:13 AM

10. Click Promote.

Promote - New Job1		? 🗆 ×
Summary Security Settings Test Promote	Systems Confirmation Source * From File Destination Change Management ID Objects to be promoted (7)	n V Log Off
	Type Folders	Name Cloud Billing BA Metrics Reports Cloud Billing Reports XS Metrics
	Relational Connection Image: Image	XS_DWH_JDBC Cloud Billing Demo Billing Statement for Cloud Services Demo
	Y WEU LIKEINGENCE	Billing Statement for Cloud Services Demo
		Save Promote Schedule Cancel

The .biar file is uploaded successfully.

Promotion Jobs				
📸 Organize 🔹 🗶 🔀 Properties 🏄 History Settings 🔹 Override Settings				
🛗 New Job Import 👻 🏒 Edit 🖹 Promote 🐿 RollBack VMS Actions 👻				
Promotion Status Created T				
Promotion Jobs	- 🛗	New Job1	Success	May 4, 2015 5:09 PM

11. Log on to the **Universe Design Tool** from the BOE Client.



12. Click **Tools > Connections...** Edit the relevant connection.

If you are uploading the CSA CAP, edit **XS_DWH_JDBC**.

If you are uploading the CSA_Demo CAP, edit **XS_EXT_JDBC**.

🕹 Connection Panel				×
Connections List The list of available	connections to acc	ess data		
🛅 🕽 🥒 🐴 🗙	* 6 6	✓ 28	B	
Name 🛆	Туре	Network Layer	Database Engine	Folder
👔 Conversion Audit	Secured	Oracle OCI	Oracle 10	1
nonitoring TrendD	Secured	JDBC	Generic JDBC datas	1
TS_DWH_JDBC	Secured	IDBC	HP Vertica 6.1	1
TS_EXT_JDBC	Secured	Add	HP Vertica 6.1	1
👔 efashion	Secured	Edit	MS Access 2000	1
🎁 efashion-webi	Secured	Remove	MS Access 2007	1
	_	Test		
		Rename		
		Edit Description		
		Switch to Folder View		
		Properties		
			Close	Cancel <u>H</u> elp

13. Enter the relevant connection message of the Vertica server and click Next.

👔 Edit XS_DWH_JDBC o	connection	×
Login parameters [3 Define the login pa	/4] arameters to access your database using JDBC middleware	
Authentication Mode	Use specified username and password	
User Name	vertica	
Password	XXXXXXXXX	
Server (host:port)	:5433	
Database	xsvertica	
Test Connection	< <u>B</u> ack <u>N</u> ext > Cancel <u>H</u> elp	_]_

14. Click **Next > Finish > Close**.

Edit XS_DWH_JDBC connection	×
Configuration Parameters [4/4] Define the advanced parameters to access your databa middleware	se using JDBC
Connection Pool Mode	Keep the connection active f
Pool Timeout	10 🕂 Minutes
Array Fetch Size	10 ÷
Array Bind Size	5
Login Timeout	600 🚑 Second
JDBC Driver Properties (key=value,key=value)	
< Back Finish	Cancel Help

The import of the .biar files is complete.

15. By default, the application schema name is **BA**, the extension schema name is **ext**, and the database name is **xsvertica**. If the customer server settings are different, change the as shown below.

a. Click File > Import..., and select the Cloud Billing universe directory.

Import Universe	2	Select a Universe Folder
	Select a universe domain in the repository to see available universes. Select the universe you want to import. Double-click to lock or unlock a universe. A grayed padlock means someone else has locked the universe.	Available Universe Folders:
Folder:	Browse	Monitoring Trendbata Universes
Available Universe	I ✓ Open the selected universes s:	- 🛅 webi universes
Universe Name	Locked by	Source Provide Allow
Description:		
		OK Cancel
Import Folder:	C:\Users\Administrator\AppData\Roaming\SAP BusinessObjects	
	Browse	
	OK Cancel Help	

b. Select Cloud Billing and click OK.

F				
Import Universe	:			×
	Select a universe domain Select the universe your a universe. A grayed par universe.	in the reposi want to impor dlock means s	tory to see av t. Double-click omeone else h	ailable universes. to lock or unlock as locked the
Eolder:	XS Metrics/Cloud Billing	J	•	Browse
	🔽 Open the selected u	niverses		
Available Universe:	5:			
Universe Name			Locked b	у
Cloud Billing				
	200			
Description:				
				A
Import Folder:	C:\Users\Administra	ator\AppData	\Roaming\SAP	BusinessObjects
				Browse
		ОК	Cancel	Help

c. Right-click the relevant table, and select Rename Table.



d. In the **Owner** field enter the correct application schema name and in the **Qualifier** field enter the correct database name.

Rename Table 'BA.PERIOD_DIM_V'	×
Table name:	ОК
PERIOD_DIM_V	Cancel
Owner:	Help
BA	
Qualifier:	
xsvertica	
Set case to	
Upper case	
Lower case	

e. After modifying all the relevant tables as shown above, click **File > Export...**

Content Pack 0004 for BA 10.00 Installation Instructions

- f. Click **OK** to upload the changes to BOE the server.
- 16. Proceed in the same way for the Cloud Billing Demo universe directory.

Limitations

Formula Filter Including '('

If the parameters in a KPI/Metric formula filter Expression contain ' (', the space is removed during the formatting of the formula and the calculation will be incorrect.

Example:

• Original formula:

PERCENTAGE(ASSET, ASSET.ASSET_STATUS Like 'Return for maintenance%' And ASSET.DATE_INSTALLED <= END_PERIOD, ASSET.ASSET_STATUS <> 'Retired (demo)' And ASSET.ASSET_STATUS <> 'unknown' And ASSET.DATE_INSTALLED <= END_PERIOD

• Formatted formula:

PERCENTAGE(ASSET, ASSET.ASSET_STATUS Like 'Return for maintenance%' And ASSET.DATE_INSTALLED <= END_PERIOD, ASSET.ASSET_STATUS <> 'Retired (demo)' And ASSET.ASSET_STATUS <> 'unknown' And ASSET.DATE_INSTALLED <= END_PERIOD

Workaround: Separate the string with '||'.

Example:

• Original formula:

PERCENTAGE(ASSET, ASSET.ASSET_STATUS Like 'Return for maintenance%' And ASSET.DATE_INSTALLED <= END_PERIOD, ASSET.ASSET_STATUS <> 'Retired (demo)' And ASSET.ASSET_STATUS <> 'unknown' And ASSET.DATE_INSTALLED <= END_PERIOD

• should be replaced:

PERCENTAGE(ASSET, ASSET.ASSET_STATUS Like 'Return for maintenance%' And ASSET.DATE_INSTALLED <= END_PERIOD, ASSET.ASSET_STATUS <> 'Retired '||' (demo)' And ASSET.ASSET_STATUS <> 'unknown' And ASSET.DATE_INSTALLED <= END_PERIOD

KPI Breakdown Formula Limitation

When you configure the formula of a KPI for which you will set up Breakdowns, make sure that you do not use multiple entities.

Example of a correct formula, the formula uses the same entity for the numerator and denominator

PERCENTAGE_MATH(SUM(CostAmount,CostExpenseType = 'CAPEX' and PERIOD_ ENTITY=Period),SUM(CostAmount,CostExpenseType = 'OPEX' and PERIOD_ ENTITY=Period),100)

Example of an incorrect formula; the formula uses two different entities for the numerator and denominator and that might cause the Breakdown calculations to be incorrect.

PERCENTAGE_MATH(SUM(CostAmount,CostExpenseType = 'CAPEX' and PERIOD_ ENTITY=Period),SUM(Cost,CostExpenseType = 'OPEX' and PERIOD_ENTITY=Period),100)

The connection to the data source fails after timeout when connecting to the CMS CAC environment

To fix the issue, download and install the following hotfix:

https://patch-central.corp.hp.com/crypt-web/protected/viewContent.do?patchId=EXSC_00220

Documentation_Additions

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CP0004 Enhancements and Their Documentation

This section provides the changes and additions to the documentation that support Content Pack 0004.

Enhancements

The enhancements provided by CP0004 are:

- The new CMS and CMS_demo CAPs. For details, see "CMS_Demo and CMS Content Acceleration Packs" on the next page.
- A new CMS Content Pack. For details, see "Integration with CMS" on page 32.
- Support for CMS 10.1 and 10.2
- Support for CSA 4.6
- Support for ALM 12.2, and 12.5
- The update of an SA KPI name
- A hotfix for CMS CAC. For details, see "Working with CMS and CAC" on page 6.
- A KPI limitation
- Clean ETL Data after upgrade to CP0004. For details, see "Clean ETL Data After Upgrade" on page 38.

Documentation

The pages that follow describe the enhancements listed above and replace the relevant pages or do not appear in the ITBA 10.00 documentation.

CMS_Demo and CMS Content Acceleration Packs

The purpose of the CMS Content Acceleration Pack (CAP) is to provide a set of items (Dashboard pages, Scorecards, Contexts, KPIs, Metrics, and more) that automatically gathers information from across your enterprise to build key performance indicators (KPIs) related to CMS-related issues with OOTB data from Data Warehouse. The CAP includes the CMS Governance, Cloud and Virtualization Perspectives. The CAP provides broad and deep insight that should enable you to Improve CMS Accuracy, Improve CMS Completeness, Improve CMS Modeling Completeness, Improve Virtualization Utility. This CAP provides a 360 degree view.

To access:

Click **Admin > Data Management > Activate CAP**. You can then select the relevant CAP and activate it.

If the CAP you want to activate is not the demo CAP, you must make sure you have installed the relevant Content Pack, connected the relevant data source, optionally configured the consolidations, and run the ETL to see the relevant data in the CAP Dashboard pages.



What are Content Acceleration Packs (CAPs)

Content Acceleration Packs (CAPs) are packages that include Dashboard pages that display Scorecards and components, KPIs, Metrics, Contexts (universes), data (from .CSV files or from data sources), and documentation for the CAP. You can import them, export them, activate, or deactivate them, or you can create your own.

CAPs describe typical stories that show how the correct implementation of Business Analytics drives Performance Improvement and Cost Reduction for the IT organization.

CAPs demonstrate Business Analytics capabilities, and helps you add basic elements that can be used to customize your Dashboard.

The CMS_Demo is based on data in .csv files that are part of the CAP package and CMS CAPs include data from the UCMDB data source.

Pages

IT Configuration Manager(CMS and AM) ×	IT Configuration	Manager(CMS and AM)(Demo) ×	IT Configuration Manager(EMS) × IT Configuration Mana	ger(CMS)(Demo) ×	Select Page 🖌 🛛 🏷 🖼 🎦	6
Scorecard	- 1i @ ∧ ×	KPI View	- ĭi∣@ ^ ×	Historical View	- 1i @ ∧ ×	Forecast	- ĭi @ ∧ ×
IT Configuration Manager(CMS and AM)(Demo)	Current		⇒ ~			Filter by Percentage of Node Virtualization(Demo) (Historical 🗙
CMS Governance(Demo)	E۲	Percentage of Application Virtualization(Demo) ≡	<u> </u>	■ Percentage of Application Virtualization(Demo) ≡	100	Percentage of Node Virtualization(Demo)
Improve CMS Accuracy(Demo) ≡ Improve CMS Completeness(Demo) =	2.67 ↓⊗ 3.39 ↓	🖶 🥅 FY2016/03(Mar) 😢	37%	 Percentage of Service Virtualization(Demo) = Percentage of Node 		100	
Improve CMS Modeling Completeness(Demo) = Cloud and Virtualization(Demo)	6.09 🕂 🔒	Percentage of Node		Virtualization(Demo) =			
Improve Virtualization Utility(Demo) \equiv	2.55 🔸 😒	Virtualization(Demo) ≡ ♣ IIII FY2016/03(Mar) 😣	41%		0	-0.57	
				1	03/31/2015 03/08/2016	04/30/2016	06/30/2016
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IT Configuration Manager (CMS and AM)(Demo)

IT Configuration Manager (CMS and AM)

IT Configuration Manager(CMS and AM)	× IT Configuration	a Manager(CMS and AM)(Demo) ×	IT Configuration Manager((EMS) × IT Configuration Ma	nager(CMS)(Demo) ×	Select Page 🖌 🕻	≯ 1\ \$ ⊡ • Q
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CMS Governance	Ę∽	Percentage of Applications Related to Nodes ≡	Î	Percentage of Applications Related =	100	Percentage of Services	Related to Nodes
Improve CMS Accuracy \equiv Improve CMS Modeling Completeness \equiv Improve CMS Completeness \equiv	0.77 ↑ ⊗ 3.73 ↑ <u>∧</u> 4.08 ↓ <u>∧</u>	= 📰 FY2016/03(Mar) 🛕	68 .75%	 Percentage of Services Modeled by Automat = Percentage of Services Related to Nodes = 		100	
Cloud and Virtualization $\label{eq:limbulk} Improve Virtualization Utility \equiv$	2.39 🛧 😒	Percentage of Services Modeled by Automated Service Mode ≡ = Ⅲ FY2016/03(Mar) 📀	23.5294%		03/31/2015 03/08/2016	0 04/30/2016	06/30/2016
KPI Rolodex		Ti ⊗ ∧ × Pie Chart V	View		◎ < × Pie Chart View		- ĭi @ ∧ ×
		An ~ Perce	entage of Author CI_TYPE CI	_TypeT	∯p → Number of Nor	les mo NODE NODE_ROLE	Ft Hp V
CMS Growth \equiv	Number of CIs moni	itored by CMS =	ness_application =		[desktop, virtu	alized_system] =	
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IT Configuration Manager (CMS)(Demo)

Sorecard CMS/Demo IT Configuration Manager(CMS/Demo) It Configuration Manager(CMS/Demo) Configuration Manager(CMS/Demo) It Configuration Manager It Configuration Manager	IT Configuration Manager(CMS and AM) ×	IT Configuration	Manager(CMS and AM)(Demo) :	× IT Configuration Manager(Cl	MS) × IT Configuration Mana	ager(CMS)(Demo) ×	Select Page 🗸 🗘 🏷 🖾 🏷 🕼 🕄 📀 🛛
IT Configuration Manager(CMS)(Demo) Cond and Wrusilization(Demo) Improve (Ms Construction Utility(Demo) = 2.55 CMS covernance(Demo) Improve (Ms Accuracy(Demo) = 2.67 Market (Ms)(Demo) = 100 Market (Ms)(Demo) = 100 Market (Ms)(Demo) = 100 Market (Ms)(Demo) = 100 100 <th>Scorecard</th> <th>- ĭi @ ∧ ×</th> <th>KPI View</th> <th>- ĭi @ ∧ ×</th> <th>Historical View</th> <th>- ĭi∣@ ☆ ×</th> <th>Forecast 👻 🔟 🖉 🔿</th>	Scorecard	- ĭi @ ∧ ×	KPI View	- ĭi @ ∧ ×	Historical View	- ĭi∣@ ☆ ×	Forecast 👻 🔟 🖉 🔿
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Improve (MS AccuracyOlemo) = 2.67 + 0 Improve (MS CompletenessIDemo) = 6.01 + 4 Improve (MS Modeling CompletenessIDemo) = 7 Improve (MS Modeling CompletenessIDemo) = 7 Imp	CMS Governance(Demo)	2.55 🔷 🔮	🖶 📰 FY2016/03(Mar) 😣	37%	Virtualization (Demo) = Percentage of Node		100
KPI Rolodex Pie Chart View Pie Chart View </td <td>Improve CMS Accuracy(Demo) ≡ Improve CMS Completeness(Demo) ≡ Improve CMS Modeling Completeness(Demo) ≡</td> <td>2.67 ↓ ⊗ 6.01 ↓ ▲ ≡ 6.09 ↓ ▲</td> <td>Percentage of Node Virtualization(Demo) ≡</td> <td></td> <td>Virtualization(Demo) =</td> <td></td> <td>-0.57</td>	Improve CMS Accuracy(Demo) ≡ Improve CMS Completeness(Demo) ≡ Improve CMS Modeling Completeness(Demo) ≡	2.67 ↓ ⊗ 6.01 ↓ ▲ ≡ 6.09 ↓ ▲	Percentage of Node Virtualization(Demo) ≡		Virtualization(Demo) =		-0.57
KPI Rodolex Pie Chart View Pie Chart View </td <td></td> <td></td> <td></td> <td>4177</td> <td>-</td> <td>03/31/2015 03/08/2016</td> <td>04/30/2016 06/30/201</td>				4177	-	03/31/2015 03/08/2016	04/30/2016 06/30/201
CHS Growth(Demo) = Number of Cls monitored by CHS(Demo) Image: Description of Cls monitored by CHS(Demo)	KPI Rolodex			t View umber of Cls Not in CMS_Demo f	CL_Type	Pie chart view	des mo CMS_Demo Virtualization
	CMS Growth@emo) =	Number of CIs monitor	ed by (MS(Demo) Bu Inf Bu Nc	xsinessApplication ≡ frastructureService ≡ xsinessService ≡ sde ≡		Non Virtualizat	

IT Configuration Manager (CMS)





This section includes:

Upload and manage the Content Acceleration Pack

For details, see Content Acceleration Packs (CAPs).

View the CMS or CMS_Demo CAP-related Dashboard page

- 1. In the ITBA application, close all the tabs. The Dashboard is displayed.
- 2. Select one of the relevant pages in **Select Page** or click the **Page Gallery** button in the Dashboard toolbar, double-click the relevant icon and close the Page Gallery dialog box.

View the Scorecard Structure and KPI and Metric Breakdowns in the Studio

- 1. Make sure the CAP is activated.
- 2. In the Business Analytics application, click **Studio**.
- 3. Expand the relevant Scorecards to view the Scorecards, Perspectives, Objectives, KPIs, KPI Breakdowns structure.

User Story

1. Maggie is the IT Configuration Manager at ABC Inc. She manages the configuration management system in the IT organization.

One of her responsibilities is to ensure that all assets are accurately defined and identified in the configuration management system in support of business needs.

- She logs into the ITBA application and opens the IT Configuration Management (CMS) page in Dashboard.
- 3. She first looks at the **Improve CMS Completeness** Objective.
- Then she clicks the Objective and finds that the CIs Synced Between CMS and AM vs CIs in AM KPI is red.
- 5. In the Historical View in the same Dashboard page, she finds that the KPI value decreased considerably during the past week.
- 6. To understand why the KPI is red, Maggie clicks on the KPI to open EXPLORER, where the pie clearly shows there are still lots of missing CIs when compared to the CIs in the Asset Manager.
- Maggie sends an annotation to Richard, the Discovery Administrator requesting clarifications: "Richard – We have poor CMS Completeness, please provide insight and set a plan by EOW".
- Richard is responsible for collecting, discovering, and maintaining the configuration information for hardware assets in the configuration management system. After he receives the annotation from Maggie, he checks his report and starts the analysis of the problem.

- 9. Richard then replies to Maggie that he will initiate a meeting with the Discovery Team to discuss the issue.
- 10. Then Maggie looks at the Improve CMS Accuracy Objective.
- 11. She clicks the Objective and finds that the Percentage of Authorized CIsKPI is red
- 12. To understand why the KPI is red, Maggie performs a Breakdown on this KPI by CI Type. She finds out that **Network Component** only hits 20% of authorized CIs and is the cause of the red ratio of the KPI.
- 13. She clicks on the **Network Component** in the legend to open the KPI EXPLORER, where the data shows details for which **Network Component** CIs are not authorized.
- 14. Maggie sends an annotation to John, the Configuration Team Leader: "John We have poor CMS accuracy on Network Component CIs. Please provide insight and set a plan by EOW".

The Configuration Team and John are responsible for authorizing the configuration item in the configuration management system.

- 15. When John gets the annotation from Maggie, he checks his report and starts the analysis of the problem.
- 16. John then replies to Maggie that he will work with the team to address the issue by EOW.
- 17. Then, Maggie updates the server virtualization results to her manager Steve, who is the director of the IT Organization, to help moving their traditional IT to the new style of IT in order to optimize the running of their IT organization.
- 18. She looks at the Improve Virtualization Utility Objective.
- 19. She clicks the Objective and finds that the Percentage of Server Virtualization KPI is red
- 20. To understand why the KPI is red, Maggie looks at the **Server by Virtualization** pie chart. She sees that only 30% of servers are running on the cloud and virtualization technology.
- 21. Maggie sends an annotation to Steve: "Steve We have poor performance on server virtualization, I will setup a meeting with the IT infrastructure team to push them move more servers on the cloud".



CMS_Demo and CMS



* f P ALM_Demo	View by : All					
ALM_Demo		~		Deactivate		
	Û	Ŵ	The purpose of the CMS Content Acceleration Pack (CAP) is to Scorecards, Contexts, KPIs, Metrics, and more) that automativ	The purpose of the CMS Content Acceleration Pack (CAP) is to provide a set of items (Dashboard pages, Scorecards, Contexts, KPIs, Metrics, and more) that automatically gathers information from across your HPE		
I AM	Û	Û	When the CAD is a list of the	BA Version: 10.00		
AM_Demo	U	Û	Content			
📦 CMS	e	Û	- Pager	- KBIs and Matrice		
CMS_Demo	U	Û	rayes			
PPM_Demo	Û	Û	IT Configuration Manager(CMS and AM)	Applications Synced Between CMS and AM vs Applications in AM	1	
SA_Demo	۵. ا	ŵ	IT Configuration Manager(CMS)	Cls Synced Between CMS and AM vs Cls in AM	0	
SM Demo	0	÷	4	Nodes Synced Between CMS and AM vs Nodes in AM	0	
				Percentage of Application Virtualization Percentage of Applications Related to Nodes	0	
	0		 Scorecards 	Percentage of Authorized Applications Percentage of Authorized Applications	0	
VPUps_Demo	Q		IT Configuration Manager(CMS and AM)	Percentage of Authorized Cls	0	
			IT Configuration Manager(CMS)	Percentage of Authorized Nodes	0	
				Percentage of Authorized Services	0	
				Percentage of Node Virtualization	0	
			 Business Contexts 	Percentage of Nodes with Vendors	٢	
				 Percentage of Service Virtualization 	€	
			🔂 Type Name	Percentage of Services Modelled by Automated Service Modelling	0	
			✓ I CMS_ConfigurationManagementSystem	Percentage of Services Related to Nodes	0	
				Data (External tablec)		

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Pages	See "Pages " on page 24.
Scorecards	IT Configuration Manager (CMS and AM)IT Configuration Manager (CMS)
Business	CMS_ConfigurationManagementSystem
Contexts	For details, see Reference: Contexts (Universes) in the Content Reference Guide.
KPIs and Metrics	Note: The Demo CAP includes KPIs with names followed by (Demo). The CAP includes the same KPIs with names that do not include (Demo). The KPIs are the same but have different names so that both the Demo CAP and the CAP can be activated at the same time.
	Applications Synced Between UCMDB and AM vs Applications in AM KPI
	The number of Business Applications synchronized between CMS and AM compared to the number of Business Applications in AM.
	CIs Synced Between CMS and AM vs CIs in AM KPI
	The number of CIs synchronized between CMS and AM compared to the number of CIs AM (for CIs of type Node, Business Service, Infrastructure Service, or Business Application).
	Nodes Synced Between CMS and AM vs Nodes in AM KPI
	The number of Nodes synchronized between CMS and AM compared to the number of Nodes in AM.
	Percentage of Application Virtualization KPI
	The number of Business Applications provided by the relative Server components running on cloud virtualization technology relative to the total number of Business Applications (KPIs show data only if you are using CMS 10.22 and above).
	Percentage of Applications Related to Nodes KPI
	The number of Business Applications that have at least 1 direct or indirect relationship with a Node relative to the number of Business Applications.
	Percentage of Authorized Applications KPI
	The number of authorized Business Applications relative to the total number of Business Applications (KPIs show data only if you are using UCMDB Configuration Manager).
	Percentage of Authorized CIs KPI
	The number of authorized CIs relative to the total number of CIs (KPIs show data only if you are using UCMDB Configuration Manager).
	Percentage of Authorized Nodes KPI

UI Element	Description
	The number of authorized Nodes relative to the total number of Nodes (KPIs show data only if you are using UCMDB Configuration Manager).
	Percentage of Authorized Services KPI
	The number of authorized Services relative to the total number of Services (Service in Business Service or Infrastructure Service) (KPIs show data only if you are using UCMDB Configuration Manager).
	Percentage of Node Virtualization KPI
	The number of Nodes that are running on cloud virtualization technology relative to the total number of Nodes (KPIs show data only if you are using CMS 10.22 and above).
	Percentage of Nodes with Vendors KPI
	The number of Nodes that contain vendor information relative to the total number of Nodes.
	Percentage of Service Virtualization KPI
	The number of Services provided by the relative Server components running on cloud virtualization technology relative to the total number of Services (Service in Business Service or Infrastructure Service) (KPIs show data only if you are using CMS 10.22 and above).
	Percentage of Services Modeled by Automated Service Modeling KPI
	The number of Services that are modeled by automated service modeling relative to the number of Services that are created during the measurement period (Service in Business Service and Infrastructure Service) (KPIs show data only if you are using CMS 10.2 and above).
	Percentage of Services Related to Nodes KPI
	The number of services that have at least 1 direct or indirect relationship with a Node relative to the number of services (Service in Business Service or Infrastructure Service).
	Services Synced Between CMS and AM vs Services in AM KPI
	The number of Services synchronized between CMS and AM compared to the number of Services in AM (Service in Business Service or Infrastructure Service).
	CMS Growth Metric
	The number of CIs created in the last period relative to the number of CIs created in the previous period.
	Number of CIs Monitored by CMS Metric
	The total number of CIs monitored by CMS.
	Number of CIs Not in Authorized State Metric

UI Element	Description
	The total number of CIs that are not in authorized state.
	Number of Missed CIs Compared to Asset Manager Metric
	The number of CIs in Asset Manager that do not have a relevant CI record in CMS (for CIs of type Node, Business Service, Infrastructure Service, or Business Application).
	Number of Nodes Monitored by CMS Metric
	The total number of Nodes Monitored by CMS.
Data (External Tables)	CMS_demo

Integration with CMS

HPE Configuration Management System (CMS) comprises three components: UCMDB, Discovery, and Configuration Manager. The UCMDB reconciles data from multiple discovered and federated sources into one data set, model your business services, calculate the potential impact of changes within these services, track changes for any configuration item, and contains reporting capabilities to transform CMDB data into comprehensible, actionable information that helps answer critical questions and solve business problems. HPE Universal Discovery (UD) software is used by UCMDB to acquire and maintain application and IT infrastructure data. Configuration Manager makes it possible to analyze IT environments in order to move toward fewer standards and improve IT management processes. This helps you improve data quality in your configuration management system (CMS), avoid single points of failure, achieve geographic redundancy of applications and drive changes based on configuration standards.

This section describes the integration, contexts, KPIs, Metrics, and reports, if any, associated with the integration with the Configuration Management System data source.

The purpose of the integration of Configuration Management System (CMS) as a data source is to bring quality management information into the Data Warehouse.

To access:

Select ADMIN > Data Management > Connect Data Source then click Add data source and select CMS to activate the integration processes for the CMS data source.





Content Packs and their functionality

To learn about Content Packs and their functionality see, Connect the Data Source in the Administrator *Guide*.

DCS Integration:

An extractor using the Data Collection Service mechanism that extracts entities from the CMS source and generates corresponding flat files using the TQL query language. For details, see Connect the Data Source in the *Administrator Guide*.

Important Information

- CMS supports multiple instances of the Content Pack.
- All fields are case-sensitive.



Activate the integration

- 1. Activate the CMS Data Source:
 - a. Select ADMIN > Data Management > Connect Data Source then click Add data source.
 - b. The Add Data Source page opens. Select the CMS data source type.
 - c. Select or enter the configuration parameters.
 - d. Click **Next** to proceed to the validation page.

Note: The system does not support changing the **Data Source Type**, therefore you must select the relevant type: CAC or non-CAC, before activation.

Note: Before reactivating the CMS data source, click **Edit Settings** and enter the **Username** and **Password**.

Connect to CMS on a Secured Connection

- Export the CMS SSL certificate to a file. For details, see the CMS Hardening Guide available in the HPE Software Support Online web site (https://softwaresupport.hp.com/group/softwaresupport/home).
- 2. If you have selected CAC, perform this step, otherwise go to the next step.

To reveal the CMS certificate to Data Warehouse, import the SSL certificate trusted by the CMS server into the JDK key store using a tool provided by the JDK called **keytool.exe** by running the command :

\$HPBA_Home/dk/jre/bin/keytool -importcert -alias <alias> -file <file> -keystore %HPBA_Home%/jdk/jre/lib/security\cacerts -trustcacerts **Note:** The default password for JVM keystore is a 'changeit'. If this password wasn't changed before, use the default keystore password for certificate import.

- 3. Restart the ITBA server.
- 4. Select **Is secured** in the activation parameters page.

Is secured unchecked with NON CAC still works.

5. Change the port to a secured port. Default port is 8080. Secured default port is 8443, CAC default port is 8444.



CMS Activation Page

The data warehouse is connected to Configuration Management System through high-level integration processes.

• Non CAC Access:

Mandatory fields are marked with a red asterisk.

Data Source Wizard Help ×					
CMS (Configuration Management System)					
*Instance name :					
CMS Version :	10.2 ~				
Time Zone :	Asia/Shanghai 🗸				
Data Source Type : Access Type :	CMS ~ Non CAC ~				
*Username : *Password :	< <enter username="">></enter>				
	Is Secured				
*Hostname/IP Address :	< <enter address="" hostname="" ip="" or="">></enter>				
*Port :	< <default 8080,="" 8443="" https:="" ports:http:="">></default>				
*Customer Name :	Default Client				
Initial Load Period (months): 6 🗸				
	Back Next Can	cel			

CAC Access:

Data Source Wizard Help ×				
CMS (Configuration Manag	ement System)			
*Instance name :				
CMS Version :	10.2 ~			
Time Zone :	Asia/Shanghai 🖌			
Data Source Type :	CMS ~			
Access Type :	CAC 🖌			
*Certificate :				
*Password :				
	Is Secured			
*Hostname/IP Address :	< <enter address="" hostname="" ip="" or="">></enter>			
*Port :	<pre></pre>			
*Customer Name :	Default Client			
Initial Load Period (months) :	6 ~			
	Back Next Cano	el		

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
CMS Version	Select the relevant CMS version. For details, see the Support Matrix.
Time Zone	Select the time zone for the data source.
Data Source Type	CMS.
Access Type	Select CAC or Non CAC
Certificate/User Name	If you select CAC , the field is displayed as Certificate. Enter the name of the certificate.
UI Element	Description
---------------------------------	---
	If you select Non CAC , the field displayed as User Name . Enter the name of the user used to access the UCMDB server.
Password	If you select CAC , enter the password of the UCMDB server's certificate file. If you select Non CAC , enter the password of the user used to access the UCMDB server.
Is Secured	Select to use https to get data. Unselect to use http to get data.
Hostname/IP Address	Enter the CMS hostname or IP address.
Port	Enter the server port number.
Customer Name	Used for multi-customer purposes. If no user name is given, then Default Client is displayed.
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.



CMS-Related KPIs and Metrics

For a list of the CMS-related KPIs and Metrics, see KPIs and Metrics in the *Content Acceleration Packs Guide*.

Clean ETL Data After Upgrade

This section describes the cases when you need to clean the existing ETL data for the relevant Content Pack after upgrading from specific versions of Content Packs (CP) to CP0004.

To clean the ETL data, see Clean the ETL data in the Utility Tools Guide.

To download the Utility Tool Guide, go to HPLN (https://hpln.hp.com/group/it-business-analytics, click **Resources > 5.Tools > ITBA 10.0**, and download the PDF.

Integration with	Base Version	Target Version	Clean the existing ETL data
CSA	10.00	10.00 CP0004	Yes
	10.00 CP0001	10.00 CP0004	No
	10.00 CP0002		
	10.00 CP0003		
AWS/AWSCW	10.00	10.00 CP0004	Yes
	10.00 CP0001		
	10.00 CP0002	10.00 CP0004	No
	10.00 CP0003		
АМ	10.00 CP0003	10.00 CP0004	Yes if you want to use the KPI across CMS and AM
	10.00 CP0001	10.00 CP0004	No
	10.00 CP0002		

To check if you need to clean the ETL data, see the conditions below:

CP0003 Enhancements and Their Documentation

This section provides the changes and additions to the documentation that support Content Pack 0003.

Enhancements

CP0003 helps you obtain Asset Manager business data including Asset Lifecycle, Procurement, Finance, Vendor Contract and software license information. It provides:

- Integration with AM. The collected data is integrated into AM-related KPIs, Metrics, and Dashboard pages. For details, see "Integration with AM" on the next page and "AM_Demo and AM Content Acceleration Packs" on page 46.
- Support for Asset Manager 9.41 and 9.50.
- Support for MSSQL and Oracle.
- Integration with vPV. The collected data is integrated into CSA-related KPIs, Metrics, and Dashboard pages.
- New AM KPIs.

Documentation

The pages that follow describe the enhancements listed above and replace the relevant pages or do not appear in the ITBA 10.00 documentation.

Integration with AM

Asset Management helps you to manage your assets across procurement, active lifecycle, and disposals so you can optimize end-to-end asset usage for optimal value and lower costs.

The AM integration uses the SAP BusinessObjects Data Services drivers for data store connections.

This section describes the integration, contexts, KPIs, Metrics, and reports, if any, associated with the integration with the Asset Manager data source.

The Asset Manager (AM) content pack enables you to receive data information from the AM application. AM is a fully integrated suite of modules delivered as part of the Service Management Center software package. AM software manages the physical, virtual, financial, and contractual aspects of assets.

Note: Information about the ALT data source and more general content issues are detailed in the *Content Reference Guide.*

To access:

Select ADMIN > Data Management > Connect Data Source then click Add data source and select AM to activate the integration processes for the AM data source.



Content Packs and their functionality

To learn about Content Packs and their functionality see, Connect the Data Source in the Administrator *Guide*.

Important Information

- The AM Content Pack supports multiple instances.
- **DCS Integration:** An extractor using the Data Collection Service mechanism that extracts entities from the source and generates corresponding flat files. For details, see Data Collection Service (DCS) in the *Administrator Guide*.

• All fields are case-sensitive.



Activate the integration

1. Prerequisite:

The AM data source can have either the Oracle or the SQL Server type.

2. Activate the AM Data Source:

- a. Select ADMIN > Data Management > Connect Data Source then click Add data source.
- b. The Add Data Source page opens. Select the **AM** data source type.
- c. Select or enter the configuration parameters.
- d. Click **Next** to proceed to the validation page.

Note: The system does not support changing the **Data Source Type**, therefore you must select the relevant type, SQL or Oracle, before activation.



AM Activation Page

The data warehouse is connected to Asset Manager through high-level integration processes.

User interface elements are described below:

Content Pack 0004 for BA 10.00 Documentation_Additions

For the SQL server:

The following is an example of the AM Activation page when the database backup of Asset Manager is restored on an SQL Server.

Data Source Wizard				Help 🗙
AM (Asset Manager)				
*Instance name :				
AM Version :	9.41/9.5	~		
Time Zone :	Asia/Shanghai	~		
Data Source Type :	MSSQL	~		
*Username :	< <enter username="">></enter>			
*Password :				
*Hostname/IP Address :	<-Enter hostname or l	P address>	>	
*Port :	<-Default: Oracle 1527	1, MSSQL 1	433, MySql 3.	306>>
*Database Name :	< <enter database="" nam<="" th=""><th>10>></th><th></th><th></th></enter>	10>>		
Initial Load Period (months) :	6	~		
	٦	Back	Next	Cancel

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
AM Version	Select the relevant AM version. For details, see the Support Matrix.
Time Zone	Select the time zone for the data source.

UI Element	Description
Data Source Type	AM should be configured to run on an SQL Server.
Username	Enter the username used to log on to the AM database.
Password	Enter the password used to log on to the AM database.
Hostname/IP Address	Enter the SQL server database hostname or IP address.
Port	Enter the server port number.
Database Name	Enter the database name used by AM.
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.

Content Pack 0004 for BA 10.00 Documentation_Additions

For the Oracle Server:

The following is an example of the AM Activation page when the database backup of Asset Manager is restored on an Oracle Server.

Data Source Wizard		Help ×
AM (Asset Manager)		
*Instance name :		
AM Version :	9.41/9.5 ~	
Time Zone :	Asia/Shanghai 🖌	
Data Source Type :	Oracle	
*Username :	< <enter username="">></enter>	
*Password :		
*Hostname/ID Address	<-Enter hostname or ID address	
*Port :	< <default: 1433,="" 1521,="" 3306="" mssoi="" mvsgl="" oracle="">></default:>	
SID :	< <if entered,="" mandatory="" name="" not="" service="">></if>	
Service Name :	< <if entered,="" mandatory="" not="" sid="">></if>	
Initial Load Period (months) :	6 ~	
-	Back Next Cano	el

Mandatory fields are marked with a red asterisk.

Note: The Oracle database can have both Server ID (SID) and Service Name properties, but the user should specify only one. If you define the SID, then the SID is used, and if you define Service Name, then Service Name is used. If you define both in the UI, only SID is used.

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
AM Version	Select the relevant AM version. For details, see the Support Matrix.
Time Zone	Select the time zone for the data source.
Data Source Type	AM should be configured to run on an Oracle server.
Username	Enter your username used to log on to the AM database.
Password	Enter your password used to log on to the AM database.
Hostname/IP Address	Enter the Oracle server hostname or IP address.
Port	Enter the server port number.
SID	Enter the unique name of the database.
Service Name	Enter the alias used when connecting.
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.



AM-Related KPIs and Metrics

For a list of the AM-related KPIs and Metrics, see KPIs and Metrics in the *Content Acceleration Packs Guide*.

AM_Demo and AM Content Acceleration Packs

The purpose of the AM_Demo and AM Content Acceleration Packs (CAPs) is to provide a set of items (Scorecards, Contexts, KPIs, Metrics, and more) that automatically gathers information from across your enterprise to build key performance indicators (KPIs) related to AM-related issues with OOTB data from Data Warehouse as well as Dashboard pages that display the relevant information. The CAPs provide broad and deep insight that should enable you to Improve Staff Effectiveness, Improve Responsiveness, Achieve Process Excellence, Improve Quality of Delivery, and Improve Customer Satisfaction. This CAP provides a 360 degree Asset Manager view.

To access:

Click **Admin > Data Management > Activate CAP**. You can then select the relevant CAP and activate it.

If the CAP you want to activate is not the demo CAP, you must make sure you have installed the relevant Content Pack, connected the relevant data source, optionally configured the consolidations, and run the ETL to see the relevant data in the CAP Dashboard pages.



What are Content Acceleration Packs (CAPs)

Content Acceleration Packs (CAPs) are packages that include Dashboard pages that display Scorecards and components, KPIs, Metrics, Contexts (universes), data (from .CSV files or from data sources), and documentation for the CAP. You can import them, export them, activate, or deactivate them, or you can create your own.

CAPs describe typical stories that show how the correct implementation of Business Analytics drives Performance Improvement and Cost Reduction for the IT organization.

CAPs demonstrate Business Analytics capabilities, and helps you add basic elements that can be used to customize your Dashboard.

The AM_Demo is based on data in .csv files that are part of the CAP package and AM CAPs include data from the Asset Manager data source.

Pages

AM - Director of IT Asset Management (Der	no) ×								Select Page 🗸 🖌 🔾	♥▩*\ 중⊇ ◈ ◎
Scorecard Asset Manager (Demo)	- 11 I O		KPI View Filter by Reduce Cost (Der	→ γi no) (Scorecard);	0 ^ X X	Historical View Filter by Number of Unuse	d Software Applications	T 11 0 ^ × (Demo) (KPI ×	Forecast Filter by Number of Unused Softw	rare Applications (Demo) (KPI View) ×
Annak (Kausia (Bana)	1	=~					d Saftware Applications	(Demo) ≡	Number of Unused Softw	are Applications (Demo)
Asser Linevycie (uemoj Reduce Cost (Derno) Reduce Risk (Derno) Achieve Process Excellence (Derno) Software License (Derno)	6.27 1 8.64 1 9.15 1	▲ ♥ ♥ ♥	Number of Unused 5 11# FY2015/12(Dec)	oftware Applications (D =	∆ +	100	a Joi i wate Applications		100	are Applications (Denito)
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Pie Chart View	515			Pie Chart View		12/31/2014		12/28/2015 Pie Chart View	01/31/2016	03/31/2016 * 11 • • ×
Total Cost of Cost Ca ed. AM_Dem HP Corporate services (US\$) ≡ HP Production (US\$) ≡ HP Administrative (US\$) ≡ HP Afministrative (US\$) ≡	«			Software License Co	ext_AM_D	eno Supplier	FT La V	Delivery On-Ti Dell Computer Intel Corp. = Hevelet Packa Lotus Devt Co	end_AM_Demo Supple	r Fî Lik v matet Bakad r75k r75k Bakate Bakad Bakate Bakad

AM - Director of IT Asset Management Page



This section includes:

Upload and manage the Content Acceleration Pack

For details, see Content Acceleration Packs (CAPs).

View the AM or AM_Demo CAP-related Dashboard page

- 1. In the ITBA application, close all the tabs. The Dashboard is displayed.
- Click the AM Director of IT Asset Management tab. If it is not displayed, select it in Select
 Page or click the Page Gallery B button in the Dashboard toolbar, double-click the relevant icon and close the Page Gallery dialog box.

View the Scorecard Structure and KPI and Metric Breakdowns in the Studio

- 1. Make sure the CAP is activated.
- 2. In the Business Analytics application, click **Studio**.
- 3. Expand the relevant Scorecards to view the Scorecards, Perspectives, Objectives, KPIs, KPI Breakdowns structure.

User Story

- 1. Maggie is the IT Director of Asset Management at ABC Inc. She manages the entire asset lifecycle of the IT organization.
- 2. One of her responsibilities is to ensure that the software licenses are compliant.
- She logs into the AM Director of IT Asset Management Dashboard page, and looks at her Scorecard to understand the overall performance of her organization and finds that the Increase Compliance Objective under the Software License Perspective is red.
- 4. She clicks the Objective and finds that the cause is the **Software Compliance Ratio** KPI that is also red.
- 5. Meanwhile, the Historical View shows, for the **Software License Compliance** KPI, a negative weekly trend for the last two weeks. Based on the current results, the Forecast component also shows a continuously decline for the week after and in the future.
- 6. Drilling down further, Maggie then looks at the KPI Breakdown called Software License Compliance Ratio Breakdown by Supplier in the Pie Chart View and realizes that the Dell Computer supplier only meets less than 45 percent of the license compliance ratio and is the cause of the red ratio of the KPI. She then clicks on the Dell Computer legend to open the KPI EXPLORER, where the data shows details about the software count for which licenses are not compliant.
- Maggie sends an annotation to Richard, the Supplier Manager, requesting clarifications: "Richard We have poor Software License Compliance performance on "Apache Group" supplier, please provide insight and set a plan by EOW".
- Richard is responsible for maintaining the license contracts with the Apache Group supplier. When he gets the annotation from Maggie he checks his Scorecard and starts the analysis of the problem.
- 9. Richard then replies to Maggie that he will initiate a meeting with the supplier to discuss the license contract.



AM_Demo and AM

LISCOLCAPS			AM				
* n Vie	w by : All	~	Open documentation Deactivate				
ALM_Demo	U	Ū	The purpose of the AM Content Acceleration Pack (CAP) is to p Scorecards, Contexts, KPIs, Metrics, and more) that automati	provid cally <u>c</u>	e a set of items (Dashboard pages, Jathers information from across your colsted iscuse with DOTE data from Data	12/31/14 No HP	
🕡 AM	0	U	enterprise to build key performance indicators (kris) related	to An	BA Version:	10.00	
AM_Demo	U	Ū	Content				
CSA_Demo	e	Ŵ	 Pages 		 KPIs and Metrics 		
PPM_Demo	Û	Ŵ					
SA_Demo	0	τīτ	AM - Director of IT Asset Management		Average Age of Hardware Assets	Ð,	
SM Demo	0				Average Time to Procure Hardware	O,	
	0				Contraction Delivery On-Time Ratio	e,	
VPApps_Demo	0	Ш			Number of At Risk Software Application	U,	
VPOps_Demo	U	Ŵ	 Scorecards 	_	Number of Contracts to Expire Soon Number of Querenending Budget Centers	U. 6)	
			🗉 Asset Manager 🔍 🔍	4	Number of Overspending Software Applications	e,	
				4	Number of Unscanned Nodes	Ð,	
					Wumber of Unused Software Applications	Ð,	
					Percentage of Assets Returned to Supplier	Ð,	
			 Business Contexts 		Percentage of Assets in Maintenance	Ð,	
				-	Percentage of Changes in Assets Cost	Ð,	
			🕞 Type Name		🔗 Return Ratio	٩	
			✓ 🕅 Asset_Management		Data (External tables)		

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Pages	See "Pages " on page 47.
Scorecards	Asset Manager (Demo)Asset Manager
Business Contexts	 AM_Demo Asset_Management For details, see Reference: Contexts (Universes) in the <i>Content Reference Guide</i>.
KPIs and Metrics	Note: The Demo CAP includes KPIs with names followed by (Demo). The CAP includes the same KPIs with names that do not include (Demo). The KPIs are the same but have different names so that both the Demo CAP and the CAP can be activated at the same time.
	Average Age of Hardware Assets KPI The average age of hardware assets.

UI Element	Description
	Average Time to Procure Hardware KPI
	The average time needed to procure an item defined as the time lag between a request for procurement and the contract signing or the purchase.
	Delivery On-Time Ratio KPI
	The ratio is calculated as the number of receipt lines for which the delivery is on- time divided by the total number of receipt lines.
	Number of At Risk Software Applications KPI
	The number of software applications for which the license count exceeds the license pool.
	Number of Contracts to Expire Soon KPI
	The number of Contracts that will expire in the coming three months.
	Number of Overspending Budget Centers KPI
	The number of budget centers that ran over budget during the last fiscal year, in terms of gap between actual spending vs. budget.
	Number of Overspending Software Applications KPI
	The number of software applications for which the license count is lower than than the license pool.
	Number of Unscanned Nodes KPI
	The number of nodes that have not being scanned for more than 3 months.
	Number of Unused Software Applications KPI
	The number of software applications that were unused for more than three months.
	Percentage of Assets Returned to Supplier KPI
	The number of assets returned to the suppliers relative to the total number of assets.
	Percentage of Assets in Maintenance KPI
	The number of assets in maintenance relative to the total number of assets.
	Percentage of Changes in Assets Cost KPI
	The asset cost in the last period relative to the asset cost in the previous period.
	Return Ratio KPI
	The ratio is calculated as the total quantity of returned assets divided by the total quantity of received assets.
	Software License Compliance Ratio KPI
	The number of software applications where the license count are lower than the

UI Element	Description
	Total Budget vs. Total Cost KPI
	The total budget vs the total cost in the last fiscal year.
	Work Order Resolution On-Time Ratio KPI
	The ratio is calculated as the number of on-time work orders divided by the total number of work orders.
	Total Cost of Asset KPI
	The total cost of assets during the measurement period. Supports Breakdown by Cost Center or Asset Type.
	Total Cost of Cost Centers
	The total cost of cost centers during the measurement period. Supports Breakdown by Cost Center.
Data (External Tables)	AM_demo

CP0002 Enhancements and Their Documentation

This section provides the changes and additions to the documentation that support Content Pack 0002.

Enhancements

The IT Business Analytics 10.00 Content Pack 0002 release provides:

- An updated and enhanced cloud integration that includes:
 - The new Azure Content Pack to obtain Microsoft Azure public cloud data including Azure billing, resource consumption, and VM resource utilization information. For details, see "Integration with Azure" on page 57.
 - The new Virtual Performance View (vPV) Content Pack to obtain:
 - VMware VCenter private cloud data including VM cost and consumption, VM utilization, and VM allocation information.
 - Helion OpenStack Version 2.0 private cloud data including VM cost and consumption, VM utilization, and VM allocation information.

For details, see "Integration with vPV" on page 165.

- An enhanced CSA Content Pack that provides the new Resource Usage and Utilization for Consumer and Resource Usage and Utilization for Resource Supply Manager reports. For details, see "CSA_Demo and CSA Content Acceleration Packs" on page 133
- An enhanced Amazon Web Services (AWS) Content Pack that provides the new Amazon EC2 Instance Usage and Utilization report. For details, see
- The new Server Automation (SA) Content Pack to obtain Server Automation data including Node, Job, Policy, and Compliance information. The Content Pack also includes new SA KPIs. For details, see "CSA_Demo and CSA Content Acceleration Packs" on page 133.

Documentation

The pages that follow describe the enhancements listed above and replace the relevant pages or do not appear in in the ITBA 10.00 documentation.

Integration with AWS

This section describes the integration, contexts, KPIs, Metrics, and reports, if any, associated with the integration with the Amazon Web Services data source.

Amazon Web Services (AWS) offers a complete set of infrastructure and application services that enable you to run virtually everything in the cloud: from enterprise applications and big data projects to social games and mobile apps. One of the key benefits of cloud computing is the opportunity to replace up-front capital infrastructure expenses with low variable costs that scale with your business.

The purpose of the integration of AWS as a data source is to bring AWS information into the Data Warehouse.

To access:

Select ADMIN > Data Management > Connect Data Source then click Add data source and select AWS to activate the integration processes for the AWS data source.





Cloud Optimization Offering

The Cloud Optimization offering includes integrations with:

- Amazon Web Services (AWS). For details see Integration with AWS in the *Content Reference Guide*.
- Amazon Web Service CloudWatch(AWSCW). For details see Integration with AWSCW in the Content Reference Guide.
- Cloud Service Automation (CSA). For details see Integration with CSA in the Content Reference Guide.

Content Packs and their functionality

To learn about Content Packs and their functionality, see Connect the Data Source in the *Administrator Guide*.

Important Information

- The AWS Content Pack supports multiple instances.
- **DCS Integration:** An extractor using the Data Collection Service mechanism that extracts entities from the source and generates corresponding flat files. For details, see Data Collection Service (DCS) in the *Administrator Guide*.
- All fields are case-sensitive.
- The AWS DCS extraction of the csv file from the S3 bucket uses a properties file along with the datasource.xml file. It is available once the AWS content pack is deployed under: \$HPBA_Home/ContentPacks/AWS/conf.

The properties file defines fixed csv properties, such as the csv file name, suffix, time format, filters in csv file, delayDay, and can be modified.

- AWS proxy parameters are optional in a public network.
- **Tip:** If you integrate with both CSA and AWS/AWSCW, you must run the AWS/AWSCW ETL before the CSA ETL. If you do not run the ETL as recommended, you must wait for the end of the CSA ETL run to view the correct data.
- The cloud-related reports (Dashboard pages) provided in the CSA_CAP and CSA_Demo_ CAP CAPs combine integrated data from the following data sources Cloud Service Automation (CSA), Amazon Web Services (AWS), Amazon Web Service CloudWatch (AWSCW)

For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.



Activate the Integration

- 1. Select **ADMIN** > **Data Management** > **Install Content Pack** then click the install button relevant for the data source.
- 2. Select ADMIN > Data Management > Connect Data Source then click Add data source.
- 3. The Add Data Source page opens. Select the **AWS** data source type.
- 4. Select or enter the configuration parameters.

5. Click **Next** to proceed to the validation page.



AWS Activation Page

The following is an example of the AWS Activation page.

Data Source Wizard		Help 🗙
AWS (Amazon Web Services)		
*Instance name :		
AWS Version :	N/A ~	
Time Zone :	PST ~	
Data Source Type :	Aws ~	
*Access Key Id :	< <enter accesskeyid="">></enter>	
*Secret Access Key :		
*Bucket :	< <enter bucket="" name="">></enter>	
*Account Id :	< <enter accountid="">></enter>	
Proxy Host :	< <enter proxyhost="">></enter>	
Proxy Port :	< <enter proxyport="">></enter>	
Proxy Username :	< <enter proxyusername="">></enter>	
Proxy Password :		
Proxy Domain :	< <enter proxydomain="">></enter>	
Proxy Workstation :	< <enter proxyworkstation="">></enter>	
Initial Load Period (months) :	6 ~	
	Back Next Cano	el

User interface elements are described below:

Note: If the AWS configuration is for a named instance connection, make sure to enter the named instance port.

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
AWS Version	This parameter is Not Applicable.
Time Zone	PST only
Data Source Type	AWS. This parameter is read only.
Access Key Id	Enter the AWS access key ID.
Secret Access Key	Enter the AWS secret access key.
Bucket	Enter the AWS S3 bucket name which was specified when you set up the Programmatic Billing Access.
Account Id	Enter the AWS account ID.
Proxy Host	Enter the proxy host name.
Proxy Port	Enter the proxy port number.
Proxy Username	Enter the proxy username used to log on to the network.
Proxy Password	Enter the proxy password used to log on to the network.
Proxy Domain	Enter the proxy domain.
Proxy Workstation	Enter the proxy workstation.
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.

Reference

AWS-Related KPIs and Metrics

The KPIs and Metrics related to the Amazon Web Services data source are provided in the CSA and CSA_Demo CAPs. For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.

Integration with Azure

Azure is Microsoft cloud computing platform, a growing collection of integrated services like analytics, computing, database, mobile, networking, storage, and web, for moving faster, achieving more, and saving money.

The purpose of the integration of Azure as a data source is to bring Azure information into the Data Warehouse.

The integration with Azure provides a general idea on how much money is spent on each Virtual Machine daily by different usage types. In addition, if the diagnostics function is enabled, you can also view the CPU utilization and Memory.

The data extracted from Azure is correlated to the data available in the KPIs and reports available in the CSA CAP. For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.

To access:

Select **ADMIN** > **Data Management** > **Connect Data Source** then click **Add data source** and select **Azure** to activate the integration processes for the Azure data source.



Content Packs and their functionality

To learn about Content Packs and their functionality, see Connect the Data Source in the Administrator *Guide*.

Important Information

- The Azure Content Pack supports multiple instances.
- **DCS Integration:** An extractor using the Data Collection Service mechanism that extracts entities from the source and generates corresponding flat files. For details, see Data Collection Service (DCS) in the *Administrator Guide*.

- All fields are case-sensitive.
- Azure must be activated with the CSA data source. If you activate Azure alone, only the cost fact information is displayed, without the ability to drill down further.

Azure Usage Data.

For performance reasons, the ETL job extracts only, at most, 1 month of data for the initial and delta loads.

Utilization Data.

For performance reasons, the ETL job extracts only, at most, 1 week of data for the initial and delta loads.

Azure utilization data is based on the latest Microsoft Azure preview portal function. Make sure you switch on Diagnostic for the Microsoft Azure Cloud VM instances, to have utilization data returned by the Microsoft Azure Cloud Service API.

Limitation:

- You can create Virtual Machines, storage, web apps, and a lot of other components with one subscription ID under a global account of Azure. If the Virtual Machine type is Windows, BA can obtain the name of the Cloud Services and provide its utilization data. If the Virtual Machine type is Linux, BA cannot obtain the name of the Cloud Services and provide its utilization data. The impact is on the SERVICE_PROVIDER_UTILIZATION_FACT entity.
- In Azure, you can enter your VM name when creating the VMs, and it is possible to use the same VM name for different Cloud Services. Due to the above limitation, the deployment ID is not displayed in the storage table, making it impossible to know the VM from which the metric data originates. So it is recommended **not** to create VMs with the same name.
- When using CSA with Azure Content Pack version: 14.12, and the OOTB design : CSL_BP_ MICROSOFT_AZURE_COMPUTE_3.20_CP3.0, Azure usage related data is displayed in the CSA-Resource Usage and Utilization for Consumer and CSA_Resource Usage and Utilization for Resource Supplier Manager reports, but Azure CPU utilization data is not available and is not displayed in these reports.

Content Pack 0004 for BA 10.00 Documentation_Additions



This section includes:

Create an application in Azure portal	. 59
Assign permission to subscriptions in the Azure portal	. 62
Create the certificate and bind all subscriptions	63
Activate the Integration	65

Create an application in Azure portal

To create an application in the Azure portal, open: https://manage.windowsazure.com/ and click
 ACTIVE DIRECTORY > Default Directory > APPLICATIONS > ADD > Add an application
 my organization is developing.

		default directory	
		LA USERS GROUPS APPLICATIONS DOMAINS DIRECTORY INTEGRATION CONFIGURE REPORT	
	Default Directory	Show X	
		What do you want to do?	
		NAME	RL
		Add an application my organization is developing	Vabc
		Add an application from the gallery	/apps //itba_sylar
		itbaapp Office 3	//itbaapp
		99	//qq
		sylarApp sylarWe	'/sylarWebApp
		Visual S	/www.visualstudio.com/
		*sepp	/xsapp
+			





 Click <Application_just_created> > CONFIGURE > keys > Select Duration > Save to get the key as App password; and the CLIENT ID as App id. They are used when configuring the data source in ITBA.

AppCreatedByS		
аррхх		
itba_sylar		
itbaapp	APPLICATION IS MULTI-TENANT YES NO	0
Office 365 Mana		
99		
sylarApp	CLIENT ID 755820ec-106d-47b9-80a9-	0
sylarWebApp		
Visual Studio Onl		
xsapp	USER ASSIGNMENT REQUIRED TO YES NO ACCESS APP	Ø
	keys	Ø
	1 year 🗸 12/2/2015 12/2/2016 OTYd1WvS2+3TB	
	Select du VALID FROM E 12/2/2016 THE KEY VALUE WILL BE DISPLAYED AFTER YOU SAVE IT.	
	Copy and store the key value. You won't be able to retrieve it after you leave this page.	

Assign permission to subscriptions in the Azure portal

 To assign permissions to subscriptions in the Azure portal, open: https://portal.azure.com/ and click Subscriptions, select the relevant subscription for which the customer wants to view data in ITBA, click Access (Roles) > Reader.

ions > Pay-As-You-Go-1					
ibscriptions			× Pay-As-You-C Subscription ¢ C ³ ii Settinas Manaac Car	Go-1	
Search to filter items			Essentials 🔨		A 1
SUBSCRIPTION	∧ SUBSCRIPTION ID	∧ SUBSCRIPTION ST ∧	Subscription ID 4dcbac7d-5719	Purchase d 7/21/2015	date 5
Pay-As-You-Go-1	4dcbac7d-5719	🖉 Active 🛛	Your role Account admin	Current bil 11/20/201	lling period 15-12/19/2015
Pay-As-You-Go-2	981c4a77-283	📀 Active 🛛	Offer Pay-As-You-Go	Currency USD	
Pay-As-You-Go	4872fe54-d28b-	Disabled	Offer ID MS-AZR-0003P	Subscriptic Active	on status
Pay-As-You-Go-3	60f99e0a-cc56-4	Oisabled			All setting
Pay-As-You-Go-4	58f06ab8-1384-	Disabled	11/22	11/29 12/	/6 12/13 1
			Cost by resource		
			Cost by resource		compute hours 25.05 usd compute hours 16.77 usd compute hours 15.78 usd others 17.12 usd
			Cost by resource		сомичте ношиз 25.05 usb сомичте ношиз 16.77 usb сомичте ношиз 15.78 usb отненя 17.12 usb
			Cost by resource	Users	compute hours 25.05 usb compute hours 16.77 usb compute hours 15.78 usb 07Hers 17.12 usb
			Cost by resource	Vers Users	compute Hours 25.05 usb compute Hours 16.77 usb compute Hours 15.78 usb others 17.12 usb Add tiles Marketplace Programmatic deployment enter for

- Reader C² Mana \$ + Add Invite lser O CA 88 Essentials ACCESS USER appC Purchase date 7/21/2015 4dcbac7d-5719-4475-8f22-bef685bafc4b abo Assigned AppCreatedBySylar Current billing period 11/20/2015-12/19/20 rour role Account admin Assigned Currency USD Offer Pay-As-You-Go Offer ID MS-AZR-0003P itba_syla Assigned itbaapp Assigned RTNER SERVICES 74.72 USD 0 USD Assigned Assigned Cost by resource 25.05 usp 16.77 USD 15.78 USD 17.12 USD Add tiles (+ Marketplac Role: 🔒 0 斗 1 Owner Users **Å** o **"Å** o Group 0 Offers/SKUs Selected users You haven't selected any users >
- 2. Click Add and select the application that the customer created for ITBA and click Select.

Note: If, in ITBA, you want to view data from multiple subscriptions you must assign the permissions to each subscription separately using the above procedure.

Create the certificate and bind all subscriptions

- 1. Generate a self-signed certificate using the JDK keytool:
 - a. After ITBA is installed, log on to the ITBA Linux server and use the following command in the command line to generate the certificate:

cd \$HPBA_HOME/jdk/bin

keytool -genkey -keyalg RSA -keystore <certificatename>.jks -keysize 2048

where <certificatename> is the name of the certificate you want to create.

b. Enter the keystore password and the requested information.



c. Convert <certificatename>.jks to <certificatename>.cer and <certificatename>.pfx. using the following command:

keytool -importkeystore -srckeystore <certificatename>.jks -srcstoretype JKS -

```
destkeystore <certificatename>.pfx -deststoretype PKCS12
```

d. Enter destination keystore password. Remember this password which will be used in the Connect to Data Source page.

Use the same password for destination keystore and source keystore.

```
hpba@qm bin]$ ./keytool -importkeystore -srckeystore Azure_certification.jks -srcstoretype JKS -destkeystore Azure_certification.pfx -deststoretype PKCS12
inter destination keystore password:
nter source keystore password:
intry for allas mykey successfully imported.
mport command completed : 1 entries successfully imported, 0 entries failed or cancelled
```

e. Enter the following command:

keytool -export -file <certificatename>.cer -keystore <certificatename>.jks

Enter the keystore password.

[hpba@qm bin]\$./keytool -export -file Azure_certification.cer -keystore Azure_certification.jks Enter keystore password: Certificate stored in file <Azure certification.cer> In the Azure Management Portal accessed via https://manage.windowsazure.com/, select SETTINGS > MANAGEMENT CERTIFICATES > UPLOAD.

Q	SCHEDULER 0	settings
4		SUBSCRIPTIONS MANAGEMENT CERTIFICATES ADMINISTRATORS AFFINITY GROUPS USAGE REMOTEAPP
π		NAME
S		Unknown
		Unknown Unload a management cartificate
P		Unknown OpiOad a management certificate
()		SylarCertificate Upload a certificate (.cer) file for managing your subscription.
		SylarCertificate FILE -8f22-bef685bafc4b
		SylarCertificate BROWSE FOR FILE b95c-3feff1c561da
		Pay-As-You-Go- SUBSCRIPTION
\otimes		Pay-As-You-Go-1 v
		Pay-As-You-Go-
		Pay-As-You-Go-
		Pay-As-You-Go-4 -8f22-bef685bafc4b
0.		Pay-As-You-Go-L8f22-bef685bafc4b
		Pay-As-You-Go-9-16-2015-credentials 🗸 Created Pay-As-You-Go-1 4dcbac7d-5719-4475-8f22-bef685bafc4b
A		Pay-As-You-Go-9-15-2015-credentials 🗸 Created 🛕 Pay-As-You-Go 4872fe54-d28b-4a08-b394-b819e7c39fc
-	SETTINGS	Pay-As-You-Go-9-15-2015-credentials 🗸 Created 🛕 Pay-As-You-Go 4872fe54-d28b-4a08-b394-b819e7c39fc
5	51111105	Pay-As-You-Go-9-15-2015-credentials 🗸 Created 🛕 Pay-As-You-Go 4872fe54-d28b-4a08-b394-b819e7c39fc
		Pay-As-You-Go-9-15-2015-credentials 🗸 Created 🛕 Pay-As-You-Go 4872fe54-d28b-4a08-b394-b819e7c39fc1

3. Upload <certificatename>.cer for each subscriptions.

Activate the Integration

- 1. Select ADMIN > Data Management > Connect Data Source then click Add data source.
- 2. The Add Data Source page opens. Select the Azure data source type.
- 3. Select or enter the configuration parameters.
- 4. Click **Next** to proceed to the validation page.

Note: If you want to display Azure utilization data returned by the Microsoft Azure Cloud Service API, make sure you switch on Diagnostic for the Microsoft Azure Cloud VM instances.



Azure Activation Page

The following is an example of the Azure Activation page.

Data Source Wizard		Help X
AZURE (Microsoft Azure)		
*Instance name :		
AZURE Version :	1 ~	- 11
Time Zone :	UTC ~	- 11
Data Source Type :	GENERIC ~	- 11
*Tenant Id :	< <enter tenantid="">></enter>	- 11
*App Id :	< <enter app="" id="">></enter>	- 11
*App Password :		- 11
*Certificate :	< <enter certificate="">></enter>	- 11
*Certificate Password :		- 11
Proxy Host :	< <enter proxyhost="">></enter>	- 11
Proxy Port :	< <enter proxyport="">></enter>	- 11
Proxy Username :	< <enter proxyusername="">></enter>	- 11
Proxy Password :		- 11
Proxy Domain :	< <enter proxydomain="">></enter>	
Proxy Workstation :	< <enter proxyworkstation="">></enter>	
	Back Next Cano	el

User interface elements are described below:

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
Azure Version	Select the relevant Azure version. For details, see the Support Matrix.
Time Zone	Time zone must be UTC.
Data Source Type	GENERIC. This parameter is read only.
Tenant ID	The unique ID of the organization in Azure AD that has granted access for your app.
APP ID	The unique identifier for your application. You must use this if your application accesses data in another application, such as the Microsoft Azure AD Graph API.
	Input the CLIENT ID that you obtain after creating the relevant application in the Azure portal.
	Note: In Azure, one Global ID can have multiple subscriptions. To get consumption data for an Azure subscription, APP ID is required. If you want to get consumption data for all subscriptions under the Global ID, all subscriptions are required to be authorized for the same APP ID, which will be added to the DCS page.
APP Password	If your app reads or writes data from/to Microsoft Azure AD, such as data that is made available through the Graph API, your app need a key. The APP Password is the key that you obtain after creating the relevant application in the Azure portal.
Certificate	Once you have created a management certificate, (a .cer file with only the public key) you can upload it into the portal. When the certificate is available in the portal, anyone with a matching certificate (private key) can connect through the Management API and access the resources for the associated subscription. The absolute path to the .pfx certification file on the ITBA Linux server. For example,
	/home/ITBA/Azure_certification.pfx.
Certificate Password	The keystore password of the .pfx certification.
Proxy Host	The proxy host.
Proxy Port	The proxy port.
Proxy Username	The Proxy user name.

UI Element	Description
Proxy Password	The Proxy password.
Proxy Domain	The Proxy domain.
Proxy Workstation	The Proxy workstation.
Initial Load Period (month)	Select the number of months from which you want the initial data loaded. The Initial load period is 1 month for usage and 1 week for utilization.



Azure-Related KPIs and Metrics

The KPIs and Metrics related to the Azure data source are provided in the CSA and CSA_Demo CAPs. For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.

Integration with CSA

Cloud Service Automation (CSA) is a platform that orchestrates the deployment of computation and infrastructure resources and of complex multi-tier application architectures. HP CSA integrates and leverages the strengths of a hybrid cloud environment, providing the ability to design and deploy enterprise-ready cloud services tailored to the business needs of your organization. It works through a catalog-based subscription process. Subscribers request and modify cloud service offerings with pre-defined pricing and other customer-specific features. Once the request is approved, through a policy-driven process, HP CSA deploys the cloud service offering using a structured lifecycle with pre-defined integration mechanisms for invoking external processes.

The integration with CSA as new content pack provides reporting analysis based on CSA data model.

The purpose of the integration of CSA as a data source is to bring this information into the Data Warehouse.

This section describes the integration, contexts, KPIs, Metrics, and reports, if any, associated with the integration with specific data sources.

To access:

Select ADMIN> Data Management > Connect Data Source then click Add data source and select CSA to activate the integration processes for the CSA data source.



Cloud Optimization Offering

The Cloud Optimization offering includes integrations with:

- Amazon Web Services (AWS). For details see Integration with AWS in the *Content Reference Guide*.
- Amazon Web Service CloudWatch(AWSCW). For details see Integration with AWSCW in the Content Reference Guide.
- Cloud Service Automation (CSA). For details see Integration with CSA in the Content Reference Guide.

Other Data Sources

The data from the below data sources is integrated with the data from CSA and displayed in the CSA CAP pages, KPIs, and Metrcs. For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.

 Amazon Web Services (AWS) offers a complete set of infrastructure and application services that enable you to run virtually everything in the cloud: from enterprise applications and big data projects to social games and mobile apps. One of the key benefits of cloud computing is the opportunity to replace up-front capital infrastructure expenses with low variable costs that scale with your business.

The integration with AWS provides cost and usage reports based on the cost allocation report provided by AWS account.

- Amazon CloudWatch (AWSCW) monitors your Amazon Web Services resources and the applications you run on AWS in real-time. You can use CloudWatch to collect and track metrics, which are the variables you want to measure for your resources and applications. CloudWatch alarms send notifications or automatically make changes to the resources you are monitoring based on rules that you define. For example, you can monitor the CPU usage and disk reads and writes of your Amazon Elastic Compute Cloud (Amazon EC2) instances and then use this data to determine whether you should launch additional instances to handle increased load. You can also use this data to stop under-used instances to save money. In addition to monitoring the built-in metrics that come with AWS, you can monitor your own custom metrics. With CloudWatch, you gain system-wide visibility into resource utilization, application performance, and operational health.
- Azure is Microsoft cloud computing platform, a growing collection of integrated services like analytics, computing, database, mobile, networking, storage, and web, for moving faster, achieving more, and saving money.
- Virtual Performance Viewer (vPV) is a web-based analysis and visualization tool that analyzes performance trends of elements in virtualized environments. vPV gives you at-a-glance visibility across your virtual environment for real-time insights into performance, capacity, and health. This helps you to optimize your infrastructure and quickly solve virtualization and cloud performance issues. It enables virtualization monitoring by providing an overview of the environment, near-real-time and historical data analysis and triaging using an interactive dashboard. It also enables monitoring for cloud and hypervisor environments. HPE vPV provides performance monitoring, graphing, and reporting in a single interface.

Important Information

- To learn about Content Packs and their functionality, see Connect the Data Source in the *Administrator Guide*.
- The CSA Content Pack supports multiple instances.
- All fields are case-sensitive.
- The CSA ETL job aggregates the CSA Subscription Price with a daily granularity in the target database. This means that the ETL job gets the price from CSA, converts it into the actual cost according to the ETL running date, generates a cost record for that day, and stores it in the target database. For example, if the current date is April 22nd, for the month of April, after the ETL run has completed, you see a total of the 22 aggregated records of the CSA subscription Price in the target database.
- **Example of a CSA subscription price calculation:** If, for example, the price of one daily subscription is \$10, you have just used the subscription for 12 hours, and the ETL starts to run at this moment, the total you have to pay is 10*12/24=\$5. The CSA subscription price is calculated for the real usage accurate to the second. Though some customers would prefer to see \$10 on the report even if the usage is not yet 24 hours, BA displays \$5 after the ETL load because it represents the real usage.
- **DCS Integration:** An extractor using the Data Collection Service mechanism that extracts entities from the source and generates corresponding flat files. For details, see Data Collection Service (DCS) in the *Administrator Guide*.
- **Tip:** If you integrate with both CSA and AWS/AWSCW, you must run the AWS/AWSCW ETL before the CSA ETL. If you do not run the ETL as recommended, you must wait for the end of the CSA ETL run to view the correct data.
- The CSA and CSA_Demo CAPs are associated with the CSA data source, its context, KPIs, and Metrics. For details, see the CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.
- When using CSA with Azure Content Pack version: 14.12, and the OOTB design : CSL_BP_ MICROSOFT_AZURE_COMPUTE_3.20_CP3.0, Azure usage related data is displayed in the CSA-Resource Usage and Utilization for Consumer and CSA_Resource Usage and Utilization for Resource Supplier Manager reports, but Azure CPU utilization data is not available and is not displayed in these reports.

Content Pack 0004 for BA 10.00 Documentation_Additions



This section includes:

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Change the default exchange rate of each currency

To help you convert the billing amount to different currencies, ITBA has pre-configured their default exchange rates.

If you want to change the default exchange rate of each currency, open the **\$HPBA_ HOME/ContentPacks/CSA/EXTERNAL/EXCHANGE.csv** file and change the rates.

	А	В	С	D	E	F	
1	SOURCE_CURRENCY	TARGET_CURRENCY	START_DATE	END_DATE	EXCHANGE_RATE	IS_CURRENT	
2	JPY	CNY	2009/1/1	2009/1/11	0.0741	Y	
3	JPY	EUR	2009/1/1	2009/1/11	0.008	Y	
4	JPY	GBP	2009/1/1	2009/1/11	0.0073	Y	
5	JPY	USD	2009/1/1	2009/1/11	0.0109	Υ	
Configure the BA Website Browser SSL

1. Log on to BA, and click Continue to this website (not recommended).

8	There is a problem with this website's security certificate.
	The security certificate presented by this website was not issued by a trusted certificate authority.
	Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.
	We recommend that you close this webpage and do not continue to this website.
	Ø Click here to close this webpage.
	Continue to this website (not recommended).
	More information

2. Click Certificate error and then click View certificates.



3. Click the **Details** tab and click **Copy to File ...**

Certificate		-	_		X
General	Details	Certification Pat	h		
Show:	<all></all>		•		
Field			Value		A
Ser Sig Sig Sig Val Val	rsion rial numbe nature ha uer id from id to <u>niect</u>	r jorithm sh algorithm	V1 00 96 a3 95 18 sha256RSA sha256 xs10v7.fpazsh. Thursday, Nove Tuesday, Nover <u>vs10v7.fpazsh</u>	33 26 0f 6e com mber 19, 2015 nber 17, 2020 com	H III
Learn m	ore about	certificate detai	Edit Properties	Copy to File.	
					ОК

Click Next.



Click Next.

ertificate Export Wizard
Export File Format Certificates can be exported in a variety of file formats.
Select the format you want to use:
OER encoded binary X.509 (.CER)
Base-64 encoded X.509 (.CER)
Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)
Include all certificates in the certification path if possible
Personal Information Exchange - PKCS #12 (.PFX)
Include all certificates in the certification path if possible
Delete the private key if the export is successful
Export all extended properties
 Microsoft Serialized Certificate Store (.SST)
Learn more about <u>certificate file formats</u>
< Back Next > Cancel

Click the **Browse...** button and give a file name, such as **CSA45.cer**, and click **Next**.

	×
kport	
	Browse
< Back Next >	Cancel
	<pre>kport </pre>

Click the Finish button.



4. Open the Internet Options > Content and click Certificates.

General Security Privacy Content Connections Programs Advanced Certificates Image: Content Connections and identification. Certificates Image: Content Connections and identification. Clear SSL state Certificates Publishers AutoComplete Image: Content Connections and identification. Settings AutoComplete stores previous entries on webpages and suggests matches for you. Feeds and Web Slices Image: Content from websites that can be read in Internet Explorer and other programs.
Certificates Image: Certificates
Use certificates for encrypted connections and identification. Clear SSL state Certificates Publishers AutoComplete Image: AutoComplete stores previous entries on webpages and suggests matches for you. Settings Feeds and Web Slices Image: AutoComplete stores provide updated content from websites that can be read in Internet Explorer and other programs. Settings
Clear SSL state Certificates Publishers AutoComplete
AutoComplete Settings AutoComplete stores previous entries on webpages and suggests matches for you. Settings Feeds and Web Slices Feeds and Web Slices provide updated content from websites that can be read in Internet Explorer and other programs. Settings
AutoComplete stores previous entries on webpages and suggests matches for you. Settings Feeds and Web Slices Settings Feeds and Web Slices provide updated content from websites that can be read in Internet Explorer and other programs. Settings
Feeds and Web Slices provide updated Settings Feeds and Web Slices provide updated Settings Settings Feeds and Web Slices provide updated Settings Feeds and Web S
Feeds and Web Slices provide updated Settings content from websites that can be read in Internet Explorer and other programs.
OK Cancel Apply

5. Open the Trusted Root Certification Authorities and click Import... link.

Certificates	-	over period	-		x
Intended p	urpose: <a< td=""><td> ></td><td></td><td></td><td>•</td></a<>	>			•
Personal	Other People	Intermediate Certification	Authorities Tru	sted Root Certification	•
Issued	То	Issued By	Expiratio	Friendly Name	
🙀 adm	inistrator		7/7/2025	<none></none>	
Import	Export	Remove		Advanced	
Certificat	e intended purpo	oses			
<all></all>					1
				View	J
Learn more	e about <u>certifica</u>	tes		Close	

- 6. Select the relevant certificate file and click Import.
- 7. Click Next.





8. Click Yes.



9. Open your browser and reopen the BA logon page.



Import the CSA SSL certificate to BA keystore

- 1. Export the CSA SSL certificate:
 - a. Access the CSA portal from the browser of the BA server.

← ⇒ C	🖹 bttps://cser	ntsrv.cilab.net/csa/login
		The site's security certificate is not trusted
		You attempted to reach csentsrv.cilab.net , but the server presented a certificate is not trusted by your computer's operating system. This may mean that the server ha security credentials, which Chrome cannot rely on for identity information, or an atta intercept your communications.
		You should not proceed, especially if you have never seen this warning before for the
		Proceed anyway Back to safety
		► Help me understand

b. Click the red cross in the URL bar and then click Certificate information.

csentsrv.cilab.net Identity not verified	×
Permissions Connection	
The identity of this website has no Server's certificate is not truster Certificate information Your connection to csentsrv.cilab.	it been verified. d. net is encrypted
Site information You have never visited this site be	efore today.
What do these mean?	

c. In the window that pops up, click the **Details** tab, and click the **Copy to File** ... button.

Certificate	×
General Details Certification Path	
∑now: <mark><all></all></mark>	
Field	Value 🔺
Version	V3
🔚 Serial number	20 14 08 27 14 34 29
🔲 🛅 Signature algorithm	sha1RSA
Signature hash algorithm	sha1 🚽
Issuer	Enterprise Appliance, US, Calif
Valid from	Wednesday, August 27, 2014
Valid to	Tuesday, August 27, 2024 7:4
Subject	192.168.1.76, HP 💌
Learn more about <u>certificate details</u>	lit Properties
	OK

d. In the window that pops up, click Next.



e. Click Next.

	c che format you want to use.
(DER encoded binary X.509 (.CER)
(Base-64 encoded X.509 (.CER)
(Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B) Include all certificates in the certification path if possible
(Personal Information Exchange - PKCS #12 (.PFX) Include all certificates in the certification path if possible
	\square Delete the private key if the export is successful
	Export all extended properties
(Microsoft Serialized Certificate Store (.SST)

f. Specify the name of the file you want to export and click Next.

tificate Exp	oort Wizard				
File to Expo	rt the name of the	file you want to	export		
opecity	che hame of che	nie you want to	export		
File nam)e:				
C:\Sof	tware\csa-certifi	cate_fromExplo	rer.cer	$\overline{}$	Browse

g. In the next page, click Finish.

Certificate Export Wizard		×
Certificate Export Wizard	Completing the Certificate Ex Wizard You have successfully completed the Certificate B wizard. You have specified the following settings: File Name Export Keys Include all certificates in the certification path File Format	×port Export C:\Soft No DER En
	< <u>B</u> ack Finish	Cancel

The CSA SSL cert file is now exported.

In the above example, the file is located at C:\software\csa-certificate_ fromExplorer.cer%HPBA_Home%/software/csa-certificate_fromExplorer.cer.

- 2. Open a command prompt and run the following commands:
 - In Linux:

keytool -importcert -alias csa -file %HPBA_Home%/software/csa-certificate_ fromExplorer.cer -keystore %HPBA_Home%/jdk/jre/lib/security/cacerts -trustcacerts

• In Windows:

cd <HPBA_Home>\jdk\jre\bin keytool –importcert –alias csa –file "c:/Software\csa-certificate_fromExplorer.cer" – keystore C:/%HPBA_Home%/jdk/jre/lib/security/cacerts –trustcacerts

- a. When prompted for the keystore password, type changeit.
- b. When prompted to trust this certificate, type yes.

```
_ 🗆 🗵
 👞 Administrator: C:\Windows\system32\cmd.exe
 c:\HPXS\agora\jdk\jre\bin>keytool -importcert -alias csa -file C:\software\csa-c
ertificate_fromExplorer.cer -keystore C:\HPXS\agora\jdk\jre\lib\security\cacerts
                                                                                                                                                                                                                                                                     ٠
ertificate_fromExplorer.cer -keystore C:\HPXS\agora\jdk\jre\lib\security\cacerts

-trustcacerts

Enter keystore password:

Owner: CN=192.168.1.76, 0=HP

Issuer: CN=Enterprise Appliance, C=US, ST=California, L=Palo Alto, OU=www.hp.com

, 0=Hewlett Packard

Serial number: 20140827143429

Valid from: Wed Aug 27 07:42:11 PDT 2014 until: Tue Aug 27 07:42:11 PDT 2024

Certificate fingerprints:

MD5: C2:4C:FC:39:7A:93:3D:7B:B3:69:39:0B:D7:98:64:80

SHA1: C4:BA:9E:A8:06:D3:3E:B3:D5:67:58:6C:28:83:FB:4C:AC:0E:DE:42

SHA26: B7:BE:3F:EB:8B:62:1B:2C:CE:B0:3D:D4:64:13:E8:2C:19:FA:65:44:E4:

02:70:0E:49:16:AE:AC:FC:SA:EF:9F

Signature algorithm name: SHA1withRSA

Version: 3
 Extensions:
#1: ObjectId: 2.5.29.19 Criticality=false
BasicConstraints:[
CA:false
PathLen: undefined
 #2: ObjectId: 2.5.29.15 Criticality=false
KeyUsage [
DigitalSignature
Non_repudiation
Key_Encipherment
Data_Encipherment
       Key_Agreement
#3: ObjectId: 2.16.840.1.113730.1.1 Criticality=false
NetscapeCertType [
SSL client
SSL server
S/MIME
Object Signing

    #4: ObjectId: 2.5.29.17 Criticality=false
    SubjectAlternativeName [
DNSName: csentsrv.cilab.net
    DNSName: csentsrv
    IPAddress: 192.168.1.76
    DNSName: 192.168.1.76

 #5: ObjectId: 2.5.29.14 Criticality=false
SubjectKeyIdentifier [
KeyIdentifier [
0000: 9B 0E 4D BF F4 55 1D 51 4C E8 83 7B B4 0E 4B A1 ..M..U.QL.....K.
0010: 7A FD FC F0 z...
 Trust this certificate? [no]: yes
Certificate was added to keystore
 c:\HPXS\agora\jdk\jre\bin}_
```

- c. Restart the HP IT Business Analytics Service from Services Windows admin tools.
- d. Run %HPBA_Home%/supervisor/bin/hpba-restart.sh to restart BA.
- e. Wait a few minutes for the services to fully start.

Install the Content Pack

- 1. Make sure you have imported the CSA SSL Certificate (see above).
- 2. Log on to the BA application.
- Click ADMIN > Data Management, click Install Content Pack to install the CSA Content Pack.
 For details, see Install Content Pack.



Activate the CSA data source

- 1. Make sure you have imported the CSA SSL Certificate (see above).
- 2. Log on to the BA application.
- 3. Make sure you have installed the Content Pack (see above).
- 4. Click ADMIN > Data Management and the click Connect Data Source .

5. Click Add data source.

Data Sources	
Select the data sources you Add data source O	want to activate or deactivate. By activating a source you start streaming data from the source, into the target model. Last Update: 1:04:15 PM
Instance Name	Content Pack Name
	No items to display.

6. Select the CSA data source type and press Next.

Data Source Wizard	×
Add Data Source	
Select the type for the new data source instance and click "Next".	
Data source type : CSA (Cloud Service 💙	
Next Cancel	

If the **Next** button does not appear in the Wizard dialog box, click the edge of the Data Source Wizard and when the black cross appear, move the window upwards until you see the **Next** button.

Data Source Wizard		Help 🗙
CSA (Cloud Service Aut	tomation)	
*Instance name :		
CSA Version : Time Zone :	B.1/3.2 ∧ Asia/Jerusalem	
Data Source Type :	CSA ~	
*Organizationname :	CSA-Provider	
*Username :	< <enter username="">></enter>	
*Password :		
*Hostname/IP Address : *Port :	< <i><enter address="" hostname="" ip="" or="">></enter></i> 8444	
Initial Load Period (months)	: 6	
	Back Next Can	icel

User interface elements are described below:

Note: If the CSA configuration is for a named instance connection, make sure to enter the named instance port.

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
CSA Version	Select the relevant version For details, see the Support Matrix.
Time Zone	Select the time zone for the data source.
Data Source Type	CSA This parameter is read only.
Organization Name	Enter the Organization Name that is necessary to retrieve admin details. The default value is CSA-Provider.
Username	Enter your admin username used to log on to CSA. The default username is ooInboundUser .
Password	Enter your admin password used to log on to CSA. The default admin password is cloud .
Hostname/IP Address	Enter the CSA server hostname or IP address.
Port	Port for REST API (default value is 8444).
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.

-		المامية مسمله مسمسه ما	al. Marshin	
	Enter the U.SA contiduiration	In parameters and cill	CK Next to validate the	narameters
	Enter the OOA Configuration	n parameters and on		purumeters.

Data Source Wizard		Help \times
CSA (Cloud Service Auto	omation)	
*Instance name :	CSA41	
CSA Version :	3.1/3.2/4.x 🛩	
Time Zone :	итс 🗸	
Data Source Type :	CSA ~	
*Organizationname :	CSA-Provider	
-		
*Username :	admin	
*Password :		
*Hostname/IP Address :	192.168.1.75	
*Port :	8444	
Initial Load Period (months) :	6 ~	
	Back Next Canc	el

Execute the ETL process

After adding the CSA data source, you need to run the ETL to pull data from CSA source.

You can schedule the running of the ETL process. For details, see Run ETL - Content Flow Managementin the *Administrator Guide*.

- 1. Log on to the BA application.
- 2. Make sure you have imported the CSA SSL Certificate (see above).
- 3. Make sure you have installed the Content Pack (see above).
- 4. Make sure you have activated the data source (see above).
- 5. Click ADMIN > Data Management > Run ETL.

 Click Add Scheduler to schedule the ETL run or click >. This loads the data from the CSA data source.

Note: The ETL run might last some time depending on the volume of data it has to load.

Activate the relevant CSA CAP

Activate the CSA_Demo CAP for demo purposes or activate the CSA CAP for live data into BA.

For live data cases, if you had activated the CSA_Demo previously, you must deactivate it before you activate the CSA CAP.

- 1. Log on to the BA application.
- 2. Ignore the Unreachable Java Applet. Click OK.

Unreacha	ble Java Applet	×
A	Business Analytics might not work properly because a Java applet did not load in a timely manner. Make sure Java is installed, up-to-date, and enabled in your browser.	
	ОК	

- 3. Make sure you have imported the CSA SSL Certificate (see above).
- 4. Log on to the BA application.
- 5. Make sure you have installed the Content Pack (see above).
- 6. If you plan to activate the CSA_Demo proceed to the next step. If you plan to activate the CSA, make sure you have executed the ETL (see "Execute the ETL process" on the previous page).
- 7. Click ADMIN > Data Management and click Activate CAP.
- Select the CSA or the CSA_Demo in the list of CPs, and click Activate to activate the CAP. Click Yes to begin the activation process. Then wait until the CAP activation is successful.
- 9. Close the **ADMIN** tab.

Calculate the KPI

- 1. Log on to the BA application.
- 2. Click the **STUDIO** tab and click the calculation tool and select **Recalculate**.

()) n	r BUS	INESS ANALYTICS				STUE	IO EXPLORER ADMIN
							Help © ×
CSA-	KPI	Active KPIs	«	Configuration details	Calculatio	on details	
Page P	Library	Lists all the elements configured and calculated in the sy elements, click here or click the side-by-side button abov and drop template items from the KPI Library to the Activ Read more	istem. To add [×] ie and drag ve KPIs pane.				Navigate to the source template
			70	ALM_Defect	F	Recalculate Help ×	
Resc		Search: ← Active KPIs ← Cloud Server Automation ト Resource Supply Manage	ALM_D Calculate now	efect		This process reactionates all results for the selected universe/context from the selected date (up to 5 year(s) back) fill the current date.	Open Formula Builder Validate
		Service Business Manage	HE Schedule conte	exit calculation		universe/context. The process is not reversible. In addition, the process causes massive DB load and may lower the performance of the system during the calculation time for all	
		🗢 🗁 Public Metrics and KPIs	📽 Calculation mo	nitoring		users.	
Netv		 Project Spend vs Project Budget		<i>«Select the data u</i>	ised to c	Calculate Cancel	Open Filter Builder Validate
•		► Izz Number of Used Instances		Test KPI			

- a. Select the CSA_CloudOptimization in the Universe/Context for recalculation list.
- b. Select the recalculation start date.
- c. Check the check box.
- d. Click Calculate.

The calculation may take a few minutes.

3. To check the KPI calculation status, click the calculation tool and select **Calculation monitoring**.

							STUDIO	EXPLORER	ADMII Helt
KPI	Active KPIs	~	Configuration details	Calculation details					
Library	Lists all the elements configured and calculated in the system elements, click here or click the side-by-side button above an and drop template (tems from the KPI Library to the Active KP Read more	n. To add [×] d drag Is pane.	Business Context					Navigate to the so	aurce temp
	* 🖻 🖩 🕏 🖬 🖬 O	p	ALM_Defect	Se	lect business context				
	Sparch (Canocha		Calculatenow						
	Status	6	Recalculate						
	🖛 🛅 Active KPIs	B2	Schedule Context Calculat	ion					
		\[\] \[\[\] \[\[\] \[\[\] \[\[\] \[\[\[\] \[\[\] \[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\[\] \]	Calculation monitoring	calculate the	formula>			Open Filter Bu	vilder
	Resource Supply Manager								
	Service Business Manager								
	🗢 🗁 Public Metrics and KPIs								
	Project Spend vs Project Budget		 Comments 						
	Public vs Private Cloud Spending								
	▶ I Amount of Used Storage		<add explai<="" more="" td=""><td>ations to provide m</td><td>ore depth to the business logic benind the l</td><td>formula and the filter></td><td></td><td></td><td></td></add>	ations to provide m	ore depth to the business logic benind the l	formula and the filter>			
	▶ 🗠 Network Traffic								
	▶ I Number of Used Instances		Test KPL						
	@ New KPI								

4. Select Calculations running now in the Monitoring options.

I	Calculation monitoring		Help	×
l	Monitoring options : Calculations running now	~		
l	Select business context to view calculation details	5		
C	Business Context	Current calculation periods:		
l	No items to show.	Yearly :		
l		Monthly:		
l		Quarterly :		
l		Weekly:		
l		Daily :		
l		Calculation start time :		
l				
l				
			se	

If No items to show is displayed, the KPI calculation is finished.

Now you can view the CSA dashboard pages with live data.

You can schedule the Scheduled calculation of the KPI. For details, see Calculation Scheduling in the *Business Analyst Guide*.

Configure the Cloud Analytic Tiles in the Provider Portal

- 1. Create a user in ITBA with the same login name as in CSA.
 - a. From the ITBA ADMIN tab, create an ITBA user account with same login name as CSA (admin). The password does not need to be the same. The password needs to be complex.

IT EXECUTIVE SCORECARE)		STUDIO	EXPLORER	FINANCE	ADMIN
Users and Roles User Management Role Management Resource Management LDAP Management Data Source Management	nt PARTIE Scorecard Administrators	Group Details Group Name : Group Description :	Administrator: Administrator:	5		Heip O ×
Add user			×			
*Login Name :	admin					
*Display Name :	admin					
*Email :	admin@cilab.net					
*New Password :			L			
*Confirm Password :	•••••		D.			
	ОК	Cancel				

- b. Log out from ITBA, and log on again in as the administrator.
- c. Select the pages relevant to CSA and make sure you can see the pages with live data.

2. Configure single sign-on:

a. Enable SSO between the CSA Cloud Service Management Console (SMC) and BA. For details, see "Enabling the Cloud Analytics Secondary Tiles" in the *HP Cloud Service Automation Configuration Guide*.

Enable SSO between the Marketplace Portal (MPP) and BA. For details, see "Configure the Showback Report Tile" in the *HP Cloud Service Automation Configuration Guide*.

 b. In CSA, initString is configured in the crypto element in the %CSA_HOME%\jboss-as-7.1.1.Final\standalone\deployments\csa.war\WEB-INF\hpssoConfiguration.xml file.

The initString value represents a secret key and should be treated as such in your environment.

Navigate to the <crypto> tag and enter the relevant value in the initString parameter.

c. In BA, click ADMIN > Settings > Single Sign-on and set the LW-SSO Token Creation key (initString) with the key above (without the double-quote and without the string "initString").
 Change the domain name to the BA server domain (CSA server should have the same domain name). Click Save.

BUSINESS ANALYTICS			STUDIO EXPLORER AD	OMIN
			He	lp ©
Users and Roles	✓ Identity Management Single Sign-Or	1		
Data Source Management				
ETL Management	ldentity Management Enabled			
 Settings 	Name	Description	Value	
Data Warehouse	Identity Management Header	Name of the Identity Management header		_
Foundation				
Single Sign-On	 Lightweight Single Sign-On 			
Pages	I W-SSO Cookie Secure			
Website				
ITFM	Name ≑	Description	Value	
Dashboard Settings	LW-SSO Trusted Hosts - Net Bios Names	Comma separated list of trusted hosts net		_
Engine Settings Score Thresholds	LW-SSO Trusted Hosts - IPs	Comma separated list of trusted hosts IPs		_
XS Settings	LW-SSO Trusted Hosts - FQDN	Comma separated list of trusted hosts FQ		
Notifications	LW-SSO Trusted Hosts - DNS Domains	Comma separated list of trusted DNS dom	example.com	_
Semantic Layer	LW-SSO Token Creation Key (initString)	Used for init of the symmetric encryption k		
Content Acceleration Pack	LW-SSO Server Domain	Used for token creation (required for multi	example.com	
			Save	l

- 3. Configure the embedded page URL:
 - a. In CSA server, backup the %CSA_HOME%/jboss-as-

7.1.1.Final/standalone/deployments/csa.war/dashboard/config.json file (where %CSA_HOME% is the directory in which Cloud Service Automation is installed).

b. Edit the **config.json** file.

c. Search for the **id: executive_scorecard** tile (beware there are two such tiles), start from the second (type = secondary) as shown below:



- d. Under the tiles node, change "enabled": false to "enabled": true, for the following ids:
 - i. Executive_scorecard_resource_manager
 - ii. Executive_scorecard_service_business_manager
 - iii. Executive_scorecard_showback_report
- e. Do not change it in the id: executive_scorecard_standalone.
- f. Change "enabled": true to "enabled": falsein the id: assistance_executive_scorecard.

g. For all tiles that are under the id: executive_scorecard, in the data section, change <CONFIGURE_HOST_NAME> to match the hostname of your Business Analytics installation. For example xs.example.com.



4. Access BA pages in the CSA system:

a. Log on to CSA using the full qualifier domain name (FQDN) URL.



b. Open the embedded BA pages in the CSA system.





Support CSA Multiple Currency for Service Offering

- 1. Edit EXCHANGE.csv.
- 2. Upload EXCHANGE.csv to %HPBA%/ContentPacks/CSA/EXTERNAL in the BA server.
- 3. Run the ETL to import exchange data. For details, see Run ETL Content Flow Managementin the *Administrator Guide*.

Configure the Showback report for the Consumer Organization

Administrator

In this section, we simulate the CSA Consumer Organization administrator use case that leverages two existing groups in the LDAP server. Each group can only see its own group's data. CSAEngineers group can only see the engineering group data and the CSAHR group can only see the HR group data. For details, see also Setting access restrictions on a universe in the *Universe Designer for BusinessObjects XI 3.1*.

- "Step 1 Configure resource, user and permission" on the next page
- "Step 2 Configure the restriction of Cloud Billing universe" on page 117
- "Step 3 Configure the Business Analytics tile in the CSA Market Place Portal" on page 129

Step 1 - Configure resource, user and permission

1. In the CSA integrated LDAP server, select 2 groups: CSAHR and CSAEngineers.

😓 OpenDJ Control Panel - Manage Entries						
File Entries View Help						
	Filter: Josers					
⊡ 🕵 dc=hpxs, dc=com ⊕ 💑 People 🙊 ExAdmin	cn=CSAengineers,dc=hpxs,dc=com Image: Only Show Attributes with Values					
ExScorcard	Common Name: *	CSAengineers				
	Object Class: *	groupOfUniqueNames				
	Members of Group:	cn=xsuser common name,ou=People,dc=hpxs,dc=com cn=xsuser1 Common Name,ou=People,dc=hpxs,dc=com cn=xsuser2 Common Name.ou=People.dc=hpxs,dc=com				
CSAengineers						

2. In the ITBA application, configure LDAP. For details, see LDAP Management in the *Administrator Guide*.

) IT	EXI	ECUTIVE SCORECARD			
sA-	 Users and Roles 		LDAP Management		
/et		User Management	Status: 😎		
		Role Management Resource Management	*Host Address :	16.165.218.176	
		LDAP Management	*Port : LDAP Account :	389 cn=Directory Manager	
	•	Data Source Management	LDAP Password :		
	•	ETL Management		Connect	
	•	Settings	Note: XS performance is improved when the number of searched groups is small; for example, if possible, do not use the Root as the base DN.		
	۲	Notifications	*Vendor :	Other 🗸	
	<u>}</u>	Semantic Layer	*Root Group Search DN :	dc=hpxs,dc=com	
Ľ		Content Acceleration Pack	Root Group Filter : Group Search DN :	cn=CSA* dc=hpxs,dc=com	Test
			•Group Filter :	(objectclass=groupOfUniqueNames)(object	Test
			*User Search DN :	OU=people, dc=hpxs, dc=com	
			User Filter :	cn=	Test
			*Administrator List :	< <select administrator="" list="">></select>	
				Save Disable	

Create the CSA engineers and CSAHR groups and assign them users.

 Users and Roles 	Image: Search Users Group Details				
User Management		Group Name : CSAengineers			
Role Management	▼ A CSAengineers	Group Description :			
Resource Management	▲ xsuser common name				
LDAP Management	<u> x</u> suser1 Common Name				
	<u> x</u> suser2 Common Name				
Data Source Management	▼ 🕰 CSAHR				
ETL Management	<u>∩</u> xsadmin LastName				
L Cottingr	<u> x</u> sadmin1Common Name	Roles and Permissions +			
• settings	🔒 xsadmin2CommonName				
Notifications		Role name			
Comantic Lavor	GEN_Cloud Server Automation				

3. Create the resource for the CSA-Showback for Consumer Organization Admin page.
| Resources | Resource Details | |
|---|---|--|
| Carters Budget Cost Centers Budgets Ail Pages Ail CSABilling Page | Recource : CSABilling Page
Description : | |
| GEN_Cloud Server Automation | Edit details | |
| | Instances | |

4. Create the CSAreportviewer role.

5. Assign the role CSA report viewer to two groups.

Users and Roles	Users & Groups Search Users	Group Details		
User Management	1 II	Group Name: CSAengineers		
Role Management	▶[#] CSAengineers	Group Description :		
Resource Management	▶ [A] CSAHR			
LDAP Management				
Data Source Management				
ETL Management		Polec and Permissions		
Settings		+ 1		
h M-Aldi-ti		Role name	Permission	Resource
Nouncauons			C) View Page	CSABilling Page
Semantic Layer		GEN_Cloud Server Automation	El ran oge	contraining roge

6. Configure LDAP with BOE. For details, see LDAP in BusinessObjects in the Administrator Guide.

Manage 💌 Actions 💌				Find title 🔻
2* 22 15 2 2 2 2				
🗄 🗳 User List		Name *	Full Name	Туре
🖅 🏭 Group List	<u> </u>	Administrator		User
Group Hierarchy	8	XSDataUser	XSDataUser	User
<u>Administrators</u> <u>Administrators</u> <u>Administrators</u> <u>Creecesting</u> <u>Cryptographic Officers</u> <u>Crypt</u>	-			
Data Services Administrator Users Data Services Designer Users Data Services Monitor Users Data Services MU Users Data Services MU Users Data Services Operator Users				

- 7. Configure the group permission in the BOE server:
 - a. Log on to BusinessObjects Central Management Console (http:// <local BOE server name>:8080/BOE/CMC) using the administrator name and password and configure LDAP with BOE. For details, see LDAP in BusinessObjects in the *Administrator Guide*.
 - b. Open the Connections:

Central Management Console



c. Select the XS_DWH_JDBC connection that your report uses and click User Security.

.oading -lide Navigation					
Default Settings Properties	Add F	Principals Remove		View S	Security Assign Security
Categories		Name	Full Name	Туре	Access
Schedule	<u>88</u>	Administrators		User Group	Full Control (Inherited)
User Security	22	cn=CSAengineers,dc=hpxs,dc=com		User Group	View On Demand
Connectivity	22	cn=CSAHR,dc=hpxs,dc=com		User Group	View On Demand
Limits	<u>88</u>	Everyone		User Group	No Access
					Reset Security Settings

d. Grant the View On Demand permission to the two groups.

Loading					
Hide Navigation					
Default Settings Properties	Add F	Principals Remove		View S	ecurity Assign Security
Categories		Name	Full Name	Туре	Access
Schedule	<u>88</u>	Administrators		User Group	Full Control (Inherited)
User Security	<u>8</u> 2	cn=CSAengineers,dc=hpxs,dc=com		User Group	View On Demand
Connectivity	<u>88</u>	cn=CSAHR,dc=hpxs,dc=com		User Group	View On Demand
Limits	22	Everyone		User Group	No Access
					Reset Security Settings

8. Open the Universes.



9. Select the CloudBilling universe that your report uses and click Universe Security.

Cen	tral Management Consol	e				
	Universes	•				
\$	Manage 🔹 Actions 🔹 Organize 👻					
	💼 🖻 - 🖽 🖧 🛠					
8	💀 Universes List		Title 📤			
2	🖳 🧰 Universes	8	Cloud Billing			
<u>89</u>	🛄 🗖 Data Warehouse Universes	2	Cloud Billing I	Properties		
	🐃 🚞 Monitoring TrendData Univers			Universe Securi	ity	
6	🛄 Report Conversion Tool Unive			User Security		
2	webi universes			New	>	
2	T No Metrics			Tools	>	
				Organize	>	
100 E	SystemHealth			Delete		
	XS 2010					

10. Add the **Private** security to the two groups.

Loading						
					Add Update	Reset Refresh
Remove	Name	Full Name	Туре	Description	Object Level Security	Net Security
	Everyone		User Group	All users of this system	(Inherited Security)	Public
	Administrators		User Group	Users who can administrate this system	(Inherited Security)	Private
	cn=CSAengineers,dc=hpxs,dc=com		User Group		Private 🗸	Public
	cn=CSAHR,dc=hpxs,dc=com		User Group		Private	Public
			see. Group			. ubit

11. Grant the View on Demand permission to the 2 groups in User Security.

Cen	tral Management Console	•				
	Universes	'				
\$	Manage 🔹 Actions 🔹 Organize 🔹					
	📸 🖻 🛛 🖾 😓 🛠					
2	🔛 🕺 Universes List		Title 📤			
	🖳 🛄 Universes		Cloud Billing	Pronerties		
<u>88</u>	🚞 Data Warehouse Universes	8	Cloud Billing Demo			
6	🚞 Monitoring TrendData Univers			Universe Security		
	🚞 Report Conversion Tool Unive		9	User Security	\geq	
	🚞 webi universes			New	>	
88	🚍 🖾 XS Metrics			Tools	>	
	Cloud Billing			Organize	>	
6	🛄 SystemHealth			Delete		
- 28	🛄 XS Studio					

	Principals Remove		View S	ecurity Assign Security
	Name	Full Name	Туре	Access
2	Administrators		User Group	Full Control (Inherited)
2	cn=CSAengineers,dc=hpxs,dc=com		User Group	View On Demand
2	cn=CSAHR,dc=hpxs,dc=com		User Group	View On Demand
2	Everyone		User Group	No Access
2	Universe Designer Users		User Group	Full Control (Inherited)

12. Select Folders.



13. Select the Showback for Consumer Organization Admin report and click User Security.



14. Grant the View On Demand to the 2 groups.

Loading					
Hide Navigation					
Default Settings	Add F	Principals		View 9	Security Assian Security
Properties					
Categories		Name	Full Name	Туре	Access
Schedule	<u>8</u> 2	Administrators		User Group	Full Control (Inherited)
User Security	22	cn=CSAengineers,dc=hpxs,dc=com		User Group	View On Demand
Connectivity	22	cn=CSAHR,dc=hpxs,dc=com		User Group	View On Demand
Limits	22	Everyone		User Group	No Access
					Denot Committee Cottingen
					Reset Security Settings
1					

Step 2 - Configure the restriction of Cloud Billing universe

- 1. Configure the restrictions of the Cloud Billing universe:
 - a. On the BOE server, install SAP BusinessObjects BI platform 4 Client Tools. Unzip the **bipclient.ZIP** file from installation file and click **setup.exe** to install it.



b. Open the Universe Design Tool.

퉬 SAP Business Intelligence
퉬 SAP BusinessObjects BI platform 4
퉬 SAP BusinessObjects BI platform 4 Clien
返 Business View Manager
🏘 Data Federation Administration Tool
ol Information Design Tool
📝 Query as a Web Service Designer
🆓 Report Conversion Tool
💕 Translation Management Tool
🔆 Universe Design Tool
🦩 Web Intelligence Rich Client
🎐 Widgets
SAP BusinessObjects Data Services 4.1
1 a c

c. Log on to the Universe Design using the BOE administrator.

User Identification	×
	SAP Business Objects
Enter your name and p	bassword to log in.
<u>S</u> ystem	localhost 💌
<u>U</u> ser Name:	Administrator
Password:	******
Authentication	Enterprise
	OK Cancel <u>H</u> elp

d. Click the Import button.

3	universe design 🛛	tool - [Admii	nistrator - @XS950DEMO.fpazsh.com:6400]
	<u>File E</u> dit <u>V</u> iew <u>I</u>	nsert <u>T</u> ools	<u>W</u> indow <u>H</u> elp
	New ⊘ Open ⊆lose	Ctrl+N Ctrl+O ⊂trl+W	1 A A 9 3 B # 3 D B A 4 5 6 6 6 7 8 7 8 8
	Save <u>A</u> s Save <u>A</u> s Save All	Ctrl+5 F12	
	Import Export		
	Parameters	ange	
	Page Setyp Print Preview Print	Ctrl+P	
	<u>1</u> Cloud Billing D	emo.unv	
	E <u>x</u> it		

e. Open the Cloud Billing universe.

Import Universe	×
	Select a universe domain in the repository to see available universes. Select the universe you want to import. Double-click to lock or unlock a universe. A grayed padlock means someone else has locked the universe.
<u>F</u> older:	/XS Metrics/Cloud Billing Browse
	Qpen the selected universes
<u>Available</u> Universes	a
Universe Name	Locked by
Cloud Billing	
	200
Description:	
	× •
Import Folder:	C:\Users\itaadmin\AppData\Roaming\SAP BusinessObjects\SAP
	Browse
	OK Cancel <u>H</u> elp

Import Universe	×
	Select a universe domain in the repository to see available universes. Select the universe you want to import. Double-click to lock or unlock a universe. A grayed padlock means someone else has locked the universe.
Folder:	/XS Metrics/Cloud Billing Browse
	Open the selected universes
Available Universe:	5:
Universe Name	Locked by
Cloud Billing	
	2010
Description:	
	<u>ب</u>
Import Folder:	C:\Users\itaadmin\AppData\Roaming\SAP BusinessObjects\SAP
	Browse
	OK Cancel Help

- f. Add the relevant restrictions in the Manage Access Restrictions wizard:
 - Engineer_restriction is set for CSA engineers which is configured to see only the engineering group's data.
 - HR_restriction is set for CSAHR which is configured to see only the HR group's data.

😚 universe design tool - Clou	ud Billing Demo - [Administr	ator - @X5950DEMO.fpazsh.com:6400]
Eile Edit View Insert	<u>T</u> ools <u>W</u> indow <u>H</u> elp	
🕴 🗅 🥔 🔛 🍜 🙆 🚜	Connections	🎒 🥖 🎦 🔚 🐺 100% 💌
i i i i i i i i i i i i i i i i i i i	Hierarchies Lists of Values Aggregate Navigation	▶ <mark>१ ≫ 28 28 </mark>
E- C Models	List of Aliases SQL List of Derived Tables	
	Query Panel	
	Automated Detection	ext.CSA_BILLING_FACT_V
	Login As Change <u>P</u> assword	AMOUNT_LOC BILLING_PERIOD_DURABLE_KEY CURRENCY_BASE CURRENCY_LOC
	Manage security	Manage Access Restrictions Manage Access Restrictions Preview Net Access Restrictions E_KEY
		SERVICE_BLUEPRINT_DURABLE_KEY SERVICE_INSTANCE_DURABLE_KEY SERVICE_OFFERING_DURABLE_KEY SUBSCRIPTION_DURABLE_KEY

g. Create the restriction.

- i. Click **New** in the wizard.
- ii. Click the **Rows** tab and click **Add...**.

	Edit Restriction - New Re	striction	×	pn (
	Restriction Name:	OrganizationRestrictionHR		estriction
	Connection Controls	iQL Objects Rows Table Mapping		
	B Defining you to query.	a Where clause on the RDBMS table specifed below allows estrict access to rows, and limit the results returned by a	5	
	Restricted tables	Where Clause Status	I	
1		New Row Restriction		× ×
E E		Table: Where Clause:		>>
	Add			<u> </u>
	Kesel			▼ ▶
			cel	Help

iii. Select the **XS_BUSINESS_UNIT_DIM_V** table in the **Table** list, and set the SQL query in as follows:

New Row Restriction	×
Table:	\frown
Where Clause:	\smile
T	× >>
OK	Cancel Help
You can select the table	
Table	
xc.BILLING_EACT_V xs.BUSINESS_UNIT_DIM_V xs.PERIOD_DIM_V xs.PERSON_DIM_V xs.SERVICE_INSTANCE_DIM_V xs.SUBSCRIPTION_DIM_V	
	OK Cancel Help

- iv. Click OK.
- v. Add restrictions1 as XS.BUSINESS_UNIT_DIM_V.Name = 'Engineering'.

🔣 Where Clause Definition		×
xs.BUSINESS_UNIT_DIM_V.Name = 'Engineering	1	4
Tables and Columns: Image: State Stat	Operators: Eunctions: <	
	OK Cancel <u>H</u> elp	

- vi. Click OK.
- h. Repeat the steps from "Create the restriction." on page 122 to create the second restriction.



2. Click the Add user or Add group button, select the user and click the > button.

Select Users and Groups							
You can select the users an system. It can be filtered u	id groups to wh using the search	ich you can apply security restriction n criteria. The list on the right shows	ns. The list users and	on the left shows all the available users and groups in the groups that have been selected.			
Available groups and users:	:	1-25/25 🕉		Selected groups and users:			
Account Name 🛛 🔺	Full Name	Description		Account Name			
& Administrator & Administrators & cn=CSAengineers & cn=CSAHR,dc=hp		Administrator account Users who can administrate	>	器 cn=C5Aengineers,dc=hpxs,dc=com 器 <mark>cn=C5AHR,dc=hpxs,dc=com</mark>			
Cryptographic Offi		The users authorized to man	66				
😹 Data Federation A		Data Federation Administrat					
😹 Data Services Ad		Data Services administrators	<				
😹 Data Services Desi		Data Services users who are					
Data Services Mon		Data Services users who can.		•			
Search							
Search by:	Name	_					
For text:		_ #1					
Look in:	🔽 Groups	Vsers					
				OK Cancel			

3. Click OK.

Manage Access Restrictions								
You can create security restrictions and apply them to groups or users. The list on the left shows all the existing security restrictions for this universe. The list on the right shows all the users and groups that have security restrictions applied.								
Available Restrictions:		Available groups and users	:					
Engineers_Restriction HR_Restriction Sales_Restriction	>> Apply	Name & cn=CSAengineers,dc= & cn=CSAHR,dc=hpxs,d	thpxs,dc=com lc=com	Restriction <none> <none></none></none>	Priority			
		•						
🤡 New 🤔 Edit 🗙		😹 Add user or group 🛛 🗧	Priority 🛛 🖑	🕉 Preview 🗙 🛛 🤪 🕻	9			
				ОК	Cancel			

4. Select Engineers_Restriction in Available Restrictions area, select the CSA engineers group in the Available groups and users area, and then click the >>Apply button.

Manage Access Restrictions							
You can create security restrictions and apply them to groups or users. The list on the left shows all the existing security restrictions for this universe. The list on the right shows all the users and groups that have security restrictions applied.							
Available Restrictions:		Available groups and user	's:				
Engineers_Restriction		Name		Restriction		Priority	
Sales_Restriction		🗸 cn=CSAengineers, dc	=hpxs,dc=com	Engineers_Restriction		1	
	>> Apply	Serie CSAHR, dc=hpxs,	,dc=com	<none></none>			
		•					
🥵 New 🤔 Edit 🗙		🚜 Add user or group	🚵 Priority 🎸	👌 Preview 🗙 🛛 🍪 🕅	9		
				0k	< Ca	ncel	

5. Repeat the previous step for the **HR_Restriction** and the HR group.

Manage Access Restrictions							
You can create security restrictions and apply them to groups or users. The list on the left shows all the existing security restrictions for this universe. The list on the right shows all the users and groups that have security restrictions applied.							
Available Restrictions:		Available groups and users:					
Engineers_Restriction		Name	Restriction	Priority			
Sales Restriction		Scn=CSAengineers,dc=hpxs,dc=com	Engineers_Restriction	1			
-	>> Apply	😹 cn=CSAHR,dc=hpxs,dc=com	HR_Restriction	2			
		•					
🥵 New 🤔 Edit 🗙		🚜 Add user or group 🛛 🖓 Priority 🛛 🍕	🖲 Preview 🗙 🙀 🥝				
			ОК С	ancel			
				11.			

6. Click Export...



- 7. Click OK.
- 8. Log on to BA as the HR group one user and open the CSA billing report in the Dashboard.

9. Click the **Refresh** button to display the following value for Org Name.

→ C Abbrs://xs950live.fpazsh.com/fndwar/d	adedApplication.isp?flavor=	\$
	and a block of the second s	User: 1 xsadmin LastName Logout Hel
IT EXECUTIVE SCORECARD		STUDIO EXPLORER FINANCE ADMIN
CSA-Billing Statement for Cloud Services ×		Select Page 🗸 🗘 🎝 🛱 🖾 🛞 🗐
Web Intelligence Report Viewer		
Web Intelligence 🔹 🗋 🧀 🚔 🖷 🎽 🍄 🚢 • 🖾 •	🕫 🕫 🔹 😨 Track 🔹 📮 Drill 💌 🌠 Filter Bar 🛞 Cutline	Reading - Design - 😗 -
Document Summary * W	Prompts Prompt	

- 10. Log on BA as the Engineers group one user and open the CSA billing report in the Dashboard.
- 11. Click the **Refresh** button to display the following value for Org Name.

			User: 🖈 🛛 xsuser common name 🛛 Logout 🛛 Help 🤅
	IT BUSINESS ANALYTICS		STUDIO EXPLORER ADMIN
Web Indigence Processing Council of	CSA-Billing Statement for Cloud Services ×		Select Page 🗸 🌣 🛱 🛍 🖒 🗟 🖄 🗐
Web Indigence +	Web Intelligence Report Viewer		
	Web Intelligence 🔹 🗋 😂 🔛 🐇 🖓 🖾 🔹 🖂	🕐 🕫 🖓 🔹 🔀 Track 👻 😱 Drill 🔹 🌠 Filter Bar 🏥 Outline	Reading - Design - 🕜 -
Disc Discussion of H / Disc to 1 + N D Discussion of H / Disc to 1 + N D Discussion of H / Disc to 1 + N D Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Discussion of H / Disc to 1 + N Disc	Discament Summary • «	Prompts Prompt	
	Billion Statement for Cloud Services		Track channer: Off H d Dana 1 of 1 b H R D 10000 x 20 157 days and

Step 3 - Configure the Business Analytics tile in the CSA Market Place Portal

To enable and configure the Showback report on the CSA Market Place Portal for the Consumer Organization Administrator persona:

- 1. Locate the **%CSA_HOME%**\portal\conf\dashboard.json file.
- In the file, locate the section below and in the highlighted url replace the <CONFIGURE_HOST_ NAME> placeholder with the host name of the BA instance.

```
{
    "label": "common.section.ADMINISTRATION.label",
    "role": ["CONSUMER_ORGANIZATION_ADMINISTRATOR"],
    "tiles": {
      "default": {
        "className": "light-gray"
      },
      "items": [{
        "label": "common.items.MANAGE_USER_SUBSCRIPTIONS",
        "icon": {
          "className": "icon-manage-subscriptions"
        },
        "link": "#/user/manage"
      }, {
        "label": "common.items.SCORECARD",
        "icon": {
          "className": "icon-status"
        },
        "link": {
          "url":"https://<CONFIGURE HOST
NAME>/fndwar/loadEmbeddedPage.jsp?com.hp.bsm.uim.pageUID=ef63ab7f-b86b-43c8-
b8d8-bb81869b73dc",
          "target": "_blank"
        }
      }]
    }
  }
```

3. Save.



CSA Activation Page

The following is an example of the CSA Activation page.

Data Source Wizard		Help \times							
CSA (Cloud Service Automation)									
*Instance name :									
CSA Version : Time Zone :	∃.1/∃.2 Asia/Jerusalem								
Data Source Type :	CSA ~								
*Organizationname :	CSA-Provider								
*Username :	< <enter username="">></enter>								
*Password :									
*Hostname/IP Address : *Port :	< <i><enter address="" hostname="" ip="" or="">></enter></i> 8444								
Initial Load Period (months)	: 6								
	Back Next Can	el							

User interface elements are described below:

Note: If the CSA configuration is for a named instance connection, make sure to enter the named

instance port.

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.
CSA Version	Select the relevant version For details, see the Support Matrix.
Time Zone	Select the time zone for the data source.
Data Source Type	CSA
	This parameter is read only.
Organization Name	Enter the Organization Name that is necessary to retrieve admin details.
	The default value is CSA-Provider.
Username	Enter your admin username used to log on to CSA. The default username is ooInboundUser .
Password	Enter your admin password used to log on to CSA. The default admin password is cloud .
Hostname/IP Address	Enter the CSA server hostname or IP address.
Port	Port for REST API (default value is 8444).
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.



CSA-Related KPIs and Metrics

For a list of the KPIs and Metrics related to the Cloud Service Automation data source, see KPIs and Metrics in the *Content Acceleration Packs Guide*.

CSA_Demo and CSA Content Acceleration Packs

The purpose of the CSA_Demo and CSA Content Acceleration Packs (CAPs) is to provide a set of items (Scorecards, Contexts, KPIs, Metrics, and more) that automatically gathers information from across your enterprise to build key performance indicators (KPIs) related to CSA-related issues with OOTB data from Data Warehouse as well as Dashboard pages that display the relevant information. The CAPs include the Cloud Server Automation Perspectives. The CAPs provide broad and deep insight that should enable you to Increase Service Profitability, Optimize Resource Provider Relationship, Improve Resource Utilization. This CAP provides a 360 degree Cloud Service Automation view.

The CSA is based on the Cloud Service Automation, Amazon Web Services, and Amazon Web Service CloudWatchdata sources.

The CSA_Demo takes its data from out-of-the-box .CSV files included in the CAP.

To access:

Click Admin > Data Management > Activate CAP. You can then select the relevant CAP and activate it.

If the CAP you want to activate is not the demo CAP, you must make sure you have installed the relevant Content Pack, connected the relevant data source, optionally configured the consolidations, and run the ETL to see the relevant data in the CAP Dashboard pages.

Learn More	Tasks	UI Description
C Learn Mor	е	

What are Content Acceleration Packs (CAPs)

Content Acceleration Packs (CAPs) are packages that include Dashboard pages that display Scorecards and components, KPIs, Metrics, Contexts (universes), data (from .CSV files or from data sources), and documentation for the CAP. You can import them, export them, activate, or deactivate them, or you can create your own.

CAPs describe typical stories that show how the correct implementation of Business Analytics drives Performance Improvement and Cost Reduction for the IT organization. CAPs demonstrate Business Analytics capabilities, and helps you add basic elements that can be used to customize your Dashboard.

The CSA_Demo is based on data in .csv files that are part of the CAP package and CSA CAPs include data from data sources.

Reports

- The CSA-Showback for Cloud Services report displays the subscription cost incurred by each organization during the time period you specified when you opened the report. for details, see CSA-Related Reports in the *Content Reference Guide*.
- To view data in the CSA-related reports, make sure you have installed BOE.
- The cloud-related reports (Dashboard pages) provided in the CSA_CAP and CSA_Demo_ CAP CAPs combine integrated data from the following data sources Cloud Service Automation (CSA), Amazon Web Services (AWS), Amazon Web Service CloudWatch (AWSCW)

Pages

САР	Page									
CSA_Demo	"CSA - Amazon EC2 Instance Usage and Utilization" on the next page									
	"CSA-Showback for Cloud Services" on the next page									
	"CSA-Showback Detail for Cloud Services" on page 137									
	"CSA_Demo and CSA Content Acceleration Packs" on the previous page									
	"CSA-Showback Detail for Consumer " on page 138									
	"CSA-Cloud Service Automation Overview" on page 139									
	"CSA-Organization" on page 139									
	"CSA-Resource Supply Manager" on page 140									
	"CSA-Resource Usage and Utilization for Consumer" on page 141									
	 "CSA-Resource Usage and Utilization for Resource Supplier Manager" on page 142 									
	"CSA-Service Business Manager" on page 143									
	 "CSA-Service Business Manager_Extended" on page 143 									
	"CSA-World Map" on page 144									
	"CSA-US Map" on page 145									
CSA	"CSA - Amazon EC2 Instance Usage and Utilization" on the next page									

САР	Page
	"CSA-Showback for Cloud Services" below
	"CSA-Showback Detail for Cloud Services" on page 137
	"CSA-Showback for Consumer Organization Admin " on page 137
	 "CSA_Demo and CSA Content Acceleration Packs" on page 133
	 "CSA-Showback Detail for Consumer" on page 138
	"CSA-Cloud Service Automation Overview" on page 139
	"CSA-Organization" on page 139
	 "CSA-Resource Supply Manager" on page 140
	"CSA-Resource Usage and Utilization for Consumer" on page 141
	 "CSA-Resource Usage and Utilization for Resource Supplier Manager" on page 142
	"CSA-Service Business Manager" on page 143
	 "CSA-Service Business Manager_Extended" on page 143

CSA - Amazon EC2 Instance Usage and Utilization

The data sources are AWS and AWSCW.

CSA-A	mazon EC2 Ins	rance Usage and Utilizar	ion (Demo) ×											Select Page 🗸 🖸 🖹 🖽	188	
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CSA-Showback for Cloud Services

The CSA-Showback for Cloud Services report displays the subscription cost incurred, during the time

period specified when the user opened the report, by the organizations for which the user has permission. It also displays the Option Full Name, Property Name, Property Value, and Cost for each selected user subscription. The period granularity of this report is daily. You can search by specific date range, by user name, or by organization name.

The CSA-Showback for Cloud Services report displays the subscription cost incurred by each organization based on demo data.

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-Showback for Cloud Services ×	Select Page 🗸 🕻 🕏 🖾 🛞
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Showback for Cloud Services	
Billing Period 2011-12-30 07:00:00 to 2019-12-30 07:00:00 Currency USD	
Organization ALL Subcribed User ALL	
Total Billing Amount: 643.7213	
2015-09 Oranalization: Consumer	
Subscription Name Subscribed User Name	Cost
Provision a server in MS Azure public cloud (1.0.0) consumer	20.1644
ITED A druge Service offerning (10.0)	0
Con acute acute	-
vm rom (sa consumer	
for create Linux VM consumer	0
LinuxVM consumer	20.0006
<u>Ubuntu</u> consumer	20.0012
Subtotal for Orgniza	.tion: 60.1661
2015.10	00.1001
Organization: Consumer	
Subscription Name Subscribed User Name	Cost
Provision a server in MS Azure public cloud (1.0.0) consumer	0.3397
Create Ubuntu 14 consumer	20 2098
B Showhold for Cloud Sometry	9/2192

CSA-Showback Detail for Cloud Services

The report displays the option and property cost for each selected user subscription. The period granularity of this report is daily. The user can search by specific date range, by user name, by organization name, or by subscription name.

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		Total Billing Amount: 13 166 25								
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		Person:Ad	Iministrator					SubTotal for Person : 1,22	4.75	
•		Subscr	iption:Helion_sub					SubTotal for Subscription	on : 630.75	
		Initia	I/Recurring Price	Quantity Name	Quantity	Option	Property	Duration	Cost	
		Initia	I (10 USD)			[None]	[None]	One Time	10	
		Initia	(30 USD)	No_Of_Server	8	Memory:32G	[None]	One Time	240	
		Initia	(40 USD)	No_Of_Server	8	Memory:32G	CPU:8	One Time	320	
		Recu	rring (1 USD Daily)			[None]	[None]	18 Hour 0 Min 0 Sec	0.75	
		Recu	rring (4 USD Daily)	No_Of_Server	8	Memory:32G	[None]	18 Hour 0 Min 0 Sec	24	
		Recu	rring (6 USD Daily)	No_Of_Server	8	Memory:32G	CPU:8	18 Hour 0 Min 0 Sec	36	
×		Subscr	iption:VCenter_sub					SubTotal for Subscription	on : 497	
		Initia	I/Recurring Price	Quantity Name	Quantity	Option	Property	Duration	Cost	
		Initia	(10 USD)			[None]	[None]	One Time	10	
		Initia	(25 USD)	No_Of_Server	7	Memory:24G	[None]	One Time	175	
		Initia	(40 USD)	No_Of_Server	7	Memory:24G	CPU:8	One Time	280	
		Recu	rring (1 USD Daily)			[None]	[None]	12 Hour 0 Min 0 Sec	0.5	
1234		Recu	rring (3 USD Daily)	No_Of_Server	7	Memory:24G	[None]	12 Hour 0 Min 0 Sec	10.5	
Billing Stat	tement for Clo	ud Services								

CSA-Showback for Consumer Organization Admin

The CSA-Showback for Consumer Organization Admin report displays the subscription cost incurred by each organization during the time period you specified when you opened the report for the Admin user.

CSA-Showback for Consumer Organization Admin ×					Select Page 🖌 🔉 🗱 🗅 📽 🖾 🛞 🕼
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CSA-Showback Detail for Consumer

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dimension values:	Recurring (6 USD Daily)	No_Of_Server	7	Memory:240	CPU:8	12 Hour 0 Min 0 Sec	21		
Promote S	ubscription: VCenter_Subscription_Ja	an				SubTotal for Subscription : 9	17		
	Initial Recurring Price	Quantity Name	Quantity	Option	Property	Duration	Cost		



CSA-Cloud Service Automation Overview

CSA-Organization







CSA-Resource Usage and Utilization for Consumer

The persona is the resource supply manager, who is responsible for the management of equipment, hardware, and other logistical details of a company or a company's division.

Since the traditional IT is transforming to the new style of IT by moving IT assets to the cloud, His job is to manage each resource provider; deliver the infrastructure service to support the business application and service run in the company; make sure the overall cost of resource provider is under control.

In this report, the private cloud VM instance cost is based on the based rate inputed by user multiplied by real VM usage. Other usage and utilization are directly from VM.

The report only displays the VM that created by CSA subscription, if the VM has no linkage to CSA subscription, it should display on this report.

Select Page 🗸 🖸 🎝 🔀 🖂 🛞 SA-Amazon EC2 Instance Usage and Utilization × CSA-Showback Detail for Cloud Services × CSA-Resource Usage and Utilization for Consumer ▼ 11 | Θ <</p> 😂 🛄 🔹 📇 🚵 👘 🖽 🔹 💌 🕫 🖉 🔹 🔡 Track 🔹 🐺 Drill 🔹 🍄 Filter Bar 🥅 F 6: 11 Resource Usage and Utilization 2009-12-31 to 2019-12-31 Period User ALL Organization ALL Total Machine(#) 10 Date : 2015-10-16 SubTotal for Date : 4 Org : Resource Provider Virtual Resource Provider Virtual Machine VM Туре 38) Min Max Aug 0.2 WS_E2E_Keep_1.0.0 WULinA_sub 😪 Track changes: Off 🛛 H 🔸 Page 1 of 1+ 🕨 H 🖉 💽 100%

The report is at daily level. User will able to filter start time and end time, organization, resource provider.



CSA-Resource Usage and Utilization for Resource Supplier Manager





CSA-Service Business Manager

CSA-Service Business Manager_Extended



Note: This page is only available on your mobile device.

CSA-World Map

This page is only available with the CSA_Demo CAP. For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.

CSA-World Map ×			Select Page 👻 🛇	
KPI View	▼ 11 @ * × m √	World Map Filter by Total Revenue of Services for World Map)	- ĭi∣© ≜ × ×
Total Revenue of Ser World Map (US\$) ≡ ↑ I FY2015/04(App	vices for s2.482 pr) \$2.4830	 ✓ Good ✓ Warning ✓ Critical 		
CSA-US Map

This page is only available with the CSA_Demo.

		Select Page 🗸 🔽 🖾 🗆 🏻 📽 🗠	•••
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This section includes:

Upload and manage the Content Acceleration Pack	. 145
View the CAP-related Dashboard pages	. 146
View the Scorecard Structure and KPI and Metric Breakdowns in the Studio	. 146
Activate the CSA_Demo in ITBA	. 146
Deactivate the CSA_Demo and activate the CSA CAP	. 147
CSA_Demo and CSA	. 149

Upload and manage the Content Acceleration Pack

For details, see Content Acceleration Packs (CAPs).

View the CAP-related Dashboard pages

- 1. In the ITBA application, close all the tabs. The Dashboard is displayed.
- Click the tab corresponding to the relevant CAP page (for details, see "Pages" on page 134) in the Dashboard. If it is not displayed, click the Page Gallery button in the Dashboard toolbar, double-click the relevant page icon and close the Page Gallery dialog box.

View the Scorecard Structure and KPI and Metric Breakdowns in the Studio

- 1. Make sure the CAP is activated.
- 2. In the Business Analytics application, click **Studio**.
- 3. Expand the relevant Scorecards to view the Scorecards, Perspectives, Objectives, KPIs, KPI Breakdowns structure.

Activate the CSA_Demo in ITBA

To activate the CSA_Demo you do not need to connect to a live CSA source.

- 1. Log on to the ITBA application.
- 2. Ignore the Unreachable Java Applet. Click OK.



3. Click the ADMIN > Data Management > Activate CAP.

								STUDIO	EXPLORE	R	ADN Help
	 Users and Roles 	List of CAPs			CSA_Demo						
	Settings	* O View by : All		~				[Deactivate		
	Notifications	ALM_Demo	0	ĵį.	The purpose of this Cloud Content Acceleration Pack (CAP)	is to pr	rovide a set of items (Dashboard pages,	B	ecalculate date: 30 in use:	1/1/14 No	
ľ	Semantic Layer	Cloud2_for_UI_tests2	0	Û	enterprise to build key performance indicators (KPIs) relativ Warehouse. The CAP includes the Cloud Server Automation	ed to C	SA-related issues with demo data from Data	A	uthor:	HP	
ľ	- Data Management	<pre>GSA_Demo</pre>	0	Û	Content	reiso	sectives. The CHP brownes broad and deeb	U V	A Version: lersion:	10.0	
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					✓ 🕅 CSA_Demo		62. Total Cost of IT Services				6
							Data (External tables)				

4. Select **CSA_Demo** in the list of CPs, and click **Activate** to activate the CAP. Click **Yes** to begin the activation process.

Then wait until the CAP activation is successful.

- 5. Close the **ADMIN** tab.
- 6. In the Dashboard, click **Select Page** and select the pages that are relevant for CSA. For details, see "Pages" on page 134.

The pages display demo data.

Note: If the CSA-Billing Statement for Cloud page displays a blank screen with the title Web

Intelligent Report Viewerand a shield icon is displayed in the URL bar (top right-hand corner), click the shield and allow script to run. After a few seconds, the page will display data.

Deactivate the CSA_Demo and activate the CSA CAP

If you have activated the CSA_Demo previously, you must deactivate if before you activate the CSA CAP.

1. Log on to the ITBA application.

2. Ignore the Unreachable Java Applet. Click OK.



- a. Click the ADMIN > Data Management > Activate CAP.
- Select CSA_Demo in the list of CPs, and click Deactivate to deactivate the CAP. Click Yes to begin the deactivation process. Then wait until the CAP deactivation is successful.
- 4. Select **CSA** in the list of CPs, and click **Activate** to activate the CAP. Click **Yes** to begin the activation process.

Then wait until the CAP activation is successful.

5. Close the **ADMIN** tab.



CSA_Demo and CSA

* 6	View by : All	~			Activate	
🗘 ALM 🕴 🗓		The purpose of this Cloud Content Acceleration Pack (CAP) is to provide a set of items (Dashboard pages, Scorecards, Contexts, KPIs, Metrics, and more) that automatically gathers information from across your		Recalculate date: B0 in use: Author:	1/1/14 No HP	
🗇 ALM_Demo	0	Ū	enterprise to build key performance indicators (KPIs) related to CSA-related issues with demo data from Data Warehouse. The CAP includes the Cloud Server Automation Perspectives. The CAP provides broad and deep		BA Version:	10.0
🗇 CSA	0	Ū.	Contont		Version	10
💎 CSA_Demo	0	İ	content			
PPM_Demo	e)	Ū	✓ Pages	 KPIs and Metrics 		
SM_Demo	Û	Û	CSA-Billing Statement for Cloud Services	% of Memory Utilization		٩
VPApps_Demo	9	Û	CSA-Cloud Service Automation Overview	Average Cost of IT Services		Đ,
VPOns Demo	0	Ť		Average Cost of Resource Providers		Ð
() Hops_being	0			Average Expense for Services		Ð,
			 Scorecards 	Average Revenue of Services		0,
				Number of Service Subscriptions		0,
			🗉 Cloud Server Automation 🔍	Percentage of DiskSpace Utilization		0,
				 Percentage of Pagefile Utilization 		0,
				Percentage of Server Utilization		D,
				Percentage of Swap Utilization		Ð
				Percentage of Volume Utilization		Ð
			 Business Contexts 	Public vs Private Cloud Spending		0,
				Service Profit Margin		0
			EC Type Name	Service Subscription Lifespan		Đ,
			✓ I CSA Demo	C. Total Cost of IT Services		

List of CAPs					CSA			
* n	View by : All	÷	~		Open documentation The purpose of this Cloud Content Acceleration Pack (CAP) is is Scorecards. Contexts. KPIs. Metrics. and more) that automati	to provide a set of items (Dashboard pages,	Activate Recalculate date: B0 in use:	1/1/14 No
 ALM_Demo CSA CSA Demo 		မ မ မ	10 10 11		enterprise to build key performance indicators (KPIs) related Warehouse. The CAP includes the Cloud Server Automation Pr Content	of Source and the source of th	Author: BA Version: Version:	HP 10.0 1 0
PPM_Demo		Û	1		✓ Pages	 KPIs and Metrics 		
SM_DemoVPApps_Demo		0	10 10		CSA-Billing Statement for Cloud Services CSA-Billing Statement for Consumer Organi	Number of Service Subscriptions Percentage of DiskSpace Utilization Percentage of Memory Utilization		U, D, D.
VPOps_Demo	VP0ps_Demo	ų	Ŵ	4	CSA-Cloud Service Automation Overview CSA-Cloud Service Automation Overview CSCorecards	 Percentage of Pagefile Utilization Percentage of Server Utilization Percentage of Swap Utilization 		9, 9, 9,
					Cloud Server Automation	Percentage of Volume Utilization Data (External tables)		٩
					Business Contexts	No items to sh	ow	
					№ Type Name ✓ ፼ CSA_CloudOptimization			

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Pages	See "Pages" on page 134.
Scorecards	Cloud Server Automation
Business Contexts	CSA_CloudOptimizationCSA_Demo
	For details, see Reference: Contexts (Universes) in the Content Reference Guide.
KPIs and	KPIs
Methos	Average Cost of IT Services KPI
	The average cost of services provided by IT.
	Average Cost of Resource Providers KPI
	The average cost of the Resource Providers during the measurement period.
	Average Expense for Services KPI
	The average expense of services consumed by the organization.
	Average Revenue of Services KPI
	The average revenue of services provided by IT during the measurement period.
	Number of Service Subscriptions KPI
	The number of Service subscriptions created during the measurement period.
	Percentage of DiskSpace Utilization KPI
	The average of percentages of diskspace utilization at instance level.
	Percentage of Memory Utilization KPI
	The average of percentages of memory utilization at instance level.
	Percentage of Pagefile Utilization KPI
	The average of percentages of pagefile utilization at instance level.
	Percentage of Server Utilization KPI
	The average of percentages of CPU utilization at instance level.
	Percentage of Swap Utilization KPI
	The average of percentages of swap utilization at instance level.
	Percentage of Volume Utilization KPI
	The average of percentages of volume utilization at instance level.

I

JI Element	Description
	Public vs Private Cloud Spending KPI
	The ratio between the public and the private spending.
	Service Profit Margin KPI
	The profit margin of the services provided by IT during the measurement period.
	Service Subscription Lifespan KPI
	The average lifecycle time of a subscription to a service during the measurement period.
	Total Cost of IT Services KPI
	The total cost of services provided by IT during the measurement period.
	Total Cost of Resource Providers KPI
	The total cost of the Resource Providers during the measurement period.
	Total Expense for Services KPI
	The total expense of services consumed by the organization.
	Total Revenue of Services KPI
	The total revenue of service provided by IT during the measurement period. In addition, the following KPIs are also available in the CSA_Demo CAP only:
	a. Total Revenue of Services for US Map: The total revenue of service provided by IT during the measurement period (this KPI is created for US Map component).
	 b. Total Revenue of Services for World Map: The total revenue of service provided by IT during the measurement period (this KPI is created for World Map component).
	 Total Revenue of Services for US Map KPI (see Total Revenue of Services KPI)
	Total Revenue of Services for World Map KPI (see Total Revenue of Services KPI)
	Metrics:
	Amount of Used Disk Metric
	The product of the amount of disk provisioned and the number of days the VM has been running. For example, if a VM has been running with 20 GB of hard disk for 5 days, the DiskDays is calculated as 20x5 = 100 Disk (GB)-Days.
	Amount of Used Memory Metric
	The product of the amount of memory allocated and the number of days the VM has been running. For example, if a VM has been running with 4 GB of memory for

III Element	Description
	5 days, the MemDays is calculated as follows: $5x4 = 20$ Memory (GB)-Days.
	Amount of Used Storage Metric
	The number of TBs of storage that are currently in use.
	Compute Hours Metric
	The number of hours during which the VM has been running.
	Incoming Network Traffic Metric
	Network Download.
	Network Traffic Metric
	Total network traffic.
	Number of Used CPUs Metric
	The product of the number of CPUs and the number of days the VM has been running. For example, if 4 CPUs are used for the first 15 days and 8 CPUs are used for the next 15 days in a month, the CPUDays is calculated as follows: $(4x15)+(8x15) = 180$ CPUDays
	Number of Used Instances Metric
	The number of dedicated instances you are running in your hybrid cloud environment.
	Outgoing Network Traffic Metric
	Network Upload.
Data	CSA_BILLING_FACT_V
(External	CSA_BUSINESS_UNIT_DIM_V
Tables	CSA_CLOUD_BILLING_UTIL_FACT_V
	CSA_CLOUD_INF_UTILIZATION_FACT_V
	CSA_COMPONENT_DIM_V
	CSA_CONSUMER_DIM_V
	CSA_Demo
	CSA_GLOBAL_MAP_DIM_V
	CSA_LOCATION_DIM_V
	CSA_Map_Demo
	CSA_NODE_DIM_V
	CSA_OPTION_PROPERTY_DIM_V
	CSA_PERIOD_DIM_V
	CSA_RESOURCE_PROVIDER_DIM_V

UI Element	Description
	CSA_PERSON_DIM_V
	CSA_SERVICE_CATEGORY_DIM_V
	CSA_SERVICE_INSTANCE_DIM_V
	CSA_SERVICE_OFFERING_DIM_V
	CSA_SERVICE_PROVIDER_BILLING_FACT_V
	CSA_SUBSCRIPTION_DIM_V
	CSA_REQUEST_OPTION_DIM_V
	CSA_SERVICE_REQUEST_DIM_V
	CSA_SHOWBACK_DETAIL_FACT_V
	CSA_US_MAP_DIM_V

Integration with SA

This section describes the integration, contexts, KPIs, Metrics, and reports, if any, associated with the integration with the Server Automation data source.

Server Automation (SA) enables you to govern the full spectrum of your software management requirements. With SA policy-based software management you can automate software installation and application configuration, and ensure that managed servers are compliant with software policies.

Note: Information about the ALT data source and more general content issues are detailed in the *Content Reference Guide*.

The purpose of the integration of SA as a data source is to bring quality management information into the Data Warehouse.

To access:

Select ADMIN > > Data Management > Connect Data Source then click Add data source and select SA to activate the integration processes for the SA data source.

Learn More	Tasks	UI Description	Reference



Content Packs and their functionality

To learn about Content Packs and their functionality, see Connect the Data Source in the *Administrator Guide*.

Important Information

- The SA Content Pack supports multiple instances.
- All fields are case-sensitive.



This section includes:

Activate the Integration

1. Prerequisite:

- Make sure that the Server Automation Platform is ready for use, meaning a set of APIs and a runtime environment that facilitate the integration and extension of SA.
- Check the Support Matrix for supported versions.
- 2. Select ADMIN > Data Management > Connect Data Source then click Add data source.
- 3. The Add Data Source page opens. Select the **SA** data source type.
- 4. Select or enter the configuration parameters.
- 5. Click **Next** to proceed to the validation page.



SA Activation Page

Data Source Wizard			Help \times
SA (Server Automation)		
*Instance name :			
SA Version :	9.00]~	
Time Zone :	Asia/Jerusalem]~	
Data Source Type :	SA]~	
*Username :	< <enter username="">></enter>		
*Password :			
*Hostname/IP Address : *Port :	<< <i>Enter hostname or IP addre.</i> 443	55>>	
Initial Load Period (months)	: 6]~	- 1
	<u></u>		
	Back	Next Cance	el l

Mandatory fields are marked with a red asterisk.

User interface elements are described below:

UI Element	Description
Instance name	Enter a name for the data source instance you are activating.

UI Element	Description				
SA Version	Select the relevant SA version. For details, see the Support Matrix.				
Time Zone	Select the time zone for the data source.				
Data Source Type	Oracle This parameter is read only.				
User	Enter your username used to log on to the SA database.				
Password	Enter your password used to log on to the SA database.				
Hostname/IP Address	The remote server on which the SA database resides.				
Port	Enter the port in the SA server which waits for connections from the SDK Client side. By default, the port number is 443. Enter the port of the SA DB. By default, the port number is 1521.				
SID	Enter the unique name of the database.				
Service Name	Enter the alias used when connecting.				
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.				



SA-Related KPIs and Metrics

For details about the KPIs and Metrics related to the integration with SA, see KPIs and Metrics in the *Content Acceleration Packs Guide*.

SA_Demo and SA Content Acceleration Packs

The purpose of the SA Content Acceleration Pack (CAP) is to provide a set of items (Dashboard pages, Scorecards, Contexts, KPIs, Metrics, and more) that automatically gathers information from across your enterprise to build key performance indicators (KPIs) related to SM-related issues with OOTB data from Data Warehouse. The CAP includes the Server Automation Perspectives. The CAP provides a 360 degree Server Automation view.

To access:

Click **Admin > Data Management > Activate CAP**. You can then select the relevant CAP and activate it.

If the CAP you want to activate is not the demo CAP, you must make sure you have installed the relevant Content Pack, connected the relevant data source, optionally configured the consolidations, and run the ETL to see the relevant data in the CAP Dashboard pages.





What are Content Acceleration Packs (CAPs)

Content Acceleration Packs (CAPs) are packages that include Dashboard pages that display Scorecards and components, KPIs, Metrics, Contexts (universes), data (from .CSV files or from data sources), and documentation for the CAP. You can import them, export them, activate, or deactivate them, or you can create your own.

CAPs describe typical stories that show how the correct implementation of Business Analytics drives Performance Improvement and Cost Reduction for the IT organization.

CAPs demonstrate Business Analytics capabilities, and helps you add basic elements that can be used to customize your Dashboard.

The SA CAP includes data from the Server Automation data source.

Content Pack 0004 for BA 10.00 Documentation_Additions

Pages

SA-Compliance Dashboard

SA-Compliance Dashboard ×				Selec	tPage ~ O 🕅 🔤 🖒 🛱 🖸 ⊕ 🖤
KPIList	▼ 1i 0 < ×	Historical View	▼ 1i 0 < ×	Forecast	* 11 ∅ < ×
		Filter by Percentage of Compliant Nodes (KPI List)	×	Filter by Percentage of Compliant Nodes (KPI List)	×
Frequency of Audit Policy Checks = 2.07407# PV2015/10(0ct)	o -	Percentage of Compliant Nodes =		Percentage of Compliant Nodes	
Mean Time to Recover from Non-Compliance (Minutes) = O Minutes FY2015/10(0ct)	o -				
Percentage of Compliant Nodes = 0% PV2015/10(0ct)	• -				
Percentage of Managed Nodes ≡ 86.6667% FY2015/10(Dct)	Δ -				
		0 • • • • •	10/31/2015	0 • 12/31/2015	02/29/2016
Compliance Node Results	 Ti ∅ ≪ × 	Number of Compliance Jobs		Number of Nodes	
Compliance Node Res COMPLIANCE_NODE COMPL	i↓ ®⊻	Number of Complian JOB JOB_STATUS	FT 🚯 🗸	Number of Nodes NODE_STATUS	Pt 🛛 🕅 🗸
FALED = C COMPLIANT = NON_COMPLIANT =		WARNING III FALURE III SUCCESS III		UUMAMACED ==	

SA-JOB Status Dashboard

SA-Job Status Dashboard ×					Select Page 🗸 🗘 🕫 陀 🕅 🛣 💭 🛞 🗐
KPI List	+ ĭi∣ 0 ≜ ×	Historical View	- 1i @ A X	Forecast	÷ 11 Θ ∧ ⊃
		Filler by Percentage of Soccession Houre 2005 (KF1CISI)		There by Percentage of Succession Rook Soos	AFTEDU /
Average Time to Run an Install Patch Job (Minutes) = O Minutes FY2015/10(0ct)	⊘ ↓ ^	Percentage of Successful Audit Jobs =	III <u>IE</u> , V	Percentage of Successful Audit Jobs	
Average Time to Run an Install Software Job (Minutes) = 0 Minutes Pr2015/10(0ct)	• •	100		100	
Percentage of Successful Audit Jobs = 20% Pr2015/10(0ct)	0 1				
Percentage of Successful Install Patch Jobs = 100% PY2015/10(Dct)	O †		\land		
Percentage of Successful Install Software Jobs ≡ 100% /Y2015/10(0c0	0 t	0 ••••		0	
Decembras of Successful Demodistion John =	*	11/30/2014	10/31/2015	12/31/2015	02/29/201
Average Time to Run Remediate Job		~ 1i @ ∧ ×	Percentage of successful Remediate Jobs		Yi ⊕ ∧ 2
Average Time to Run POLICY POLICY_CATEGORY ~		티 = 레 ~	Percentage of Succes POLICY POLICY_CATE	GORY ~	PT III (al v
SOFTWARE POLICY 20			SOFTWARE POLICY =		
PATCH POLICY (Minutes) 16			PATCH POLICY = 80%		
E AUDIT POLICY (Minutes) E 12					
8 4			40%		
0			0%		
FY2014/11(Nov) FY2015/02(Fe	b) FY2015/04(Apr)	FY2015/06(Jun) FY2015/08(Aug) FY2015/10(Oct)	FY2014/110	ov) FY2015/02(Feb) FY2015/04(J	lpr) FY2015/06(Jun) FY2015/08(Aug) FY2015/10(Oct)



SA-Server Automation Overview



This section includes:

Upload and manage the Content Acceleration Pack	160
View the CAP-related Dashboard pages	. 160
View the Scorecard Structure and KPI and Metric Breakdowns in the Studio	. 161
User Story	. 161
SA_Demo and SA CAPs	. 162

Upload and manage the Content Acceleration Pack

For details, see Content Acceleration Packs (CAPs).

View the CAP-related Dashboard pages

- 1. In the Business Analytics application, close all the tabs. The Dashboard is displayed.
- 2. Click the tab corresponding to the relevant CAP page (for details, see "Pages" on the previous page) in the Dashboard. If it is not displayed, click the **Page Gallery** button in the Dashboard toolbar, double-click the relevant page icon and close the Page Gallery dialog box.

View the Scorecard Structure and KPI and Metric Breakdowns in the Studio

- 1. Make sure the CAP is activated.
- 2. In the Business Analytics application, click **Studio**.
- 3. Expand the relevant Scorecards to view the Scorecards, Perspectives, Objectives, KPIs, KPI Breakdowns structure.

User Story

- 1. Scott is the IT Security and Compliance Analyst of ABC Inc. IT Security organization.
- 2. One of his responsibilities is to ensure that all the managed nodes are compliant.
- 3. Scott logs on the ITBA application and opens the Job Status page in the Dashboard to make sure that all server automation jobs have completed successfully in the last period. He sees that the status of all job-related KPIs is green.
- Scott then switches to the Compliance Dashboard and looks at the Percentage of Successful Install Patch Jobs KPI to see if it meets the target. He finds out that the latest KPI value is orange.
- 5. The Historical View shows the poor weekly performance of the KPI for the past few days. In addition, based on the current results, the Forecast is a continuous decline for the next week and in the future.
- Drilling into the details, Scott then looks at the Compliance Node Results Pie Chart, and understands how many servers are not compliant. He also notices that there are still a couple of nodes that are not compliant causing the red status of the KPI.
- 7. He then clicks on **Non-compliant** in the legend to open the KPI EXPLORER to see the data set that lists all the servers that are not compliant.
- 8. Scott decides to setup a meeting with Chris who is the Compliance Manager of the IT organization responsible for enforcing the IT compliance policy. They come up with a plan to return the node compliance status back to normal for all managed nodes.



SA_Demo and SA CAPs



				56			
* n View by : All		~		Open documentation Deactivate			
₩ ALM	e	Û		The purpose of the SA Content Acceleration Pack (CAP) is to Scorecards, Contexts, KPIs, Metrics, and more) that automat	rovide a set of items (Dashboard pages, cally gathers information from across your Buthers - HP		
💎 ALM_Demo	0	Û		enterprise to build key performance indicators (KPIs) related	to SM-related issues with OOTB data from Data		
CSA_Demo	0	Û		Content	DA VEISION: 10.00		
PPM_Demo	U U	Û					
📦 SA	U	Û		✓ Pages	KPIS and Metrics		
🗇 SA_Demo	e	前		SA-Compliance Dashboard	Average Time to Run a Remediation Job		
SM Demo	0			SA-Job Status Dashboard	Average Time to Run an Audit Job		
VPAppe Domo	4	10 10		SA-Server Automation Overview	Average Time to Run an Install Patch Job		
Ф урарьто			1		Average Time to Run an Install Software Job		
VPOps_Demo	9			 Scorecards 	Generative to Recover from Non-Compliance		
				Server Automation	Percentage of Compliant Nodes		
				- · · ·	Percentage of Managed Nodes		
					Percentage of Successful Audit Jobs		
					Percentage of Successful Install Patch Jobs		
				 Business Contexts 	Percentage of Successful Install Software Jobs		
					 Percentage of Successful Remediation Jobs 		
				🔂 Type Name	└── Compliance Node Results		
				Z I Server Automation	∠ Number of Compliance Jobs		

User interface elements are described below (when relevant, unlabeled elements are shown in angle brackets):

UI Element	Description
Pages	See "Pages" on page 159.
Scorecards	Server Automation
Business Contexts	 Server Automation SA_Demo For details, see Reference: Contexts (Universes) in the <i>Content Reference Guide</i>.
KPIs and Metrics	Note: The Demo CAP includes KPIs with names followed by (Demo). The CAP includes the same KPIs with names that do not include (Demo). The KPIs are the same but have different names so that both the Demo CAP and the CAP can be activated at the same time.
	Average Time to Run a Remediation Job KPI
	The average time it takes to run a remediation job.
	Average Time to Run an Audit Job KPI
	The average time it takes to run an audit job.
	Average Time to Run an Install Patch Job KPI
	The average time it takes to run an install patch job.
	Average Time to Run an Install Software Job KPI
	The average time it takes to run an install software job.
	Frequency of Audit Policy Checks KPI
	Measures how frequently compliance checks are running during the measurement period.
	Mean Time to Recover from Non-Compliance KPI
	The length of time it takes and the service level to which a business process must be restored after a non-compliance in order to avoid unacceptable consequences associated with a break in business continuity.
	Percentage of Compliant Nodes KPI
	The number of compliant nodes relative to the total number of nodes.
	Percentage of Managed Nodes KPI
	The number of managed nodes relative to the total number of nodes.
	Percentage of Successful Audit Jobs KPI
	The number of successful audit jobs relative to the total number of audit jobs.
	Percentage of Successful Install Patch Jobs KPI

UI Element	Description					
	The number of successful patch jobs relative to the total number of patch jobs.					
	Percentage of Successful Install Software Jobs KPI					
	The number of successful software jobs relative to the total number of software jobs.					
	Percentage of Successful Remediation Jobs KPI					
	The number of successful remediation jobs relative to the total number of remediation jobs.					
	Metrics					
	Compliance Node Results Metric					
	The number of compliance results.					
	Number of Compliance Jobs Metric					
	The number of compliance jobs.					
	Number of Nodes Monitored by SA Metric					
	The number of nodes monitored by SA.					
Data (External Tables)	SA_Demo					

Integration with vPV

The integration with VPV (Virtual Performance View) as a data source enables accessing vCenter and HP Helion data.

The purpose of the integration of VPV as a data source is to bring this information into the Data Warehouse.

Virtual Performance Viewer (vPV) is a web-based analysis and visualization tool that analyzes performance trends of elements in virtualized environments. vPV gives you at-a-glance visibility across your virtual environment for real-time insights into performance, capacity, and health. This helps you to optimize your infrastructure and quickly solve virtualization and cloud performance issues. It enables virtualization monitoring by providing an overview of the environment, near-real-time and historical data analysis and triaging using an interactive dashboard. It also enables monitoring for cloud and hypervisor environments. HPE vPV provides performance monitoring, graphing, and reporting in a single interface.

The data extracted from vPV is correlated to the data available in the KPIs and reports available in the CSA CAP. For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.

To access:

Select ADMIN > Data Management > Connect Data Source then click Add data source and select VPV to activate the integration processes for the VPV data source.





Content Packs and their functionality

To learn about Content Packs and their functionality, see Connect the Data Source in the *Administrator Guide*.

Important Information

- The VPV Content Pack supports multiple instances.
- **DCS Integration:** An extractor using the Data Collection Service mechanism that extracts entities from the source and generates corresponding flat files. For details, see Data Collection Service

(DCS) in the Administrator Guide.

- All fields are case-sensitive.
- VPV must be activated with the CSA data source. If you activate VPV alone, only the cost fact information is displayed, without the ability to drill down further.

Note: When configuring VPV reports:

- VPV Custom reports are not supported, therefore it is recommended to select the Daily report option.
- Only cost reports are supported.
- When you generate a report in vCenter Chargeback Manager, you cannot select the following values:
 - Disk Read
 - Disk Write
 - Network Transmitted
 - Network Received

Although the combined disk read and write utilization data and the combined network transmitted and received utilization data can be fetched and included in the report, the split utilization data for disk read, disk write, network transmitted, and network received is unavailable.

When using both the AWS and VCM data sources. Both the AWS and the VCM data sources offer the same type of information. If you integrate with both data sources, the values provided by the relevant Metrics might combine. For example, the Number of Used Instances Metric calculates how many VMs users are using the hybrid cloud environment. Both of the AWS data source (100 VM subscriptions) and the VCM data source (300 VM subscriptions) include this information. If, for example, you work with AWS only, the Number of Used Instances Metric is 100. If you work with VCM only, the Number of Used Instances Metric is 300. If you work with both data source, the Number of Used Instances Metric is 400.

The cloud-related reports (Dashboard pages) provided in the CSA_CAP and CSA_Demo_CAP CAPs combine integrated data from the following data sources Cloud Service Automation (CSA), Amazon Web Services (AWS), Amazon Web Service CloudWatch (AWSCW)

For details, see CSA_Demo and CSA Content Acceleration Packs in the *Content Acceleration Packs Guide*.



This section includes:

Activate the Integration

- 1. Select ADMIN > Data Management > Connect Data Source then click Add data source.
- 2. The Add Data Source page opens. Select the VPV data source type.
- 3. Select or enter the configuration parameters.
- 4. Click **Next** to proceed to the validation page.

Change the default price of the vPV private cloud resources

To help you calculate the cost for vPV supported private cloud resources (CPU, Memory, Disk), ITBA has pre-configured their default prices.

To change the default price:

- 1. Log on to the ITBA server.
- Edit the last column in the PRICING_MODEL.csv located in \$HPBA_ Home/ContentPacks/vPV/EXTERNAL. The column provides the unit price.
- 3. Save.

The new pricing model will be valid in the next ETL run.



VPV Activation Page

The following is an example of the VPV Activation page for MS SQL server.

Data Source Wizard Help 🗙					
VPV (Virtualization Perform	ance Viewer)				
*Instance name :]			
VPV Version :	3.0 ~]			
Time Zone :	NA ~)			
Data Source Type :	VPV ~]			
*Username :	< <enter username="">></enter>				
*Password :					
*Hostname/IP Address :	< <enter address="" hostname="" ip="" or="">></enter>				
*Port :	8444				
Initial Load Period (months) :	1 ~				
	Back	Next Cancel			

User interface elements are described below:

For the SQL server:

If the VPV configuration is for a named instance connection, make sure to enter the named instance port.

UI Element	Description		
Instance name	Enter a name for the data source instance you are activating.		
VPV Version	Select the relevant VPV version. For details, see the Support Matrix.		
Time Zone	Time zone must be UTC.		
Data Source Type	VPV. This parameter is read only.		
vpvUsername	Enter your username used to log on to the VPV web application.		
vpvPassword	Enter your password used to log on to the VPV web application.		
Hostname/IP Address	Enter the hostname or IP address on which VPV is installed.		
Port	Port for VPV web application.		
Initial Load Period (months)	Select the number of months from which you want the initial data loaded.		



vPV-Related KPIs and Metrics

The KPIs and Metrics related to the integration with vPV are part of the integration with CSA. For details, see "CSA-Related KPIs and Metrics" on page 132.

CP0001 Enhancements and Their Documentation

Enhancements

The CSA Content Pack 0001 supports the following functionality:

- A new billing details report (Showback Details for Cloud Services) shows the option level cost and property level cost. For details, see "Billing Report Design Format – option and property level" on the next page.
- Customized CSA service designer for Amazon Web Service Resource Provider is supported. For details, see "Customized CSA Service Designer for Amazon Web Service Resource Provider is Supported" on the next page.

Documentation

Billing Report Design Format – option and property level

Billing Period 2015-08-12 to 2015-10-09 USD ALL Currency Organization Subcribed User ALL Suscription Name Sub1 **Total Billing Amount:** 2,798,657.3148 Date:2015-08-12 SubTotal for Date : 786,000 Org: Consumer SubTotal for Org : 786,000 Person: consumer SubTotal for Person : 786,000 Subscription: Sub1 SubTotal for Subscription : 262,000 Initial/Recurring Price Property Duration Cost Option Recurring (1,000 USD Daily) [Non-Option] [Non-Property] 24 Hour 0 Min 0 Sec 1,000 Recurring (2,000 USD Daily) Hardware-display:High-display [Non-Property] 24 Hour 0 Min 0 Sec 2.000 Hardware-display:High-display-CPU-display:8 [Non-Property] Recurring (13,000 USD Daily) 24 Hour 0 Min 0 Sec 13,000 Hardware-display:High-display-DiskVolumn-display:1T Recurring (15,000 USD Daily) [Non-Property] 24 Hour 0 Min 0 Sec 15,000 Hardware-display:High-display-Network-display:Internet Recurring (17,000 USD Daily) [Non-Property] 24 Hour 0 Min 0 Sec 17,000 Hardware-display:High-display-Network-display:Internet-Width-display:4M Recurring (18,000 USD Daily) [Non-Property] 24 Hour 0 Min 0 Sec 18.000 Recurring (53,000 USD Daily) Setup:Day [Non-Property] 24 Hour 0 Min 0 Sec 53,000 Recurring (51,000 USD Daily) 51,000 Software:ITBA 10.0 [Non-Property] 24 Hour 0 Min 0 Sec Recurring (45,000 USD Daily) 24 Hour 0 Min 0 Sec 45,000 Software:Oracle [Non-Property] Recurring (47,000 USD Daily) Software:Oracle-Version:11i [Non-Property] 24 Hour 0 Min 0 Sec 47.000

Showback Detail For Cloud Services

The report displays the option and property cost for each selected user subscription. The period granularity of this report is daily. The user can search by specific date range, by user name, by organization name, or by subscription name.

Customized CSA Service Designer for Amazon Web Service Resource Provider is Supported

In CSA, you can define different service designs for Amazon Provider and those service designs can be different from user to user, and can be different from the CSA OOTB service design.

By default, the ETL logic hardcodes, the component type value, the component property value, and the values match only the CSA OOTB service design. If you do not use the CSA OOTB service designer, then you must change the ETL scripts manually.

In addition, when you add fields to component property list, and then display these field in the report, the data model does not include the new customized data.

-22	Amazon Network Interface NETWORK INTERFACE
Prope	rties -
🖬 av	ailabilityZone
US-	west-2a
🖬 de	viceIndex
📼 ins	stanceld
i-4	affSebd
🖬 int	refaceDescription
🖬 int	erfaceStatus
in-	use
🖬 ma	cAddress
02:	b1:b4:ee:98:d6
🖬 ne	tworkInterfaceId
eni	-1576a592
🖬 pri	vatelpAddress
17	2.31.41.245
🖬 res	sult
se se	curityGroupIds
sg-	64c3a901;default
🖬 su	bnetld
sut	onet-1e7cd47b

The CSA Content Pack provides a separate ETL logic to support customized CSA service designs

Below is the ETL logic that you can use to get the component value from the AWS service design. To easily customize the logic in the ETL scripts:

- a. The logic used to handle the AWS service design is extracted into a separate script instead of having all logic in one Server Side Includes (SSI) step. The file name of the script is AWSservice-design.
- b. Afterwards, you can modify the OOTB logic to support your own CSA service design, without impacting the others. Modify the **\$HPBA_**

HOME/ContentPacks/CSA/INBUILT/ETL/COMPONENT/CSA_COMPONENT_CONF_ DF.sql file by providing the SSI scripts folder and the file name for the SSI component in the CSTM_PROPERTY_<NN> fields.

```
case

when positionb('^|^'|[ext.propertylist,'^|^'|['INSTANCEID'|['^=^']) = 0 then null

else

ext.SERVICEINSTANCEID || ':' [|split_part(split_part(substrb('^|^'|]

ext.propertylist,positionb('^|^'|[ext.propertylist,'^|^'|['INSTANCEID'|['^=^']),'^|^',2),'^=^',2)

end as CSTM_PROPERTY_01 ,

case

when positionb('^|^'|[ext.propertylist,'^|^'|['IPaddress'|['^=^']) = 0 then null

else

ext.SERVICEINSTANCEID || ':' [|split_part(split_part(substrb('^|^'|])

end as CSTM_PROPERTY_02 ,
```

Additional Customized Fields in the Component Entity to Support Customized CSA Service Designs

Currently, you cannot add extra fields to the **Showback for Cloud Services** report as the current data model cannot accommodate customized fields.

To support the capability of adding customized fields to the **Showback for Cloud Services** report, the component was modified to include 10 additional customized fields. For details, see "CP0001 Enhancements and Their Documentation" on page 170.

• BILLING_FACT table details

To support option level pricing calculation, the existing BILLING_FACT table was modified. It stores the real cost based on the subscription details including the subscription request, request option, and option property. The granularity of BILLING_FACT table is at the levels of subscription, request, option, property, daily.

Field Name	Field Type	Null	Field Description
SUBSCRIPTION_ID	FK	N	Foreign Key to subscription
SERVICE_ REQUEST_ID	FK	Ν	Foreign Key to subscription request
REQUEST_ OPTION_ID	FK	Ν	Foreign Key to request option
OPTION_ PROPERTY_ID	FK	Ν	Foreign Key to property
SERVICE_ INSTANCE_ID	FK	Ν	Foreign Key to service instance
BILLING_START	DATE	Ν	Foreign Key to billing start period
BILLING_END	DATE	N	Foreign Key to billing end period
CURRENCY_LOC	VARCHAR (10)	Y	Source currency
CURRENCY_BASE	VARCHAR (10)	Y	DWH currency
AMOUNT_LOC	NUMERIC	Y	The cost stays with the source currency
AMOUNT_BASE	NUMERIC	Y	The cost is converted into DWH currency
RECURRING_FLAG	INTEGER	Y	The flag to identify if the cost is coming from recurring price or not

Field Name	Field Type	Null	Field Description
			1=Recurring price, 0=Initial price
BASE_FLAG	INTEGER	Y	The flag to identify if the cost is coming from base price or not
OPTION_FLAG	INTEGER	Y	The flag to identify if the cost is coming from option or not
PROPERTY_FLAG	INTEGER	Y	The flag to identify if the cost is coming from property price or not

• SERVICE_REQUEST_DIM table details

The user can subscribe to any on-shelf service offering in the CSA Consumer portal. When the user subscribes to a service, CSA creates the relevant request for the subscription, and if the user changes the subscription option from CPU 1 to CPU 2, another request is generated for the modified subscription.

The SERVICE_REQUEST_DIM table holds the subscription request information for the business analysis.

Field Name	Field Type	Null	Field Description
SERVICE_ REQUEST_ID	PK	Ν	PK of service request
NAME	VARCHAR (1000)	Y	Name of service request
DISPLAY_LABEL	VARCHAR (1000)	Y	Display name of service request
INITIAL_PRICE	NUMERIC	Y	Initial price of service request
RECURRING_ PRICE	NUMERIC	Y	Recurring price of service request
RECURRING_ PERIOD	VARCHAR (100)	Y	Recurring period of service request
CURRENCY	VARCHAR (10)	Y	Source currency
REQUEST_ START	DATE	Y	The create time of service request
REQUEST_END	DATE	Y	The time that the service request is end of lifecycle

Field Name	Field Type	Null	Field Description
REQUEST_ STATE	VARCHAR (100)	Y	The state of service request
REQUEST_ STATUS	VARCHAR (100)	Y	The status of service request
REQUEST_ ACTION	VARCHAR (100)	Y	The action of service request(mainly used to capture the user subscription cancellation action)
SUBSCRIPTION_ ID	FK	N	Foreign Key to subscription

• REQUEST_OPTION_DIM table details

The user can subscribe to any on-shelf service offering in the CSA Consumer portal. When subscribing to a service, the user can select the relevant option.

Below is the screenshot for CSA catalog ordering, **Application ABC (1.0.0)** is the subscription. It contains three options **Primary Storage**, **Backup Storage**, and **Application Scaling**. Each option can define its own initial price and recurring price.

-	Application ABC (1.0.0) Application Servers Publication May 11, 2015 9:58-42 PM	\$ 12,000.00 + \$ 200.00 daily Show More Details is 9 e	\$ 13,350.00 \$ 600.00 daily
P	rimary Storage		Add To Cart
	250 GB	\$ 100.00 and \$ 25.00 daily	Configuration
	500 GB	\$ 150.00 and \$ 50.00 daily	Primary Storage 250 GB
	0 800 GB	\$ 200.00 and \$ 100.00 daily	Backup Storage 1 B
10 B	ackup Storage Idon Set Description		Application Scaling OPU and Nemory Settings
	18	\$ 100.00 and \$ 200.00 daily	Memory (268)
	218	\$ 150.00 and \$ 400.00 daily	Operational Cost
(%) *	oplication Scaling		
	CPU and Memory Settings	\$ 0.00 and \$ 0.00 daily	
	Cpu		
	2 — \$ 50.00 • \$ 25.00 daily	•	
	Memory		
	268 - \$ 100.00 + \$ 50.00 daily	-	

The REQUEST_OPTION_DIM table is designed to store the option level price information for each user submitted service request.

Field Name	Field Type	Null	Field Description
REQUEST_OPTION_ID	PK	Ν	PK of Request Option
OPTIONSET_NAME	VARCHAR (1000)	Y	Name of Option Set
OPTIONSET_DISPLAY_ LABEL	VARCHAR (1000)	Y	Display name of Option Set
OPTION_NAME	VARCHAR (1000)	Y	Name of Option
OPTION_DISPLAY_LABEL	VARCHAR (1000)	Y	Display name of Option
OPTION_FULL_NAME	VARCHAR (2000)	Y	Name of Option Set + Name of Option
OPTION_FULL_DISPLAY_ LABEL	VARCHAR (2000)	Y	Display name of Option Set + Display name of Option
INITIAL_PRICE	NUMERIC	Y	Initial price of option
RECURRING_PRICE	NUMERIC	Y	Recurring price of option
RECURRING_PERIOD	VARCHAR (100)	Y	Recurring period of option
SERVICE_REQUEST_ID	FK	Ν	Foreign Key to Service request
PARENT_ID	FK	Ν	Parent Foreign Key to Request Option

• REQUEST_OPTION_DIM_HIER table details

The user can subscribe any on-shelf service offering in the CSA Consumer portal. When subscribing to a service, the user can select the relevant option. Each option can contain sub options, which can themselves include sub options.

The REQUEST_OPTION_DIM_HIER table stores the option name hierarchy information for each user submitted service request. The maximum supported number of levels in the hierarchy is 20.

Field Name	Field Type	Null	Field Description
MD_SLEVEL	INTEGER	Ν	The level of the option
MD_LEVEL_0_NAME	VARCHAR(2000)	Ν	The full name of top level option
MD_LEVEL_1_NAME	VARCHAR(2000)	Y	The full name of second level option

Field Name	Field Type	Null	Field Description
MD_LEVEL_2_NAME	VARCHAR(2000)	Y	The full name of third level option
	VARCHAR(2000)	Y	The full name of n level option
MD_LEVEL_19_NAME	VARCHAR(2000)	Y	The full name of twentieth level option
REQUEST_OPTION_ID	FK	Ν	Foreign Key to Request option

For example, if you have the following hierarchy: option1 > option1.1> option1.1.1, then the row is displayed as follows:

MD_ SLEVEL	MD_LEVEL_ 0_NAME	MD_LEVEL_ 1_NAME	MD_LEVEL_ 2_NAME	MD_LEVEL_ 319_NAME	REQUEST_ OPTION_ID
3	option1	option1.1	option1.1.1	Null	option1.1.1's PK
2	option1	option1.1	Null	Null	option1.1's PK
1	option1	Null	Null	Null	option1's PK

• OPTION_PROPERTY_DIM table details

The user can subscribe any on-shelf service offering in the CSA Consumer portal. When subscribing to a service, the user can select the relevant option. The option contains three properties (**250 GB**, **500 GB**, **800 GB**), and each property can define its own initial price and recurring price. The price supports fixed values, listed values, or multiple values.

Application ABC Application Server	(1.0.0) rs	\$ 12,000.00 + \$ 200.00 daily	\$13,350.00
Published on Hay 11, 2010	5 \$154-42 PM	Show More Details is Ge	\$ 600.00 daily
			Checkout
Primary Storage			Add To Cart
250 GB		\$ 100.00 and \$ 25.00 daily	Configuration
S00 GB		\$ 150.00 and \$ 50.00 daily	Primary Storage 250 GB
🔵 800 GB		\$ 200.00 and \$ 100.00 daily	Backup Storage
Backup Storage Cotion Set Description			Application Scaling CPU and Hemory Setting
. 18		\$ 100.00 and \$ 200.00 daily	Memory (258)
2TB		\$ 150.00 and \$ 400.00 daily	Operational Cost
Application Scaling			
CPU and Memory Setting	ngs	\$ 0.00 and \$ 0.00 daily	
Cpu			
2 \$ 50.00 + \$ 25	.00 daily 👻		
Memory			
268\$ 100.00 + 5	\$ 50.00 daily 👻		

The OPTION_PROPERTY_DIM table stores the property information for each user selected property value in its related service request.

Field Name	Field Type	Null	Field Description
OPTION_PROPERTY_ID	PK	Ν	PK of Option property
PROPERTY_NAME	VARCHAR (1000)	Y	The name of the property
PROPERTY_DISPLAY_ NAME	VARCHAR (1000)	Y	The display name of the property
PROPERTY_VALUE_ID	VARCHAR (1000)	Y	The value ID of the option property
PROPERTY_VALUE_TYPE	VARCHAR (1000)	Y	The value type of the property
PROPERTY_VALUE	VARCHAR (1000)	Y	The value of the property
PROPERTY_DISPLAY_ VALUE	VARCHAR (1000)	Y	The display value of the property

Field Name	Field Type	Null	Field Description
INITIAL_PRICE	NUMERIC	Y	The initial price of the property
INITIAL_PRICE_TYPE	VARCHAR(100)	Y	The initial price type of the property
RECURRING_PRICE	NUMERIC	Y	The recurring price of the property
RECURRING_PRICE_TYPE	VARCHAR(100)	Y	The recurring price type of the property
RECURRING_PERIOD	VARCHAR(100)	Y	The recurring period of the property
REQUEST_OPTION_ID	FK	N	Foreign Key to request option

COMPONENT_DIM table enhancements

The existing COMPONENT_DIM table was extended by adding more component properties to support customized service designs.

Field Name	Field Type	Null	Field Description
CSTM_PROPERTY_01	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_02	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_03	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_04	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_05	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_06	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_07	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_08	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_09	VARCHAR (1000)	Y	Customized component property field
CSTM_PROPERTY_10	VARCHAR (1000)	Y	Customized component property field

Field Name	Field Type	Null	Field Description
Other existing fields did not change			

CSA Component_Property entity

Field Name	Field Type	Null	Field Description
PROPERTY_NAME	VARCHAR(1000)	Y	The name of the component property.
PROPERTY_VALUE	VARCHAR(2000)	N	The value of the component property.
COMPONENT_ID	FK	Y	Foreign Key to COMPONENT.

CSA Target entity

Entity Name	Change Description	
BILLING_FACT	Refactor the existing logic of the cost aggregation to store option and property cost	
REQUEST_OPTION_ DIM_HIER	New entity add to support option and sub option info	
REQUEST_OPTION_DIM	New entity add to support option info	
OPTION_PROPERTY_ DIM	New entity add to support option property info	
SERVICE_REQUEST_ DIM	New entity add to support service request info	
COMPONENT_DIM	Refactor the existing logic of the cost aggregation to store option and property cost	
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Document Change Notes

The following table provides details of any changes introduced in this version of this document.