



Hewlett Packard
Enterprise

ITBA Virtual Appliance

Software Version: 2016.01

Linux[®] operating system

Installation Guide

Document Release Date: January 2016

Software Release Date: January 2016

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Contents

About the ITBA Virtual Appliance	5
Products	6
System Requirements	7
Configuration	8
Settings	9
Login Credentials	10
ITBA Virtual Appliance Installation Instructions	11
Deploy the ITBA Virtual Appliance	11
Update the BO License.	11
Update the search path of the Vertica logon user.	11
Reconfigure the ITBA Virtual Appliance	12
Log on to the ITBA Virtual Appliance Admin Portal	13
Log on to the BOE Admin Portal	14
Launch an ITBA Virtual Appliance Page with CSA Sample Data	15
Integrate the ITBA Virtual Appliance with CSA 4.x Instance and Generate KPIs Using Live Data	21
Configure CSA SSL Certificate	21
Create Data Source for CSA 4.x	22
Create Data Source for Amazon EC2 (Optional)	24
Execute ETL process	32
Activate CSA Live CAP	33
Launch pages with CSA KPIs	33
Launch ITBA Virtual Appliance Pages from the CSA Management Console	35
Hide UNKNOWN and INVALID Columns	36
Troubleshooting	37
Unable to log on to BOE	37
CSA-Billing Statement is empty	38
Postgres service fails to start	38
License has expired	39
Appendix A: Start the Vertica Database on the ITBA Virtual Appliance	40
Appendix B: Start ITBA Virtual Appliance Services	42
Appendix C: CentOS and open-vmtool Licenses	42

Send Documentation Feedback43

About the ITBA Virtual Appliance

Managers need better insights into how their groups are performing and a way to convey the value they provide. Manual methods are too slow and lack governance so the open analytics platform HP IT Business Analytics behind the ITBA Virtual Appliance application provides the following:

- Best practice Dashboards, Scorecards, Objectives and Key Performance Indicators (KPIs) that can be tailored as needed.
- Automated data gathering through a comprehensive and growing library of integrations.
- A rapid start to providing management insights that avoids the overhead of typical BI solutions.
- Easy access by web or mobile with cascading Dashboards that meet the needs of different personas.
- Solves the hardest area of management reporting (IT) and expands to other performance management areas.

You can get related information at hpln.hpe.com/group/it-business-analytics.

Products

System	Version	Reference
HP IT Business Analytics	10.00	
Vertica	7.1.2-4	
Postgres	9.4.4	
SAP® BusinessObjects BI Platform	4.1SP2	
Content Package	ITBA10_00_ContentPacks_0001	
Hotfix	QCCR8B24043- Failed to extract data from postgres	https://patch-central.corp.hp.com/crypt-web/protected/viewContent.do?patchId=EXSC_00160&product=crypt%253Aexecutive_scorecard%253A&hasProdBreadcrumb=true

System Requirements

Server	Configuration	Minimum
ITBA Virtual Appliance Server	RAM	16 GB
	Free disk space	150 GB
	Required ports	ports: 10001 to 10010, 11020, 11021, 5432 HTTP default port: 2024. You can select non-default. HTTP and HTTPS ports during post install. HTTPS default port: 8443. You can select non-default. HTTP and HTTPS ports during post-install.
Vertica DB server	RAM	16 GB
	Free disk space	150 GB
	Required ports	Database default port: 5433
SAP® BusinessObjects Enterprise server	RAM	16 GB
	Free disk space	150 GB
	Required ports	Port for the Central Management Console (CMC): 8080 Ports for the Central Management System (CMS): 6400 and 6410

Configuration

The ITBA Virtual Appliance configuration should use three servers as follows:



Settings

Category	Item	Value
Vertica DB settings	Vertica database port	5433
	Source Staging Scheme name	dws
	Target Staging Scheme name	dwst
	Target Scheme name	dwt
	Application scheme name	BA
	Result scheme name	dbo
	Extension scheme name	ext
ITBA Virtual Appliance settings	Installation Directory	/home/hpba/HPBA-10.00.615-618-master
	Time Zone	Asia/Shanghai
	Application http port	2024
	Application https port	8443
	Currency	USD - US Dollar
	Glassfish admin user	admin
	Glassfish admin password	Admin111
	First fiscal month of the year	January
	First day of week	MONDAY

Login Credentials

Vertica server OS	User name: root Password: Cl0ud@pp1iance
	User name: dbadmin Password: openview
BO server OS	User name: root Password: Cl0ud@pp1iance
	User name: boadmin Password: openview
ITBA Virtual Appliance server OS	User name: root Password: Cl0ud@pp1iance
	User name: hpba Password: hpba@pp1iance
ITBA Virtual Appliance application	User name: Administrator Password: Admin111
Vertica DB	User name: dbadmin Password: openview
Vertica DB name	DB name: itbavertica Password : openview
Postgres DB	DB name: xs_mng User name: xsadmin Password: openview
BO application	User name: Administrator Password: Admin111

ITBA Virtual Appliance Installation Instructions

This section provides the installation instructions for the ITBA Virtual Appliance as part of the Cloud Orchestration Suite.

Deploy the ITBA Virtual Appliance

After downloading the OVF file, import the OVF file into vCenter using the vSphere client. To create instances of ITBA Virtual Appliance, complete the following steps:

Note: You must repeat these steps on each one of the three VA machines.

1. Log on to the vSphere client as an administrator.
2. Click **File > Deploy OVF template**.
3. Browse to select the OVF file in the directory to which you extracted the distribution file.
4. Follow the instructions in the **Deploy OVF Template** wizard to complete the deployment.
5. Power on the ITBA Virtual Appliance virtual machine, after completion of the OVF file import.

Update the BO License.

1. Log on to the Central Management Console (CMC) using **http://<new BO server ip>8080/BOE/CMC/** with the user name: **Administrator** and the password: **Admin111**.
2. Log on to CMC as a user who has administrator rights.
3. Select **License Keys**.
4. Add the new BO license key:
D900S-TFRBM3M-710WP0G-2A200WM-JU

Update the search path of the Vertica logon user.

1. Log on to the Vertica server with the user name: **dbadmin** and the password: **openview**.
2. Run the following script:

```
cd /opt/vertica/bin.
```

```
./vsq1 -U dbadmin -d itbavertica Password: openview.
```

```
ALTER USER dbadmin search_path BA, ext, "$user", public, v_catalog, v_monitor, v_
internal;
```

Reconfigure the ITBA Virtual Appliance

1. Update the IP and FQDN for servers.

Logon to **itbaapp.lab.com** using user name **root** and password **CI0ud@pp1iance**.

- a. Open the folder using the following command:

```
cd /home/hpba/HPBA-10.00.615-618-master/Tools/autoconfig/
```

- b. Input and save the new IP and new FQDN for BOE server and Vertica server using the following command:

```
vim conf.sh
```

```
1. /home/mobaxterm x 2. itbaapp.lab.com x
export ITBA_Install_User=hpba
export BA_FQDN=itbaapp.lab.com
export BOE_FQDN=itbabo.lab.com
export BOE_IP=16.165.218.224
export Vertica_FQDN=itabavertica.lab.com
export Vertica_IP=16.165.218.209
```

- c. Run the following command:

```
./RemoteChange.sh
```

using the relevant passwords:

- For root: **CI0ud@pp1iance**
- For boadmin: **openview**

2. Update the BO web services URL.

Note: If FQDN was not changed, ignore this section.

Log on to CMC using **http://<new ip>8080/BOE/CMC/** with user name: **Administrator**, password: **Admin111**.

- a. Log on to Central Management Console (CMC) as a user who has administrator rights over Applications.
- b. Navigate to **Applications** in CMC.
- c. Double-click **Web Service** or right-click **Web Service** and select **Properties**.
- d. Update **Access URL**: if it needs to be changed as a result of a hostname change.
- e. Double-click **RESTful Web Service** or right-click **Web Service** and select **Properties**.
- f. Update **Access URL**: if it needs to be changed as a result of a hostname change.
- g. Go back to the **Applications** page in CMC and update the hostname for **Processing Settings** under **Central Management Console**.
- h. Reboot the BO virtual machine.

Note: Make sure BO services are started by logging on to **http://<new ip>8080/BOE/CMC/**.

3. Integrate the ITBA Virtual Appliance, BO, and Vertica servers.

Log on to **itbaapp.lab.com** with user name: **root** and password: **Cl0ud@pp1iance**.

- a. Open the relevant folder using the following command:

```
cd /home/hpba/HPBA-10.00.615-618-master/Tools/autoconfig/
```

- b. Run the following command:

```
./start.sh
```

Log on to the ITBA Virtual Appliance Admin Portal

1. Open the following URL:

https://itbaapp.lab.com:8443/ba

Note: You may need to add an entry (with the ITBA Virtual Appliance server IP Address and hostname) to the hosts file on your computer to resolve DNS issues.

For example: Add the following entry to your hosts file:

```
<ITBA_ipAddress> itbaapp.lab.com itbaapp
```

2. Log on to the ITBA Virtual Appliance Admin Portal using the following credentials:

User ID: **Administrator**

Password: **Admin111**

Note: Ignore the warning messages related to 'Java Plugin'. Allow all plugins to run on localhost and hpba.lab.com.

Log on to the BOE Admin Portal

1. Open the following URL:

<http://itbabo.lab.com:8080/BOE/CMC/>

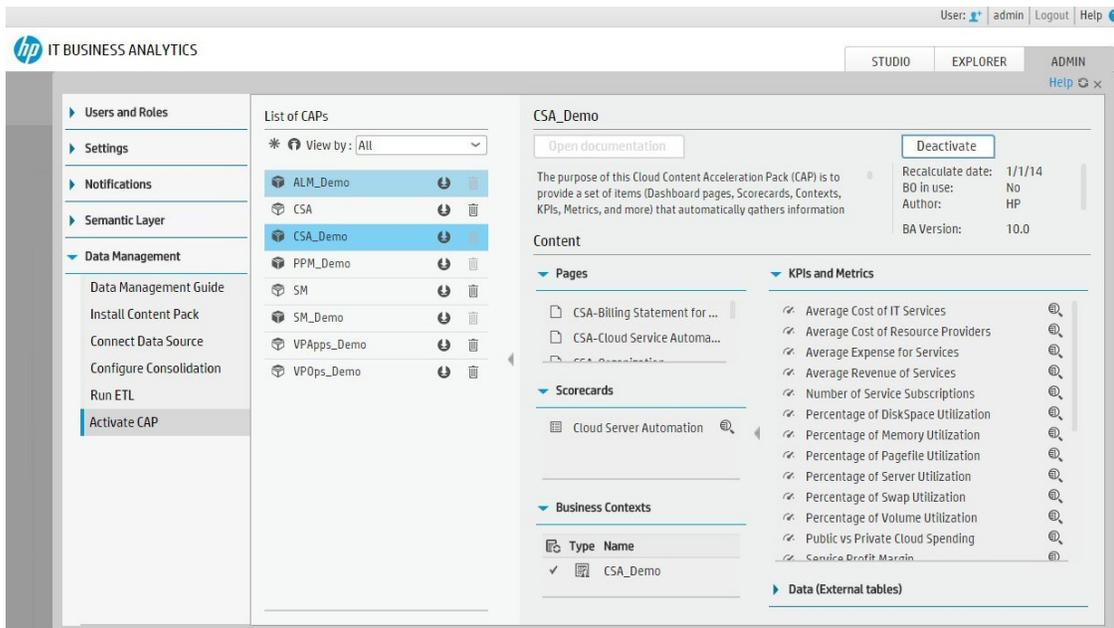
2. Log on to the BOE Admin Portal using the following credentials:

User ID: **Administrator**

Password: **Admin111**

Launch an ITBA Virtual Appliance Page with CSA Sample Data

1. Log on to the ITBA Virtual Appliance Admin portal. For details, see "[Log on to the ITBA Virtual Appliance Admin Portal](#)" on page 13.
2. Click **ADMIN > Data Management > Activate CAP**.

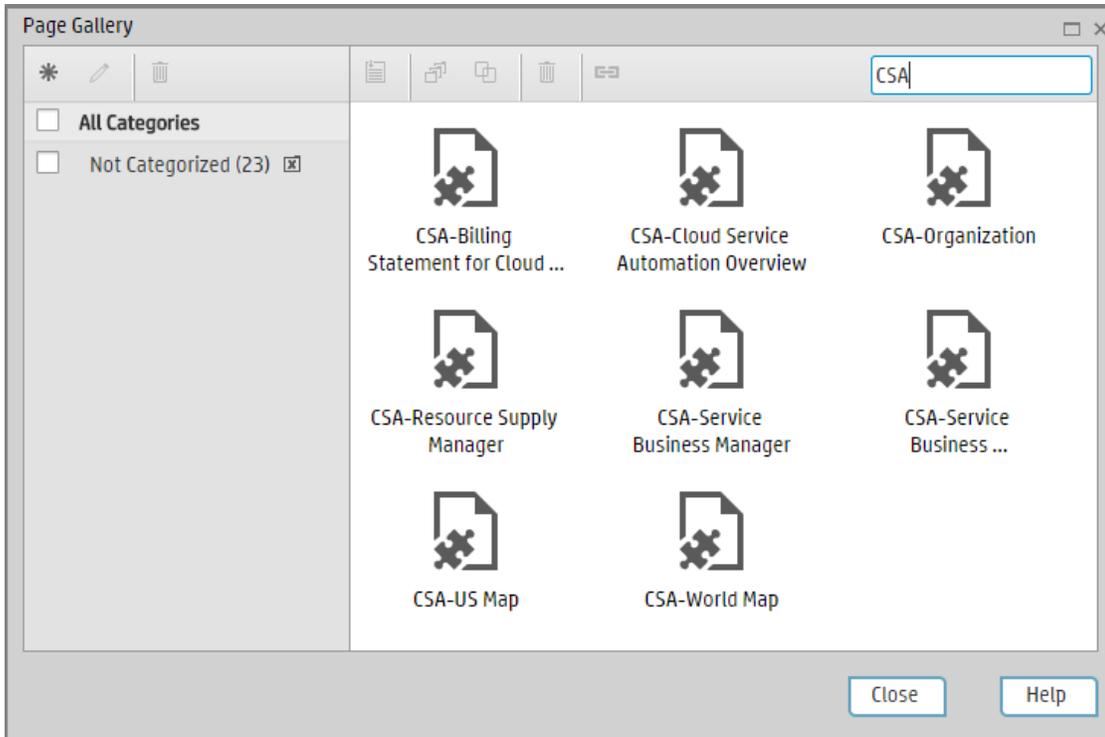


3. Select **CSA_Demo CAP** and click **Activate** to activate the Content Acceleration Pack.

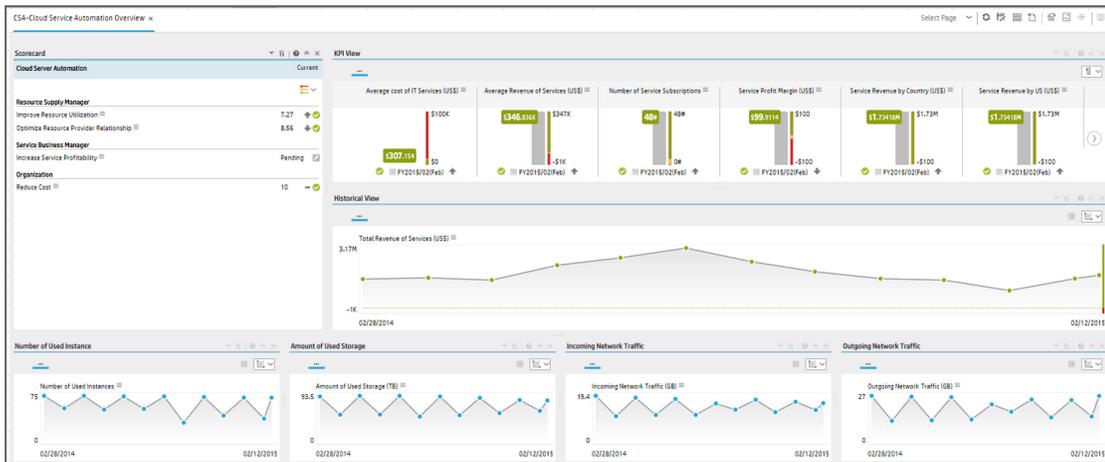
Note: Ignore the two previous steps if CSA_Demo is already activated.

4. Wait until a CAP activation successful message is displayed.
5. Close the ADMIN tab to open the Dashboard and click **Select page**.

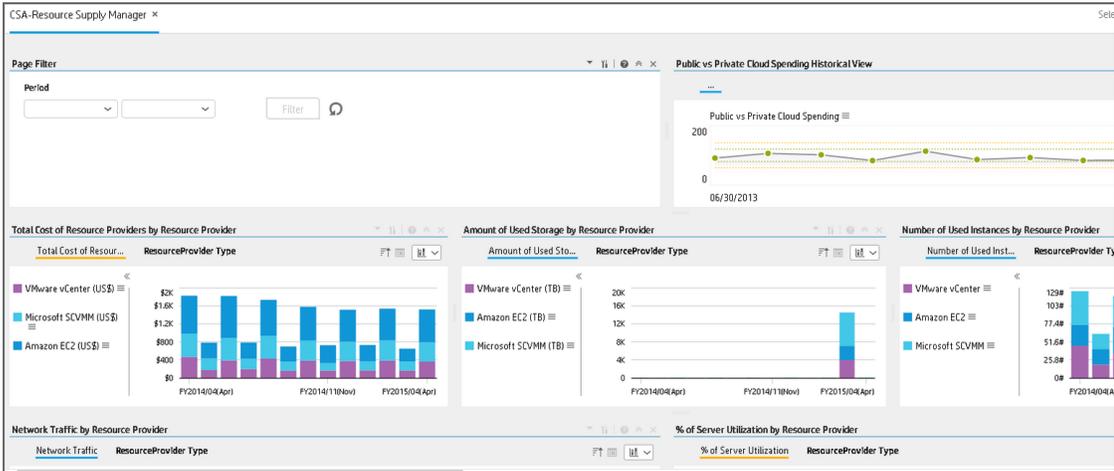
6. In the Page Gallery, select the **Not Categorized** category, and then double-click the relevant CSA related pages.



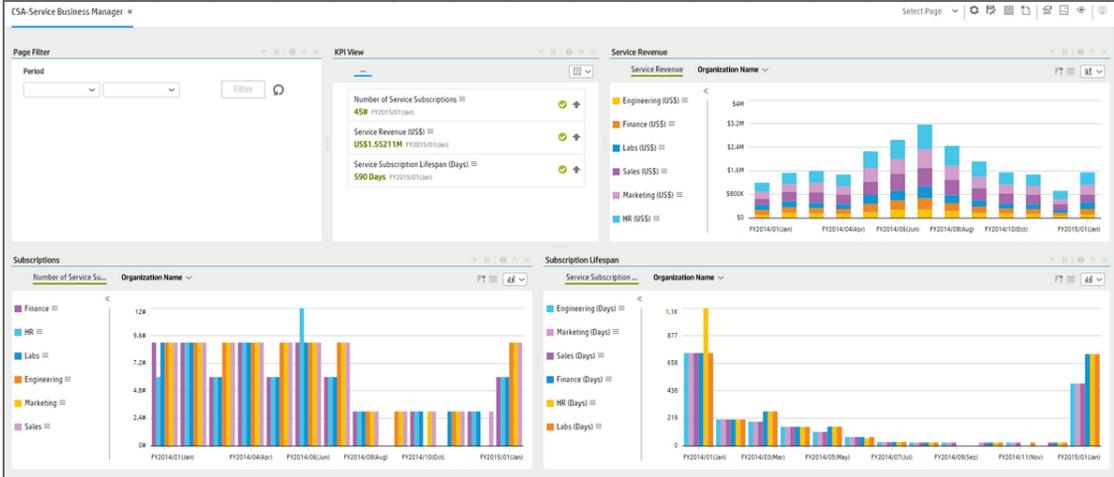
The CSA-Cloud Service Automation Overview Page:



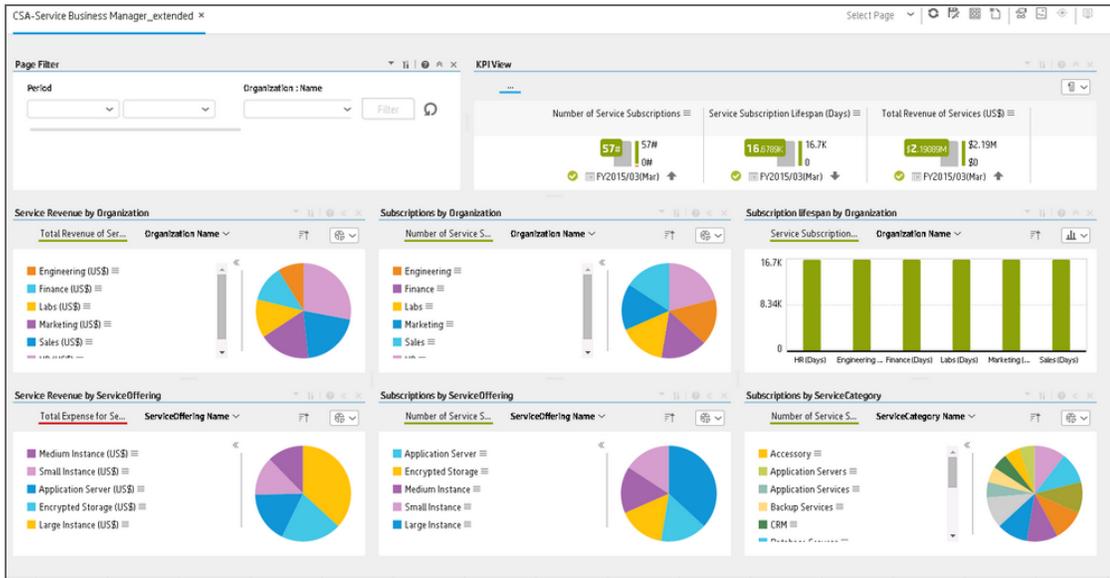
The CSA-Resource Supply Manager Page:



The CSA-Service Business Manager Page:



The CSA-Service Business Manager Extended Page:

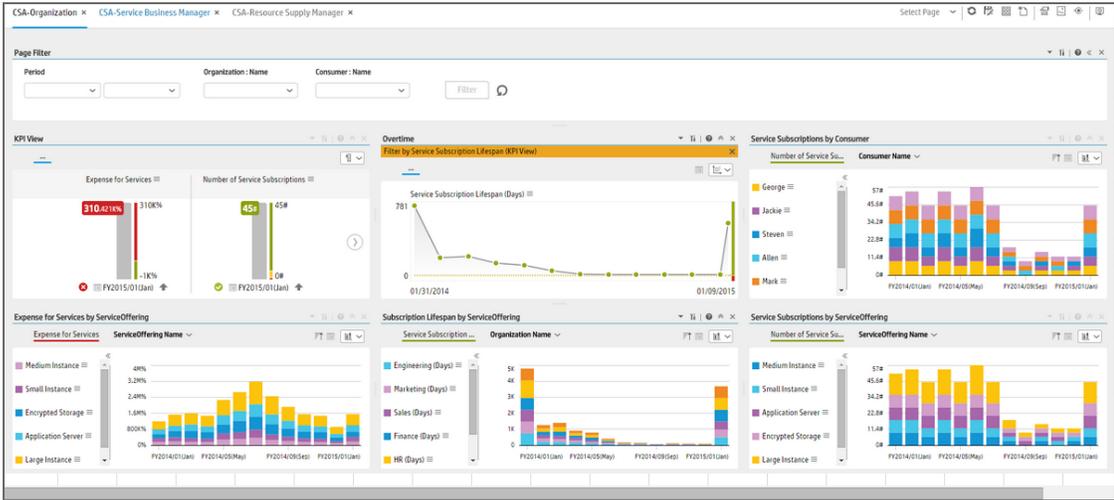


The Billing Statement for Cloud Services Page:

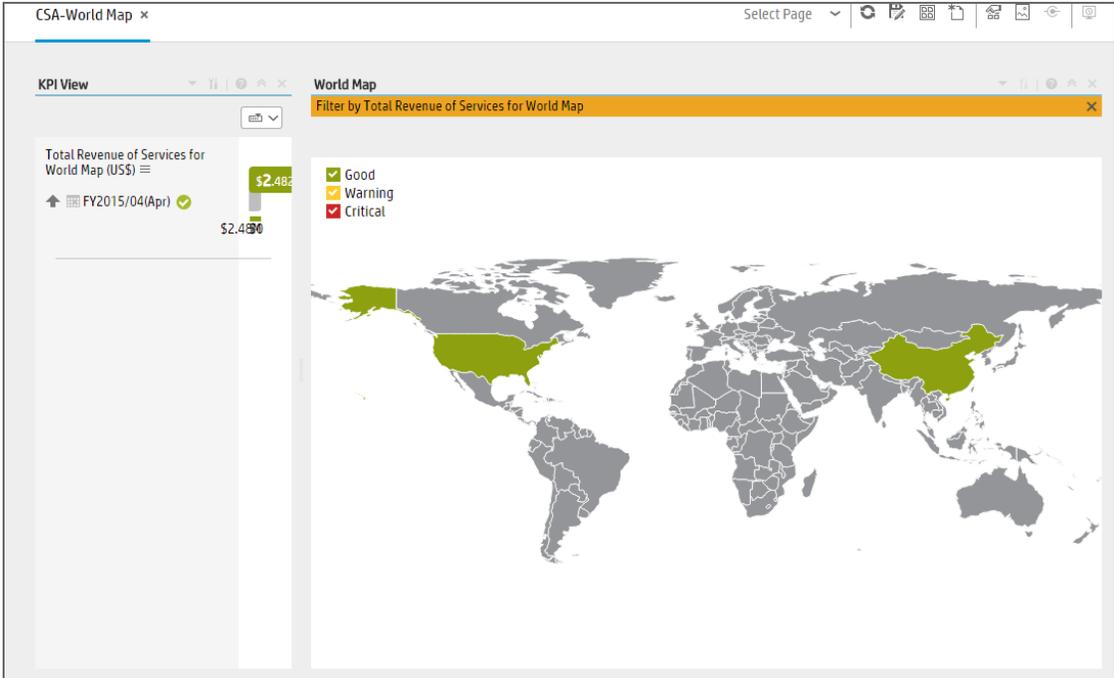
The screenshot shows the 'Showback for Cloud Services' page in the HP IT Business Analytics interface. The page title is 'Showback for Cloud Services' and the total billing amount is \$643,721.3. The table below details the charges for two periods: 2015-09 and 2015-10. The table columns are Organization, Subscription Name, Subscribed User Name, and Cost.

Organization	Subscription Name	Subscribed User Name	Cost
Consumer	Provision a server in MS Azure public cloud (1.0.0)	consumer	20.1644
Consumer	ITBA Azure Service offering (1.0.0)	consumer	0
Consumer	csa_azure_azure	consumer	0
Consumer	vm_from_138	consumer	0
Consumer	for_create_linux_vm	consumer	0
Consumer	LinuxVM	consumer	20.0006
Consumer	Ubuntu	consumer	20.0012
Subtotal for Organization:			60.1661
Subtotal for Month:			60.1661
Consumer	Provision a server in MS Azure public cloud (1.0.0)	consumer	0.2397
Consumer	Create Ubuntu_14	consumer	20.2998
Consumer		consumer	0.2182

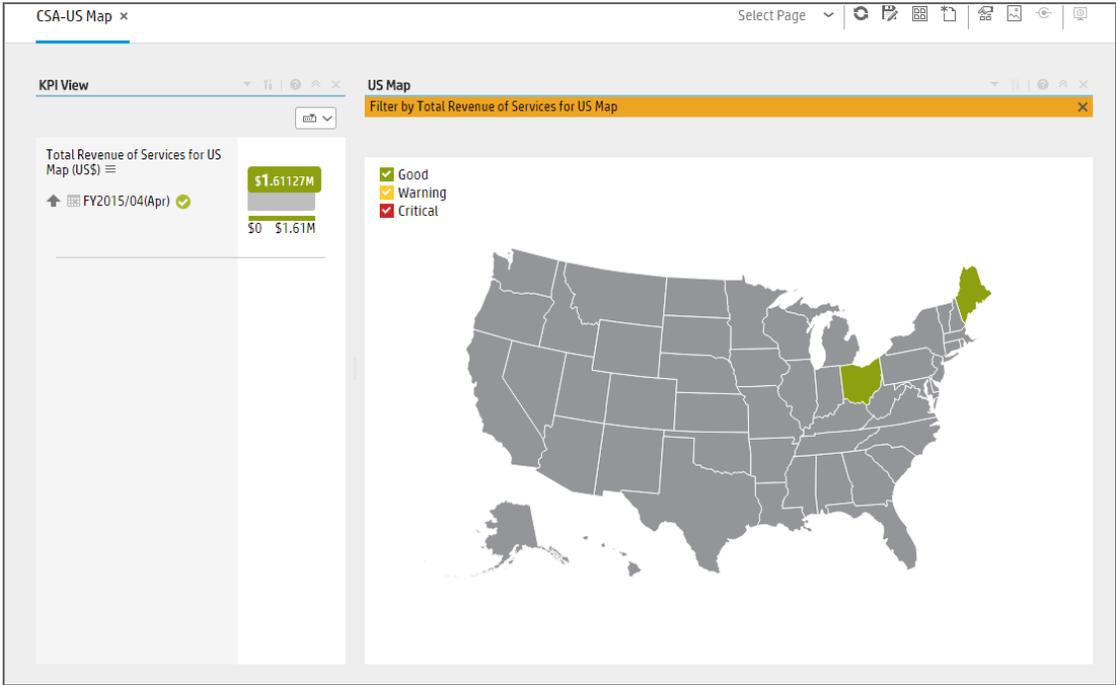
The CSA-Organization Page:



The CSA-World Map Page:



The CSA-US Map Page:



Integrate the ITBA Virtual Appliance with CSA 4.x Instance and Generate KPIs Using Live Data

Complete the following steps to integrate ITBA Virtual Appliance 2016.1 with CSA 4.x (with Amazon EC2 as resource provider).

Configure CSA SSL Certificate	21
Create Data Source for CSA 4.x	22
Create Data Source for Amazon EC2 (Optional)	24
Execute ETL process	32
Activate CSA Live CAP	33
Launch pages with CSA KPIs	33

Configure CSA SSL Certificate

To integrate a ITBA Virtual Appliance 2016.1 instance with a CSA4.x instance, complete the following steps:

1. Import the CSA SSL Certificate:

- a. Export the CSA SSL Certificate to a file.

On the CSA server, export the trusted SSL Certificate into the JDK key store using the **keytool.exe** tool provided by the JDK and run the following commands from the command prompt:

```
cd C:\Program Files\Hewlett-Packard\CSA\openjre\bin
```

```
keytool -export -alias csa -file "C:\csa-certificate.cer" -keystore "C:\Program Files\Hewlett-Packard\CSA\openjre\lib\security\cacerts" -storepass changeit
```

Note: You must change the CSA keystore directory path according to the CSA installation in your environment.

You must copy the exported CSA certificate to the ITBA Virtual Appliance before proceeding to the next step. Tools like WinSCP can be used to transfer the files from Windows to Linux.

- b. Reveal the CSA Certificate to the Data Warehouse:

Import the SSL Certificate trusted by the CSA server into the JDK keystore using the **keytool.exe** tool provided by the JDK as follows:

Log on to the ITBA Virtual Appliance as root and run the following commands

```
su hpba
```

```
cd $HPBA_HOME/jdk/jre/bin
```

```
keytool -importcert -alias <alias> -file <file> -keystore
```

```
../lib/security/cacerts -trustcacerts -storepass changeit
```

Replace <alias> and <file> with the relevant values.

Example: <alias> is csa and <file> is /tmp/csa-certificate.cer.

- c. Restart the ITBA Virtual Appliance service to activate the CSA Certificate by running the following command:

```
$HPBA_HOME/supervisor/bin/hpba-restart.sh
```

When the message **Do you wish to restart HPBA(yes/no)?** is displayed, select **Yes**, and then press the **Enter** key.

Create Data Source for CSA 4.x

1. Prerequisites:

- o Make sure that you have imported the CSA SSL Certificate (for details, see ["Configure CSA SSL Certificate" on the previous page](#)).
- o Make sure that you have few Active Subscriptions in CSA.

2. Create the CSA data source:

- a. Log on to the ITBA Virtual Appliance ADMIN portal. For details, see ["Log on to the ITBA Virtual Appliance Admin Portal" on page 13](#).
- b. Select **ADMIN > Data Management**.
- c. Click **Connect data source**.
- d. Click **Add data source**.
- e. The **Add Data Source** page opens. Select the **CSA** data source type.
- f. Select or enter the configuration parameters.

- g. Click **Next** to proceed to the validation page.

The following is an example of the CSA Activation page.

Data Source Wizard Help x

CSA (Cloud Service Automation)

*Instance name :

CSA Version :

Time Zone :

Data Source Type :

*Organizationname :

*Username :

*Password :

*Hostname/IP Address :

*Port :

Initial Load Period (months) :

Note:

- If the CSA configuration is for a named instance connection, make sure to enter the named instance port.
- Ignore CSA version in the Data Source Wizard. You can use 3.1/3.2/4.x to connect to HP CSA 4.x

Create Data Source for Amazon EC2 (Optional)

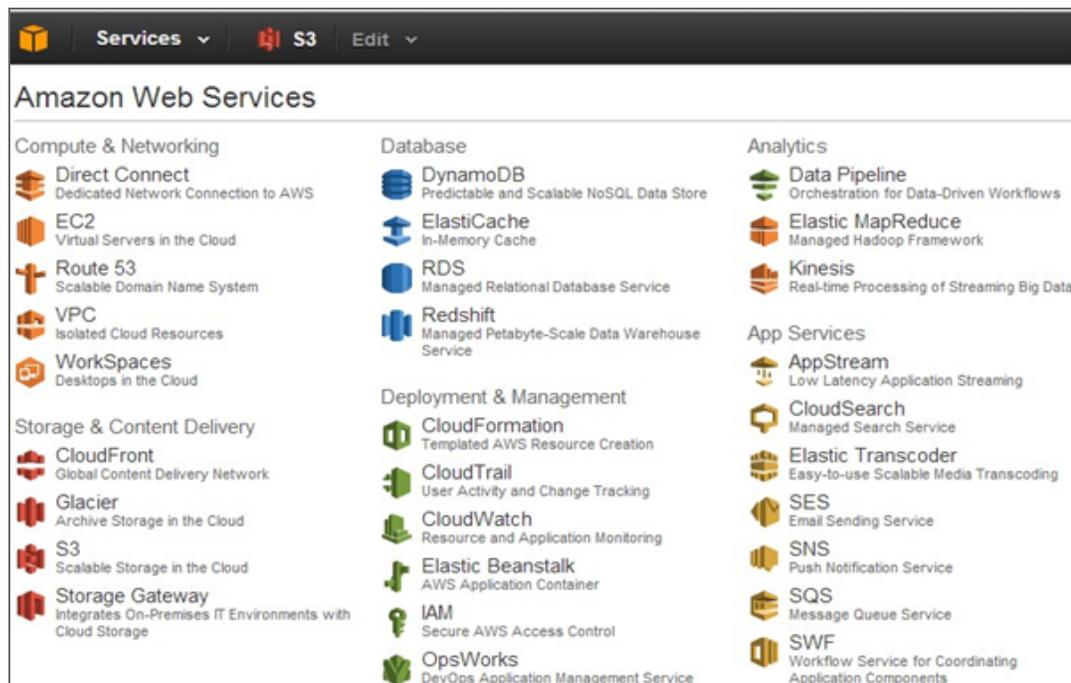
Prerequisite

Before you create the data source for Amazon EC2 you must create the relevant bucket in Amazon S3.

1. **Create a bucket in Amazon S3.**

Complete the following steps to create a bucket in Amazon S3:

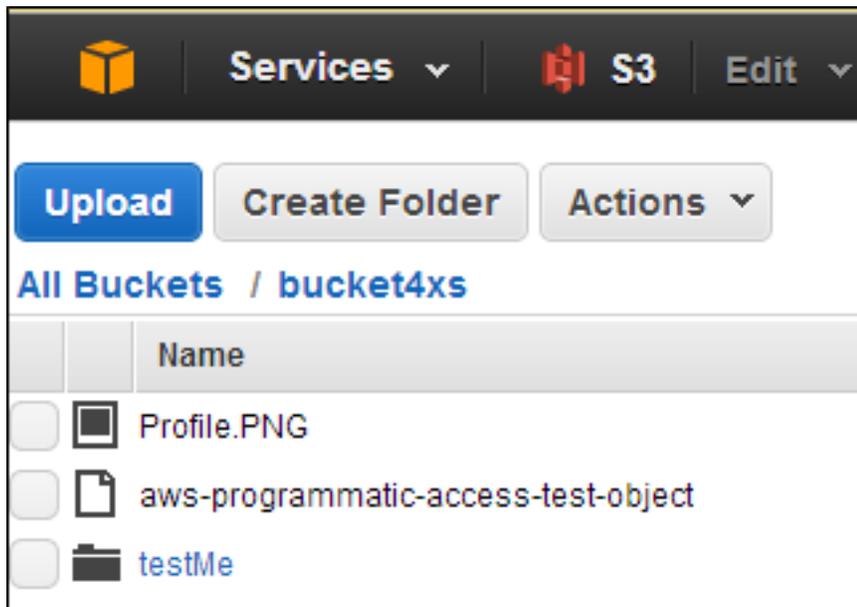
- a. Log on to Amazon console using a valid AWS account.
- b. Navigate to AWS Management console.



- c. Click **S3** under **Storage & Content Delivery**.

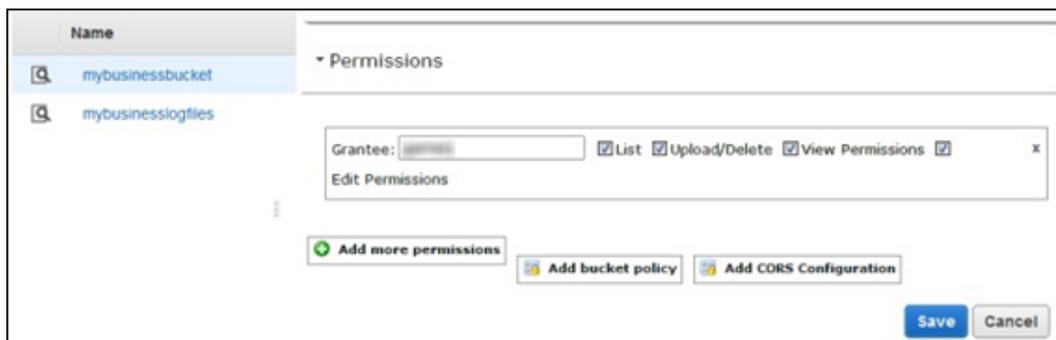
If buckets are not already created, create a new bucket.

- d. Click the bucket and click **Upload** to upload sample data file(s) to the bucket.

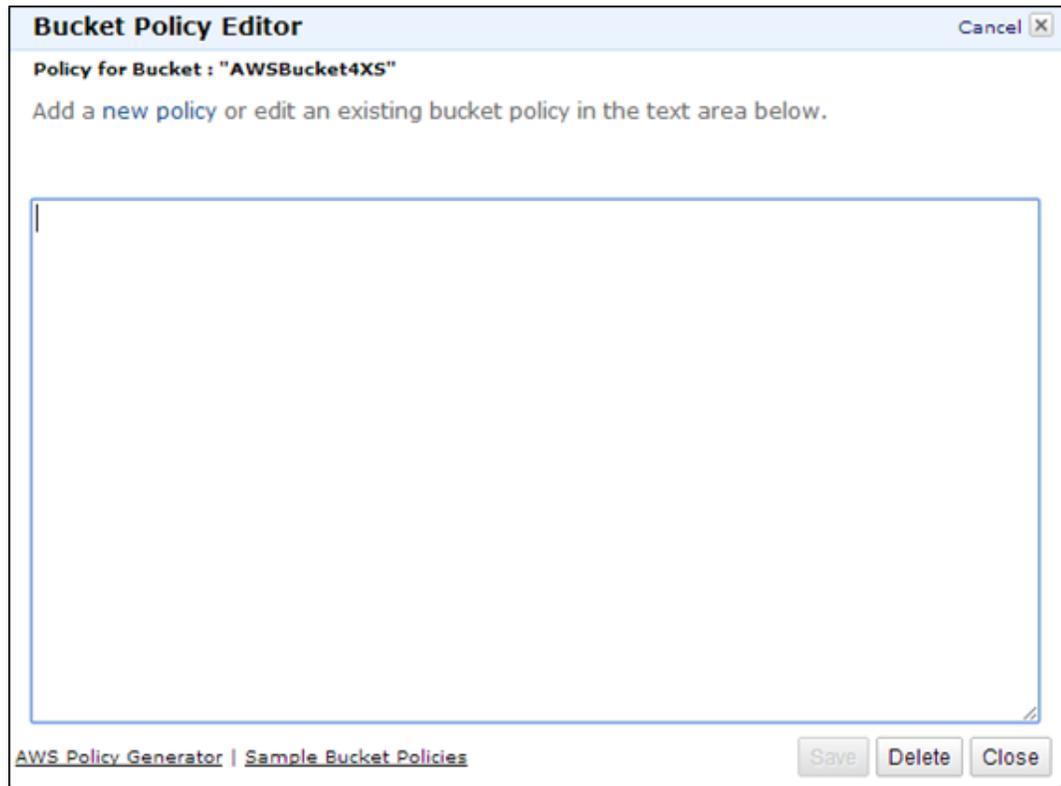


2. **Add a policy to the created bucket.**

- a. Log on to the AWS Management Console and open the Amazon S3 console.
- b. From the Buckets list, click the relevant bucket to view its properties.



- c. Click **Add bucket policy**.

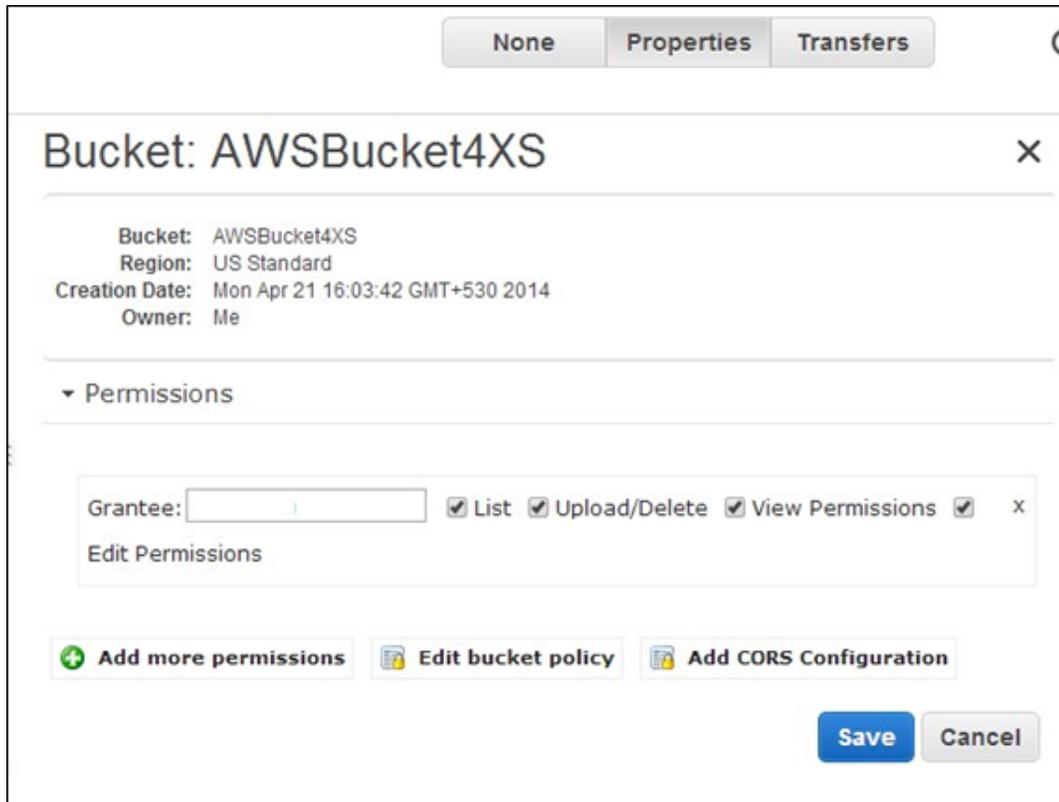


d. In the Bucket Policy Editor, copy or paste the text below.

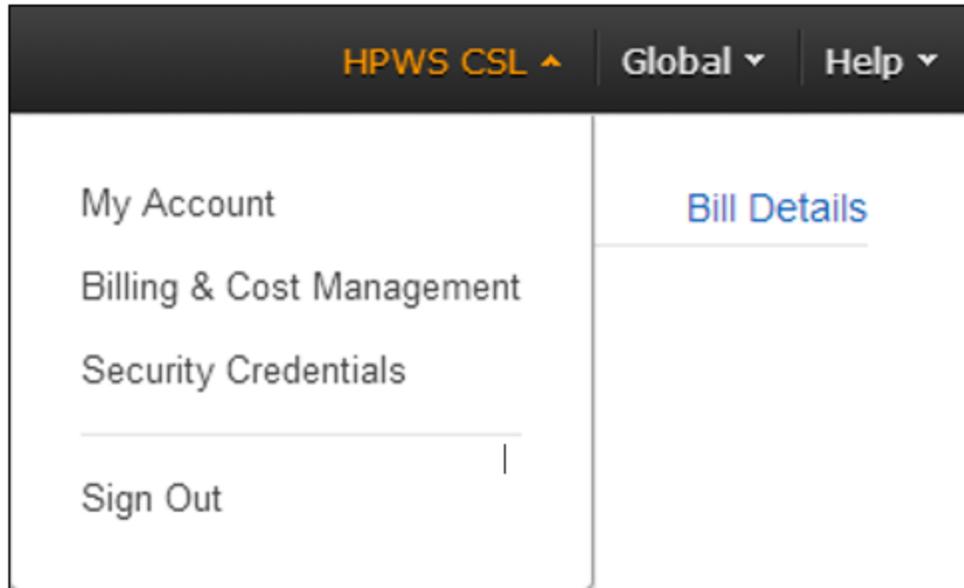
```
{
  "Id": "Policy_AWSBucket4XS", "Statement": [
    {
      "Sid": "Stmt_AWSBucket4XS01",
      "Effect": "Allow", "Principal": {
        "AWS": "*"
      },
      "Action": [
        "s3:GetBucketAcl", "s3:GetBucketPolicy"
      ],
      "Resource": "arn:aws:s3::: Your_Bucket_Name "
    },
    {
      "Sid": "Stmt_AWSBucket4XS02", "Effect": "Allow", "Principal": {
        "AWS": "*"
      },
      "Action": "s3:PutObject",
      "Resource": "arn:aws:s3::: Your_Bucket_Name /*"
    }
  ]
}
```

Note: Replace **Your_Bucket_Name** with the name of the bucket you have created and make sure there are no extra space around the bucket name in the policy file.

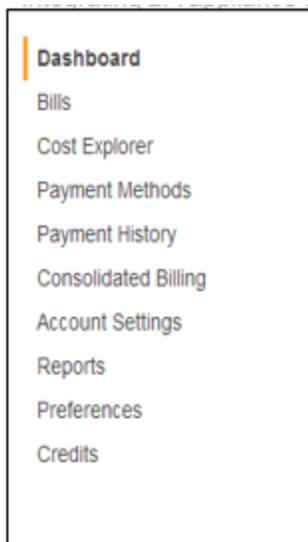
- e. Click **Save** to verify the policy content.
- f. Click **Save** to save the changes made to the bucket.



- 3. Activate the billing reports services for the S3 bucket.
 - a. Click your account on the top-right corner of the AWS Console, and then click **Billing & Cost Management**.



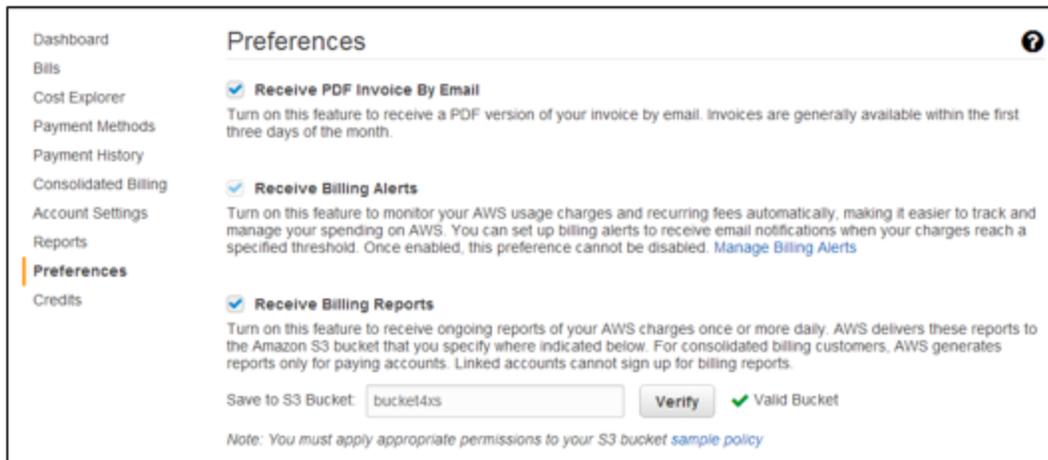
b. Select **Preferences** in the left side pane.



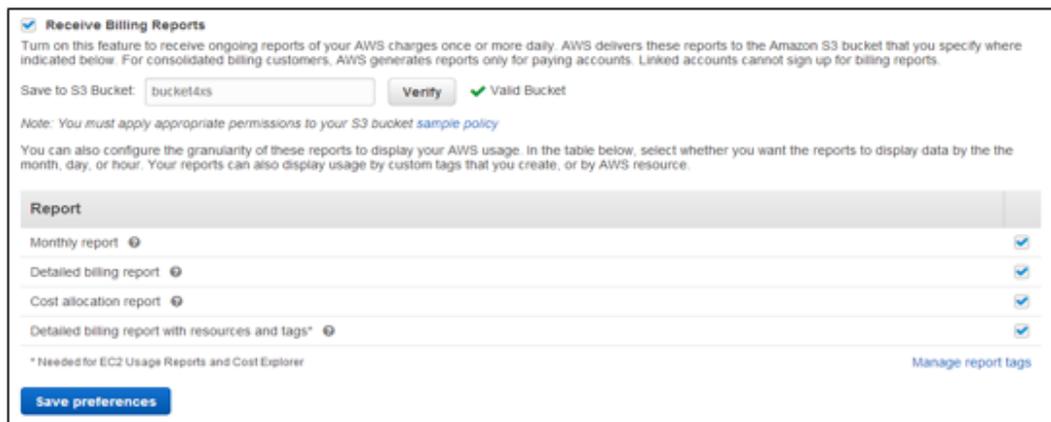
c. Check **Receive Billing Reports** for the bucket that you have created in Amazon S3.

d. Provide the name of the bucket in the **Save to S3 Bucket** box.

- e. Click **Verify** and ensure that it is validated.



- f. Enable reports by selecting the check boxes in the **Report** section.



- g. Click **Save preferences**.

Note: AWS may take up to 24 hours to generate report files with cost and billing information in the S3 bucket that you have created/configured in above steps.

- i. After generating the reports, you can see the .CSV files and other files under the S3 bucket that you have created.

Create the AWS Data Source

Complete the following steps to the create data source for AWS.

1. Log on to BA Admin portal. For details, see For details, see ["Log on to the ITBA Virtual Appliance Admin Portal"](#) on page 13.

Note: Install the AWS CAP before proceeding to the next step. To do so, click **Admin > Data Management > Activate CAP** and activate the AWS CAP.

2. Select **Admin > Data Management > 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.

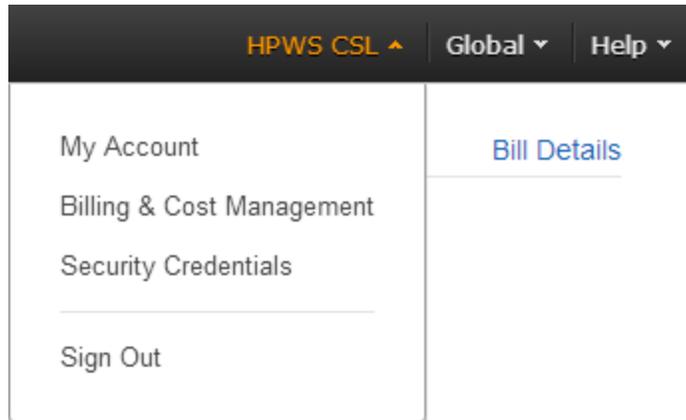
The following is an example of AWS activation page.

Note:

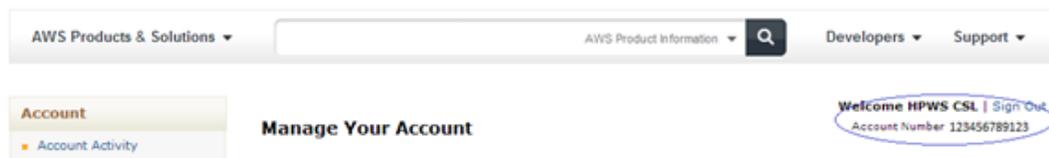
- For the property named 'Bucket', provide the name of the bucket that you have created in the previous section.
- For property named 'Account Id', provide the 12 digit AWS account id.

6. You can find the account ID for your AWS account using the following steps:

- a. Log on to Amazon console using a valid AWS account.
- b. Click on your account on top-right corner of the AWS Console. Select **My Account** from the options.



- c. You can find your account Id.



- d. Remove - from your account ID while configuring the EC2 data source.

Execute ETL process

After adding and activating the data sources, you must run the ETL to pull the data from the CSA and the EC2 sources, using the following steps:

1. In the BA application, click **Admin > Data Management > Run ETL**.
2. Click **Play** for the relevant data sources to start their ETL process. Completing the running of the ETL processes might take some time.

An example for successful completion of ETL for CSA and AWS data sources is shown below.

The screenshot shows the 'Content Flow Management' section of a web application. On the left is a navigation menu with items like 'Users and Roles', 'Notifications', 'Semantic Layer', 'Settings', and 'Data Management'. The 'Data Management' menu is expanded, showing options like 'Data Management Guide', 'Install Content Pack', 'Connect Data Source', 'Configure Consolidation', 'Run ETL', and 'Activate CAP'. The main area displays a table of job streams.

Instance Name	Content Pack Name	Last End Time	Last Status	Next Start Time	Scheduler	Set Calculation		
EC2	AWS	2015-06-26 12:29:59 ...	Complete	Never	Add Scheduler	Set	▶	i
CSA45	CSA	2015-06-26 12:32:31 ...	Complete	Never	Add Scheduler	Set	▶	i

Activate CSA Live CAP

1. In the BA application, click **Admin > Data Management > Activate CAP**.

The list of CAPs is displayed.

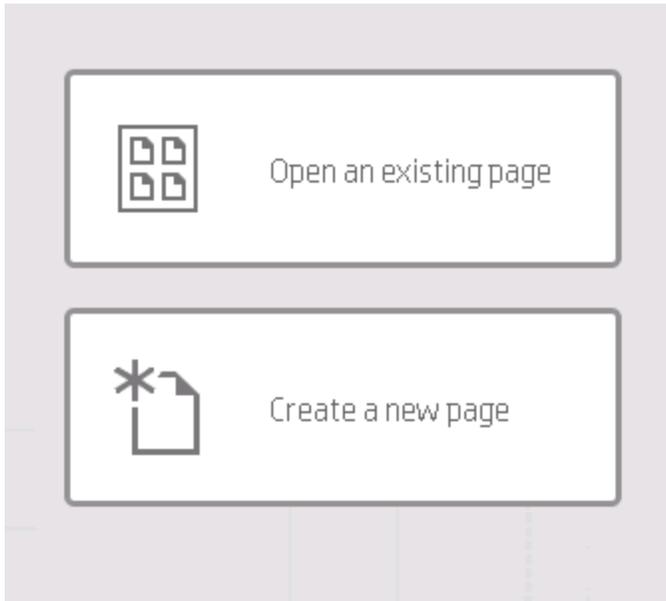
2. Deactivate the CSA_Demo CAP if it is activated.
3. Click **CSA**, and then click **Activate**. Wait until the CAP is activated.

You may need to wait for 5-10 minutes for BA to load the KPI data into CAP pages.

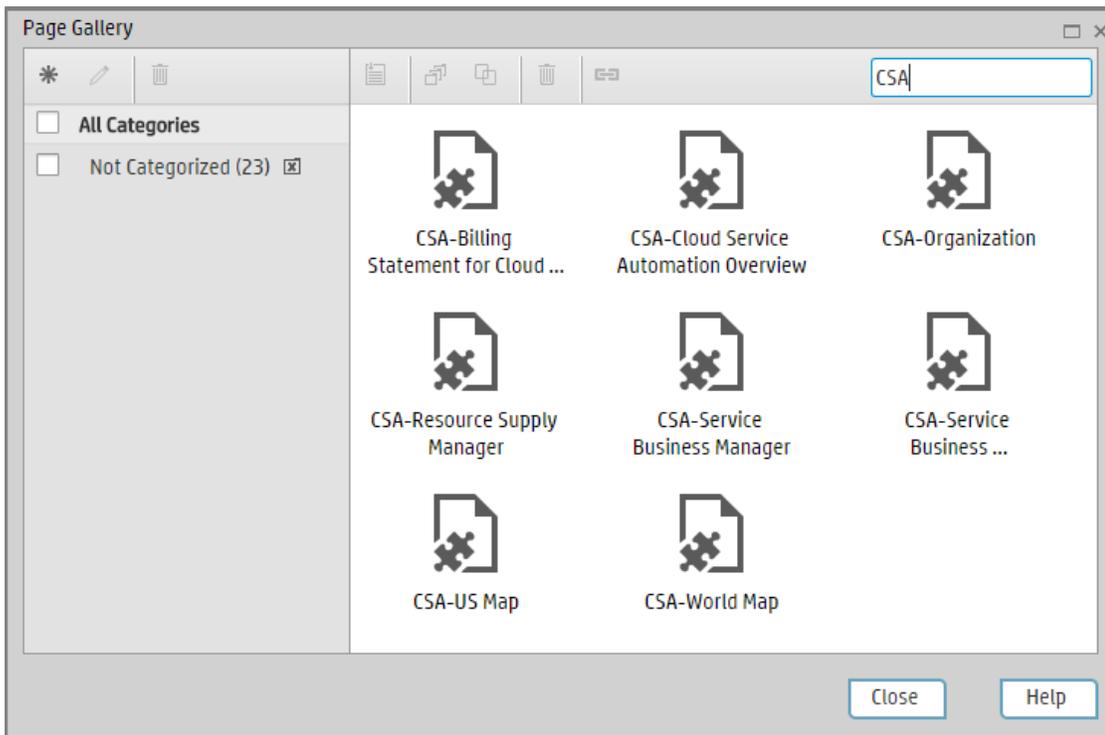
Note: The time needed by BA to load the KPI data depends on the number of calculations required and also on the amount of data available for calculations. You may need to logout and login to BA UI to see the updated data in pages

Launch pages with CSA KPIs

1. In the BA application, close the tab if it is open to display the Dashboard.
2. Select **Open an existing page** option.



3. In the Page Gallery, select the **Not Categorized** category and double-click the CSA related pages.



For details about the available pages, see "[Launch an ITBA Virtual Appliance Page with CSA Sample Data](#)" on page 15.

Launch ITBA Virtual Appliance Pages from the CSA Management Console

Links to pages in the ITBA Virtual Appliance application are provided from the CSA Management Console.

Complete the following steps to launch ITBA Virtual Appliance pages from CSA.

1. Log on to the CSA server as an administrator.
2. Open the **hosts** files located at **C:\Windows\System32\drivers\etc** and add the following entry:

<IP_Address_BA_Server> itbaapp.lab.com

where <IP_Address_BA_Server> is the IP Address of the ITBA Virtual Appliance server in your environment.

Note: If the entry already exists in the hosts file, update the ITBA Virtual Appliance server IP Address.

3. Launch the CSA Management Console and log on as the admin user.
4. Click the **Cloud Analytics** tile.

Note: The Cloud Analytics tiles must be enabled in CSA.

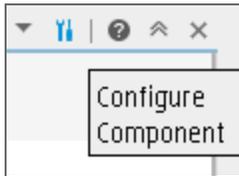
Hide UNKNOWN and INVALID Columns

This section describes how to hide INVALID or UNKNOWN columns from a configured component in a page.

The INVALID or UNKNOWN columns are default columns for KPIs in the ITBA Virtual Appliance. Based on the data that ITBA Virtual Appliance uses to calculate KPIs, these columns may or may not have proper data to show in a ITBA Virtual Appliance page.

To hide these default columns, complete the following steps:

1. Go to the component that shows INVALID or UNKNOWN columns.
2. Click **Configure Component** in the tray.



3. Select a number from the **Maximum number of slices** list according to the number of slices that are displayed in the component.

Example: If the number of slices displayed in a component are 3 then by selecting 4 from the pick list, UNKNOWN and INVALID columns are replaced with the OTHER column.

Troubleshooting

Unable to log on to BOE

Issue description

You are not able to log on to BOE and the UI shows the following error message.



The screenshot shows the SAP BusinessObjects Central Management Console login interface. At the top, there is a yellow header bar. Below it, the text "SAP BusinessObjects Central Management Console" is displayed. A red error message reads: "Account information not recognized: Could not reach CMS 'hpba.lab.com:6400'. The CMS on machine 'hpba.lab.com' was stopped due to a critical error. (FWM 20031)". Below the error message, instructions state: "Enter your user information, and click 'Log On'. If you are unsure of your account information, contact your system administrator." The login form contains four fields: "System:" with the value "hpba.lab.com:6400", "User Name:" with the value "Administrator", "Password:" which is empty, and "Authentication:" with a dropdown menu set to "Enterprise". A "Log On" button is located below the form. In the bottom left corner is the SAP logo, and in the bottom right corner is a "Help" link.

Solution

If the BOE service does not start properly, complete the following steps to start the service:

1. Log on to the itbabo appliance as root.
2. Run the command: **su boadmin**
3. Run the command: **cd /home/admin/bo/sap_bobj**
4. Run the command: **./tomcatshutdown.sh**
5. Run the command: **./stopservers**
6. Run the command : **./startservers**
7. Run the command: **./tomcatstartup.sh**
8. Launch the BOE URL and try to log on using the **Administrator** and **Admin111** credentials.

CSA-Billing Statement is empty

Issue description

The CSA-Billing Statement for Cloud Service page is empty.

Solution

Click the  icon displayed on the right of the URL box in the browser and click the **Load unsafe scripts** link.

Postgres service fails to start

Issue description

While starting the ITBA Virtual Appliance services, the Postgres service fails to start.

Solution

1. Open **/home/hpba/HPBA-10.00.615-618-master/pgsql/instance1/data/pg_hba.conf**.
2. Replace **itbaapp.lab.com** with the current IP address of the ITBA Virtual Appliance under section **# IPv4 local connections:**, and then save and close the file.

License has expired

Issue description

The ITBA Virtual Appliance license is expired when logging on to the ITBA Virtual Appliance application.

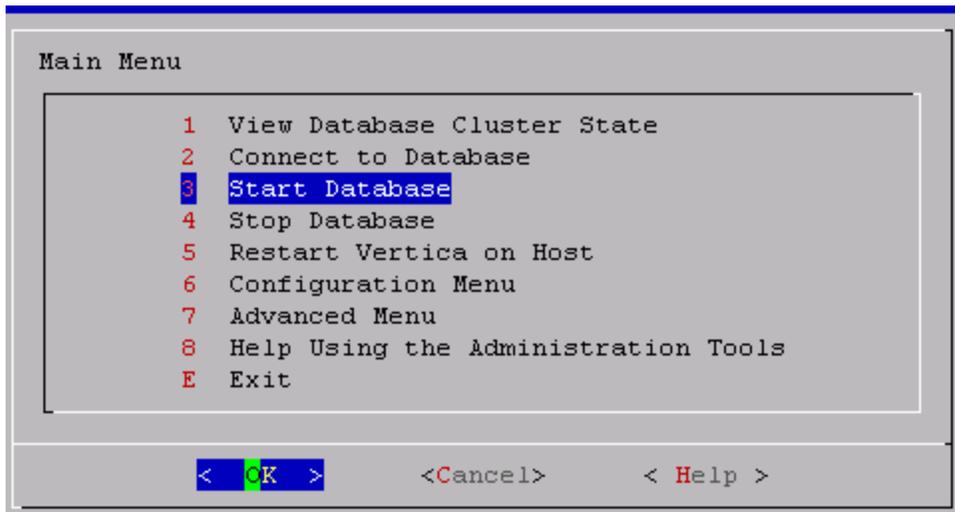
Solution

1. Get one valid license from **HPE support/HPE presales**.
2. Open a Unix console (bash) and go to the following **<HP-BA>/Tools/ directory and input command `./maintenanceTool.sh`** to start the ITBA Virtual Appliance Maintenance Tool.
3. Enter **5** in **Please enter a number (0-6) to update the license**.
4. The user licenses information (license type and capacity) is automatically displayed in the shell.
5. Enter the license key.

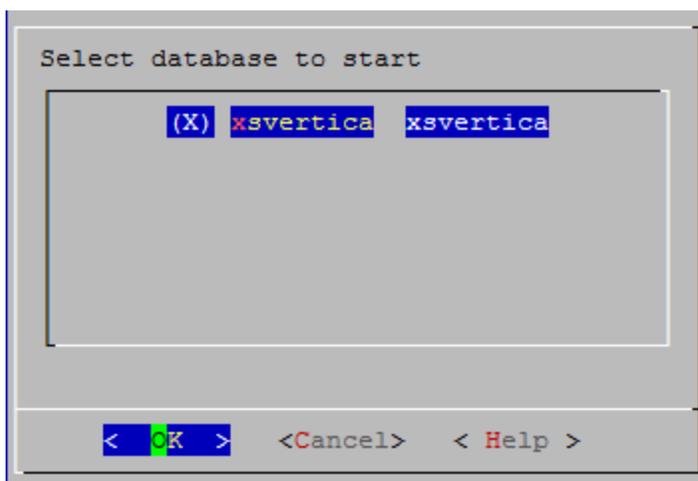
Appendix A: Start the Vertica Database on the ITBA Virtual Appliance

To start the Vertica database that the ITBA Virtual Appliance uses, complete the following steps:

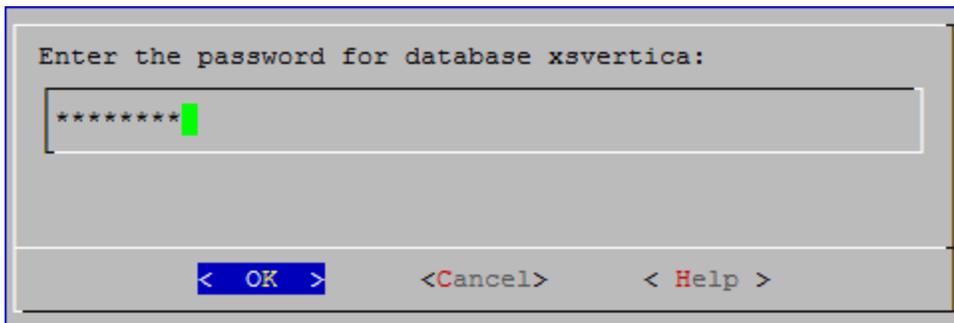
1. Run the command: **su dbadmin**
2. Run the command: **/opt/vertica/bin/admintools**



3. In the Main Menu, select **Start Database** and click **Enter**. Use the Arrow keys on the keyboard to select the required options from the menu.
4. Click the spacebar to select the Vertica database and click **Enter**.

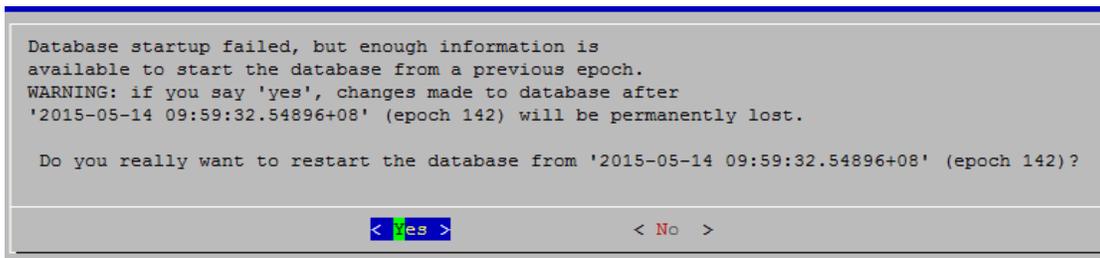


- 5. Enter **openview** as the password and click **Enter**.

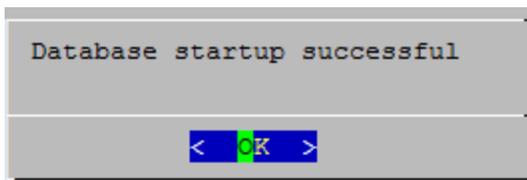


- 6. Wait till the Vertica database is started, and then click **Enter** to continue when prompted.

Note: If you see any warnings as shown in the image below, select **Yes** and click **Enter**.



- 7. If Vertica database start is successful, the following message is displayed.



- 8. Select the **Exit** option on the Main Menu, and then click **Enter** to close the Main Menu.
- 9. Reboot server and login as **root** when the server is up.

Appendix B: Start ITBA Virtual Appliance Services

Complete the following steps to start ITBA Virtual Appliance services:

1. Run the command: **su hpba**.
2. Run the command: **cd /home/hpba/HPBA-10.00.615-618-master/supervisor/bin**
3. Run the script: **./hpba-restart.sh**.
4. When the message **Do you want to restart HPBA?** is displayed, type **yes** and click **Enter**.

Appendix C: CentOS and open-vmtool Licenses

This product includes code licensed under the GNU General Public License, the GNU Lesser General Public License, and/or certain other open source licenses. A complete machine-readable copy of the source code corresponding to such code is available upon request. This offer is valid to anyone in receipt of this information and shall expire three years following the date of the final distribution of this product version by Hewlett-Packard Company.

To obtain such source code, send a check or money order in the amount of US \$10.00 to:

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Attn: General Counsel
3000 Hanover Street
Palo Alto, CA 94304
USA

Please specify the product and version for which you are requesting source code.

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If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Installation Guide (ITBA Virtual Appliance 2016.01)

Just add your feedback to the email and click send.

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We appreciate your feedback!

