



# IT Operations Compliance

Software Version: 1.20

Linux, Solaris, AIX, HP-UX, and Windows

## Reports User Guide

Document Release Date: October 2016

Software Release Date: October 2016



**Hewlett Packard**  
Enterprise

## Legal Notices

### Warranty

The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

### Restricted Rights Legend

Confidential computer software. Valid license from Hewlett Packard Enterprise required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

### Copyright Notice

© 2015 - 2016 Hewlett Packard Enterprise Development LP

### Trademark Notices

Adobe™ is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

This product includes an interface of the 'zlib' general purpose compression library, which is Copyright © 1995-2002 Jean-loup Gailly and Mark Adler.

## Documentation Updates

To check for recent updates or to verify that you are using the most recent edition of a document, go to: <https://softwaresupport.hpe.com/>.

This site requires that you register for an HP Passport and to sign in. To register for an HP Passport ID, click **Register** on the HPE Software Support site or click **Create an Account** on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HPE sales representative for details.

## Support

Visit the HPE Software Support site at: <https://softwaresupport.hpe.com/>.

Most of the support areas require that you register as an HP Passport user and to sign in. Many also require a support contract. To register for an HP Passport ID, click **Register** on the HPE Support site or click **Create an Account** on the HP Passport login page.

To find more information about access levels, go to: <https://softwaresupport.hpe.com/web/softwaresupport/access-levels>.

**HPE Software Solutions Now** accesses the HPSW Solution and Integration Portal website. This site enables you to explore HPE Product Solutions to meet your business needs, includes a full list of Integrations between HPE Products, as well as a listing of ITIL Processes. The URL for this website is <https://softwaresupport.hpe.com/km/KM01702731>.

# Contents

|   |    |
|---|----|
| Introduction to ITOC reports .....  | 9  |
| ITOC reporting components .....   | 9  |
| ITOC-ITBA architecture .....  | 10 |
| Install and configure HPE ITOC and ITBA for HPE ITOC reports .....        | 11 |
| Platform support .....  | 11 |
| Installation workflow .....   | 11 |
| Install the Vertica database .....  | 12 |
| Set up the data warehouse through CLI .....                               | 12 |
| Apply the Vertica license .....   | 15 |
| Install ITBA .....  | 15 |
| Install SAP BusinessObjects Enterprise .....                              | 16 |
| Post-installation tasks .....   | 16 |
| Configure SAP BusinessObjects Enterprise to ITBA .....                    | 17 |
| Install the Vertica driver in the BusinessObjects Enterprise server ..... | 17 |
| Deploy the HPE ITOC Reports content pack .....                            | 19 |
| Configure data sources .....  | 19 |
| Add and activate a new data source instance .....                         | 19 |
| View data source configuration settings .....                             | 24 |
| Edit data source settings and test the connection .....                   | 24 |
| ETL management .....  | 24 |
| Run a job instance using the Content Flow Manager .....                   | 25 |
| View details of the job instance run .....                                | 26 |
| Configure secure connection for SAP BusinessObjects server .....          | 27 |
| ITOC reporting URLs .....   | 29 |
| Start and stop HPE ITOC Reporting components .....                        | 29 |
| Directory structure for HPE ITOC Reporting components .....               | 30 |
| Use ITBA Web Intelligence to build reports .....                          | 31 |
| Before creating reports .....   | 31 |
| Configure user groups and permissions .....                               | 31 |
| Set security on folders .....   | 31 |
| Standard reports .....  | 32 |

|  |           |
|--|-----------|
| Run standard reports .....                           | 32        |
| Build custom reports .....                           | 34        |
| Configure the adaptive job server .....              | 35        |
| Schedule a report .....                              | 36        |
| Merge objects from different classes .....           | 39        |
| <b>HPE ITOC compliance reports .....</b>             | <b>47</b> |
| Business service compliance detail - by policy ..... | 47        |
| Prerequisites for displaying meaningful data .....   | 47        |
| User prompt input .....                              | 48        |
| Table .....  | 48        |
| Business service compliance summary .....            | 48        |
| Prerequisites for displaying meaningful data .....   | 49        |
| User prompt input .....                              | 49        |
| Graph .....  | 49        |
| Table .....  | 50        |
| Business Service variance history .....              | 50        |
| Prerequisites for displaying meaningful data .....   | 50        |
| User prompt input .....                              | 50        |
| Table .....  | 51        |
| Job history .....                                    | 51        |
| Prerequisites for displaying meaningful data .....   | 51        |
| User prompt input .....                              | 52        |
| Table .....  | 52        |
| Policy ompliance Detail - by business service .....  | 52        |
| Prerequisites for displaying meaningful data .....   | 52        |
| User prompt input .....                              | 53        |
| Table .....  | 53        |
| Policy compliance summary .....                      | 53        |
| Prerequisites for displaying meaningful data .....   | 54        |
| User input prompts .....                             | 54        |
| Graph .....  | 54        |
| Table .....  | 55        |
| Policy platform applicability .....                  | 55        |
| User prompt input .....                              | 56        |
| Table .....  | 56        |

|  |    |
|--|----|
| SLO conformance summary .....                      | 56 |
| Prerequisites for displaying meaningful data ..... | 57 |
| User prompt input .....                            | 57 |
| Graph .....  | 57 |
| Table .....  | 58 |
| HPE ITOC universe .....                            | 59 |
| Universe elements .....                            | 59 |
| Universe descriptions .....                        | 60 |
| Log in to the HPE ITOC universe .....              | 60 |
| HPE ITOC inventory .....                           | 61 |
| Policy (Inventory) .....                           | 61 |
| Requirement (Inventory) .....                      | 63 |
| Rule (Inventory) .....                             | 64 |
| Control (Inventory) .....                          | 65 |
| Business Service (Inventory) .....                 | 66 |
| Resource (Inventory) .....                         | 68 |
| Statement of Applicability (SoA inventory) .....   | 70 |
| HPE ITOC compliance .....                          | 71 |
| Date (Compliance) .....                            | 72 |
| Policy (Compliance) .....                          | 72 |
| Requirement (Compliance) .....                     | 73 |
| Rule (Compliance) .....                            | 73 |
| Control (Compliance) .....                         | 74 |
| Business Service (Compliance) .....                | 74 |
| Resource (Compliance) .....                        | 75 |
| Statement of Applicability (SoA Compliance) .....  | 76 |
| Job (Compliance) .....                             | 76 |
| Compliance Summary (Compliance) .....              | 77 |
| SLO Conformance (Compliance) .....                 | 79 |
| Compliance Details (Compliance) .....              | 80 |
| Policy Compliance Applicability (Compliance) ..... | 81 |
| Service Variance (Compliance) .....                | 82 |
| HPE ITOC users and roles .....                     | 83 |
| Users .....  | 83 |
| Roles .....  | 84 |

Send documentation feedback .....86





# Introduction to ITOC reports

IT Operations Compliance Reports provide comprehensive, real-time information about policies, business services, controls, resources, SoAs, and resource managers in your system. ITOC Reports use the IT Business Analytics (ITBA) platform with Vertica analytics database technology and provides a complete set of ETL tools, dimensional data model, reports, dashboards and analytics systems, and content for the suite of automation tools.

HPE ITOC Reports leverage the ITBA platform, which provides a data warehouse that uses Vertica as the database, and delivers content based on solution packs that contain ETL and model definitions, universes, and standard reports. Content packs for HPE ITOC Reports are deployable from the ITBA web administration user interface and can be downloaded and updated from HPE LN. Using SAP Business Intelligence, HPE ITOC Reports provide both standard and customizable reports that enable you to monitor the state of your data center. The HPE ITOC web administration UI provides web-based administration of HPE ITOC Reports.

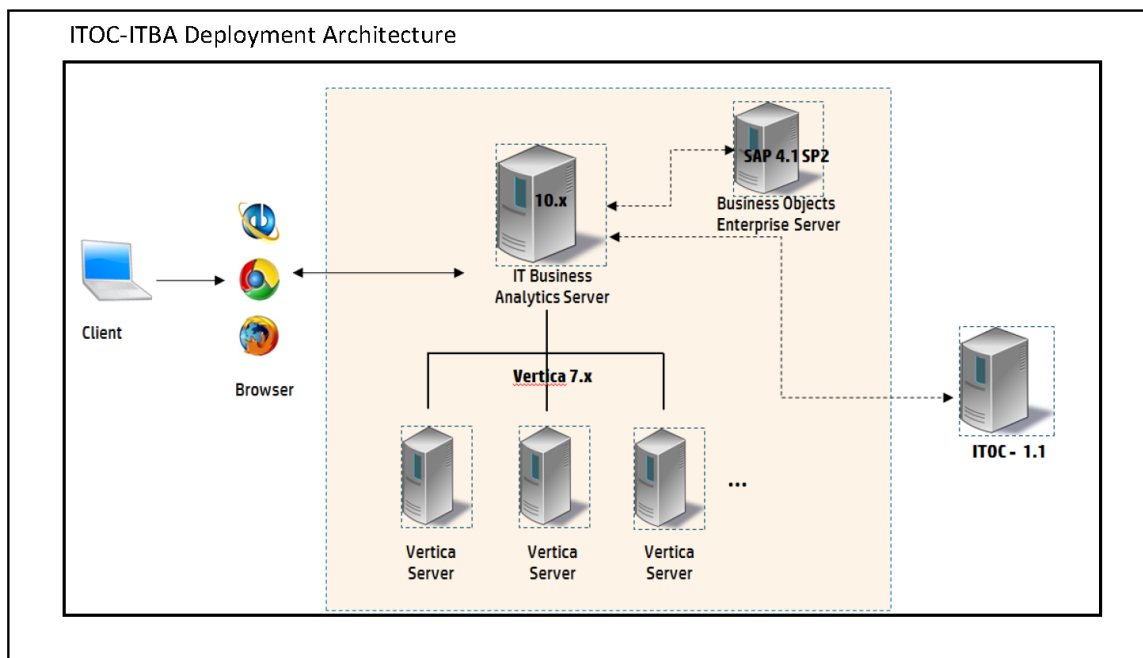
## ITOC reporting components

- **ITOC Administration Web Application**—Web application used to configure and manage HPE ITOC Reports subsystems.
- **Live Network**— system that hosts HPE ITOC Reports content packs and downloads using LiveNetwork Connector.
- **ITBA Administration Web Application** - Web application for the reporting platform.
- **Vertica Database System**—Database that hosts the HPE ITOC Reports data warehouse and provides analytic functions.
- **SAP BusinessObjects Web Intelligence**—Enterprise reporting and dashboard platform used to perform data analysis.
- **SAP Business Intelligence (BI) Launch Pad**
- **SAP BO Central Management Console (CMC)**

# ITOC-ITBA architecture

The ITBA platform with Vertica analytics database technology provides a complete set of ETL tools, dimensional data models, reports, dashboards and analytics systems, and content for the suite of automation tools. The ITBA platform uses the following:

- Data warehouse using Vertica analytics as the database.
- Content pack encompassing ETL/model, universe, and out-of-the-box (OOTB) reports.
- Unified reporting across products and data sources.
- Near real-time reporting focused on operational compliance data.



HPE ITOC Reports provide the ability to report on data from source systems such as HPE ITOC. You can select data from the source system reporting universes to build Web Intelligence documents that define and display historical and trending information about your data center.

**Note:** Users who do not have data permissions to report data can view report results that are stored in folders to which they have Read access.

# Install and configure HPE ITOC and ITBA for HPE ITOC reports

This section describes how to install and configure HPE ITOC and ITBA for HPE ITOC reports.

## Platform support

This section provides information about the versions of products and browser that you must have to install and run HPE ITOC Reports successfully.

| Product                        | Supported version                       | Supported browsers  |
|--------------------------------|---|---|
| HPE ITOC                       | 1.20                                    | See the "Supported Browsers" section in the <i>HPE ITOC 1.20 Support Matrix</i> .   |
| ITBA                           | 10.10 patch 001                         | See the "Web Browsers and Plug-ins" section in the <a href="#">IT Business Analytics Support Matrix</a> .   |
| Vertica (ITBA database server) | 7.1.1-0.x86_64                          | See the "HP Vertica Server and HP Vertica Management Console" section in the <a href="#">HPE Vertica Analytics Database Supported Platforms Guide</a> . |
| SAP BO (ITBA Reporting tool)   | SAP BusinessObjects BI platform 4.1 SP2 | See the <a href="#">IT Business Analytics Support Matrix</a> .  |

## Installation workflow

1. ["Install the Vertica database" on the next page](#)
2. ["Set up the data warehouse through CLI" on the next page](#)
3. ["Apply the Vertica license" on page 15](#)
4. ["Install ITBA" on page 15](#)
5. ["Install SAP BusinessObjects Enterprise" on page 16](#)

## Install the Vertica database

Vertica is an analytics database that handles big data and relevant information from the source system. For details about installing Vertica, see the [HPE Vertica Analytic Database Installation Guide](#).

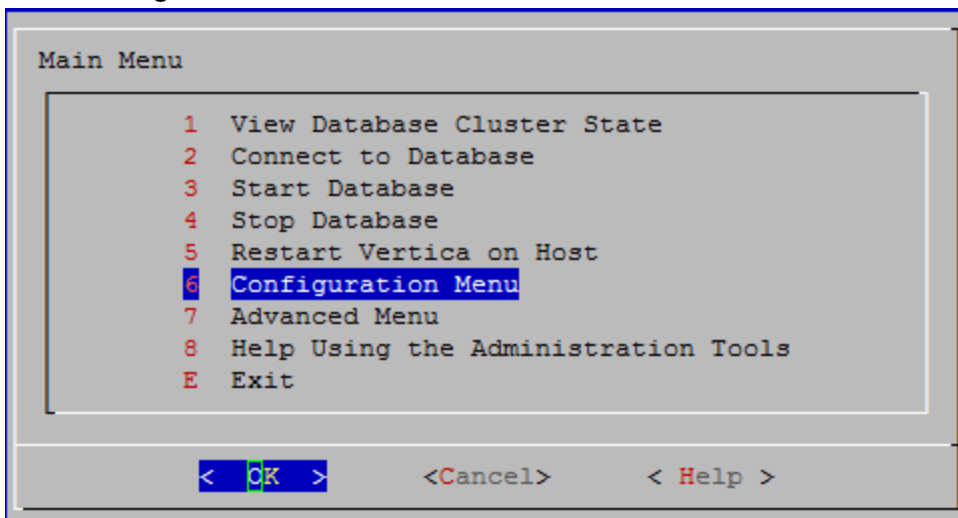
## Set up the data warehouse through CLI

Perform the following steps to create the Vertica database on the Vertica cluster through the command line interface (CLI). You must use `itocdb` for the HPE ITOC database instance.

In the example, the sample IP address of 16.166.49.118 for three nodes in the Vertica cluster is used.

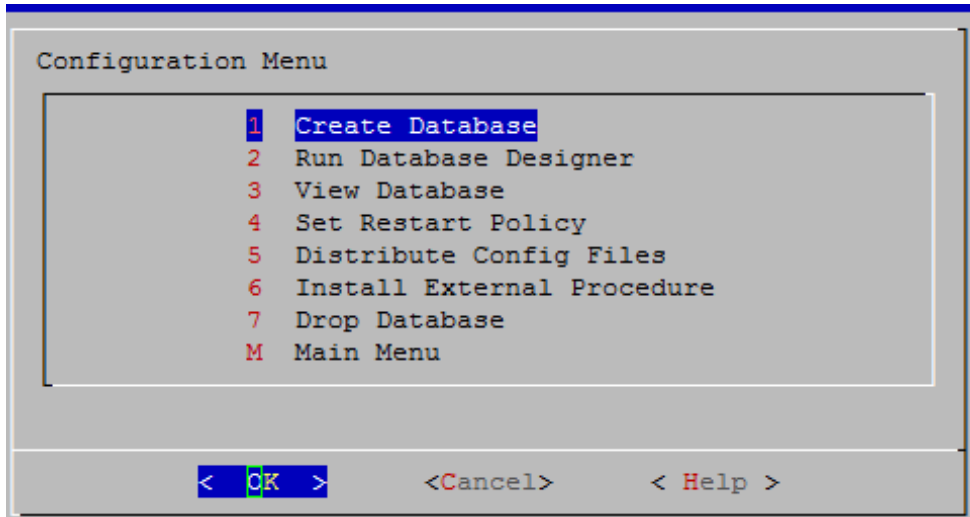
The database can be configured on any of the nodes, in the cluster visible for one node. Connect to the node in the cluster (or to the cluster VIP) to access the node CLI and then run the following command to create the database on the cluster:

1. Log in as the database admin user (or switch to the database admin user):  
`# su - dbadmin`
2. Enter the following command to open the **Vertica Analytics Database 7.x Administration Tools** main menu:  
`$ /opt/vertica/bin/admintools`
3. Select **Configuration Menu**:

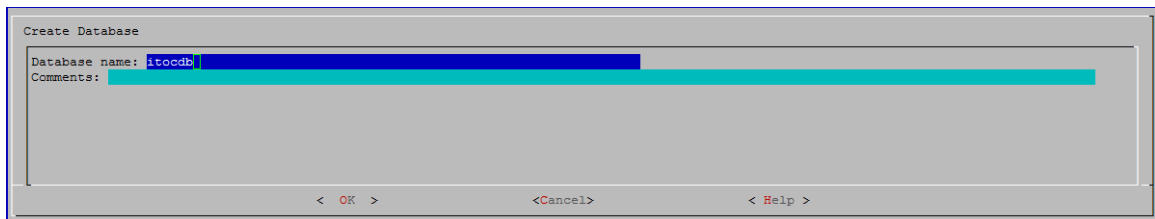


4. Click **OK**.

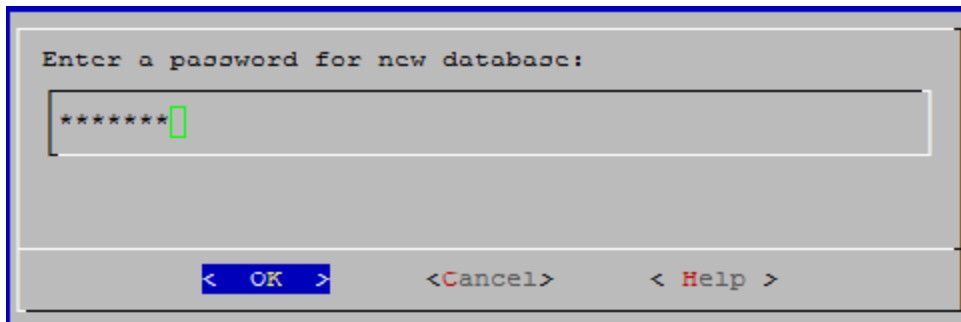
5. Select **Create Database** to create a database. The **Create Database** wizard opens:



6. Enter the database name itocdb.

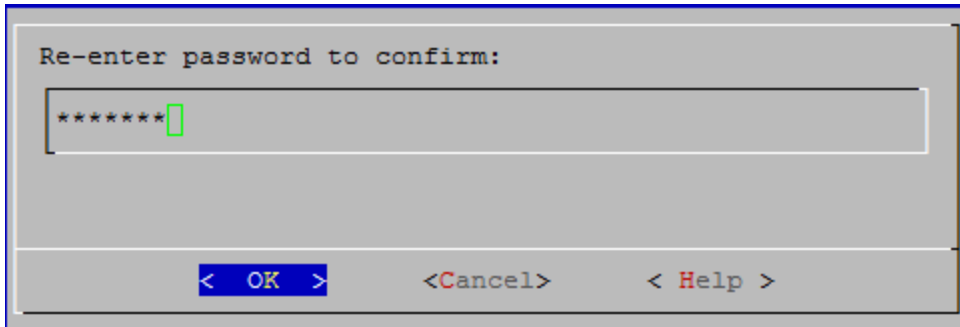


7. Click **OK**.
8. Enter a password for the database.

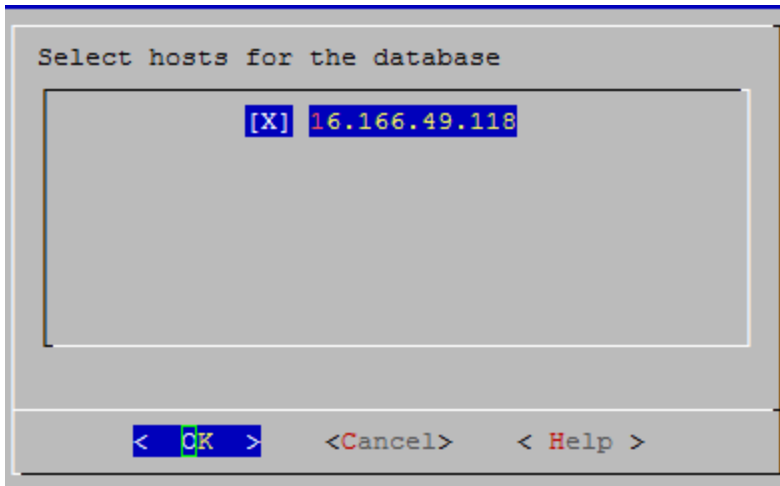


9. Click **OK**.

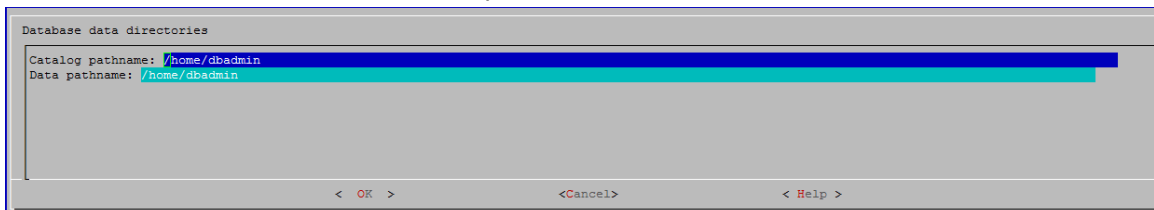
10. Reenter the password to confirm.



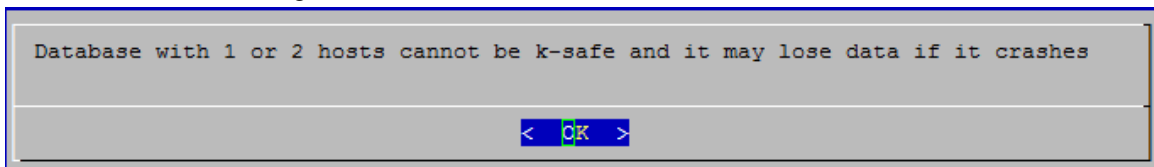
11. Click **OK**.
12. Select the host for the database.



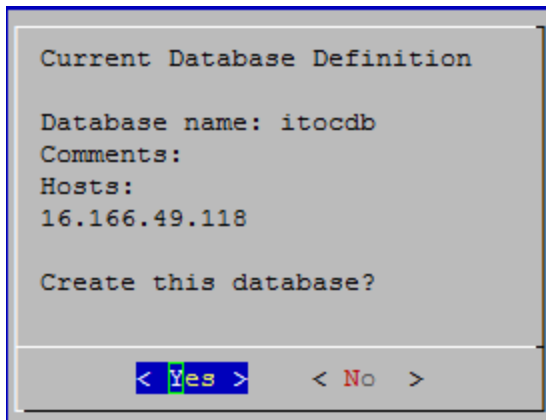
13. Click **OK**.
14. The **Database data directories** console opens.



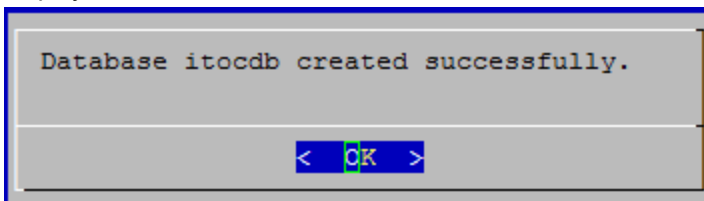
15. Click **OK**, and click **OK** again.



16. The list of cluster nodes on which the database is being created is displayed. Click **Yes** to begin creating the database.



The console displays status messages. When the database is created, the following message is displayed:



## Apply the Vertica license

Apply the Vertica license. For more information about Vertica license application, see the [HPE Vertica Analytic Database Installation Guide](#).

## Install ITBA

The IT Business Analytics Application (ITBA) provides the means to define IT goals and objectives, measure performance, and provides actionable insights into performance improvement plans. It includes the **Dashboard**, **Studio**, **Explorer**, **Admin**, and **Data Warehouse (DWH)** modules.

DWH is a repository for key business data that is cleansed, consolidated, and organized to support efficient queries, reports, and populate a variety of business analytics. The contents of the DWH depend on the external applications that generate business data. For example, the data may originate

from external applications such as Application Lifecycle Management or Project and Portfolio Management.

For information about how to install the ITBA platform, the BOE platform, and the Vertica Data Warehouse, see the [HPE IT Business Analytics Installation Guide](#).

## Install SAP BusinessObjects Enterprise

SAP BusinessObjects Enterprise is a solution that provides reporting, analysis, and information delivery using web applications. This component must be installed separately.

The SAP BusinessObjects Business Intelligence (BI) platform is a flexible, scalable, and reliable solution for delivering powerful, interactive reports to end users through any web application. The BI platform delivers tangible benefits that extend across and beyond the organization. As an integrated suite for reporting, analysis, and information delivery, the platform provides a solution for increasing end-user productivity and reducing administrative efforts.

Server Intelligence is a core component of the BI platform. Changes to server processes applied in the CMC are propagated to corresponding server objects by CMS.

The CMC is a web-based tool that you use to perform administrative tasks (including user, content, and server management) and to configure security settings. Because the CMC is a web-based application, you can perform all of the administrative tasks in a web browser.

For more information about SAP BOE, see the [SAP BusinessObjects Business Intelligence](#) site.

## Post-installation tasks

- ["Configure SAP BusinessObjects Enterprise to ITBA" on the next page](#)
- ["Install the Vertica driver in the BusinessObjects Enterprise server" on the next page](#)
- ["Deploy the HPE ITOC Reports content pack" on page 19](#)
- ["Configure data sources" on page 19](#)
- ["ETL management" on page 24](#)
- ["Configure secure connection for SAP BusinessObjects server" on page 27](#)



## Configure SAP BusinessObjects Enterprise to ITBA

For information about configuring SAP BusinessObjects Enterprise to ITBA, see the [HPE IT Business Analytics Administrator Guide](#).

### Install the Vertica driver in the BusinessObjects Enterprise server

You must install the HPE Vertica driver in the BusinessObjects Enterprise server as follows:

1. Get the Vertica JDBC driver from HPBA in the following directory:  
**%ITBA\_HOME%/glassfish/glassfish/domains/BTOA/lib/vertica-jdbc-7.1.1-0.jar**
2. Copy the driver to the following location in the SAP BusinessObjects Enterprise server:  
**<BO\_INSTALLATION\_DIRECTORY>/sap\_bobj/enterprise\_xi40/dataAccess/connectionServer/jdbc/**
3. Open the following file:  
**<BO\_INSTALLATION\_DIRECTORY>/sap\_bobj/enterprise\_xi40/dataAccess/connectionServer/jdbc/jdbc.sbo**
4. Add the JDBCdriver file path to the ClassPath tag in the jdbc.sbo file, as shown below. Add the highlighted content as shown below to the jdbc.sbo file:

```

<?xml version="1.0" encoding="UTF-8"?><driverConfiguration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="../../sbo.xsd">
  <defaults>
    <class JarFile="dbd_jdbc">com.sap.connectivity.cs.java.drivers.jdbc.JDBCDriver</Class>
    <JDBCdriver>
      <ClassPath>
        <Path>${ROOT}/drivers/java/dbd_jdbcwrapper.jar</Path>
      </ClassPath>
      <Parameter Name="JDBC Wrapper">com.sap.connectivity.cs.java.drivers.jdbc.wrapper.JDBCWrapper</Parameter>
    </JDBCdriver>
    <Parameter Name="Family">Generic</Parameter>
    <Parameter Name="SQL External File">jdbc</Parameter>
    <Parameter Name="SQL Parameter File">jdbc</Parameter>
    <Parameter Name="Description File">generic_jdbc</Parameter>
    <Parameter Name="Driver Capabilities">Query</Parameter>
    <Parameter Name="Extensions">jdbc</Parameter>
    <Parameter Name="Connection Shareable">Yes</Parameter>
    <Parameter Name="Shared Connection">No</Parameter>
    <Parameter Name="Array Fetch Available">True</Parameter>
    <!-- define &quot;magic&quot; value 0 for Array Fetch Size to use default JDBC Fetch Size -->
    <Parameter Name="Array Fetch Size">0</Parameter>
    <Parameter Name="Transactional Available">No</Parameter>
    <Parameter Name="Array Bind Available">False</Parameter>
    <Parameter Name="Max Rows Available">No</Parameter>
    <Parameter Name="Query Timeout Available">No</Parameter>
    <Parameter Name="Optimize Execute">True</Parameter>
  </defaults>
  <databases>
    <Database Active="Yes" Name="Generic JDBC datasource">
      <JDBCdriver>
        <!-- Uncomment and edit the following lines
              to define java classes required by JDBC driver
              &lt;&lt;ClassPath&gt;
                &lt;&lt;Path&gt;your jar or class files directory&lt;/Path&gt;
              &lt;/ClassPath&gt;
              -->
        <Parameter Name="JDBC Class">${JDBCCLASS}$</Parameter>
        <Parameter Name="URL Format">${DATASOURCE}$</Parameter>
      </JDBCdriver>
      <Parameter Name="Array Fetch Size">10</Parameter>
    </Database>
    <Database Active="Yes" Name="Vertica JDBC">
      <JDBCdriver>
        <ClassPath>
          <Path>[BO_INSTALLATION_DIRECTORY]/sap_bobj/enterprise_xi40/dataaccess/connectionserver/jdbc/vertica-jdbc-7.1.1-0.jar</Path>
        </ClassPath>
        <Parameter Name="JDBC Class">${JDBCCLASS}$</Parameter>
        <Parameter Name="URL Format">${DATASOURCE}$</Parameter>
      </JDBCdriver>
      <Parameter Name="Array Fetch Size">10</Parameter>
    </Database>
  </databases>
</DriverConfiguration>

```

The following example shows the highlighted portion of the above illustration:

```

<Database Active="Yes" Name="Vertica JDBC">
  <JDBCdriver>
  <ClassPath>
  <Path>[BO_INSTALLATION_DIRECTORY]/sap_bobj/enterprise_xi40/dataaccess/connectionserver/jdbc/vertica-jdbc-7.1.1-0.jar</Path>
  </ClassPath>
  <Parameter Name="JDBC Class">${JDBCCLASS}$</Parameter>
  <Parameter Name="URL Format">${DATASOURCE}$</Parameter>
  </JDBCdriver>
  <Parameter Name="Array Fetch Size">10</Parameter>
</Database>

```

##### 5. Execute the following scripts:

```

cd <BO_INSTALLATION_DIRECTORY>/sap_bobj
./stopservers
./tomcatshutdown.sh
./startservers
./tomcatstartup.sh

```

## Deploy the HPE ITOC Reports content pack

1. Download the HPE ITOC Reports content pack (HP\_ITOC\_Reports\_1.20\_ContentPack.zip) from HPE LN.
2. Copy the zip file to a temporary folder in your local machine.
3. Unzip the HP\_ITOC\_Reports\_1.20\_ContentPack.zip file after which you can see the CORE and ITOC folders.
4. Switch user to ITBA\_installer\_Username.
5. With the above sudo user, copy the CORE and ITOC folders to \$HPBA\_HOME/Content Packs/.
6. Log in to ITBA as an administrator.
7. To deploy the HPE ITOC content pack:
  - a. Navigate to the **Data Management** panel.
  - b. Click the **Install Content Pack** tab.
  - c. Select **ITOC**, and click **Install**.
8. The **Install** option changes to **Upgrade**. Click **Upgrade**.
9. You can view the logs at:  
\$ HPBA\_HOME/glassfish/glassfish/domains/BTOA/logs/

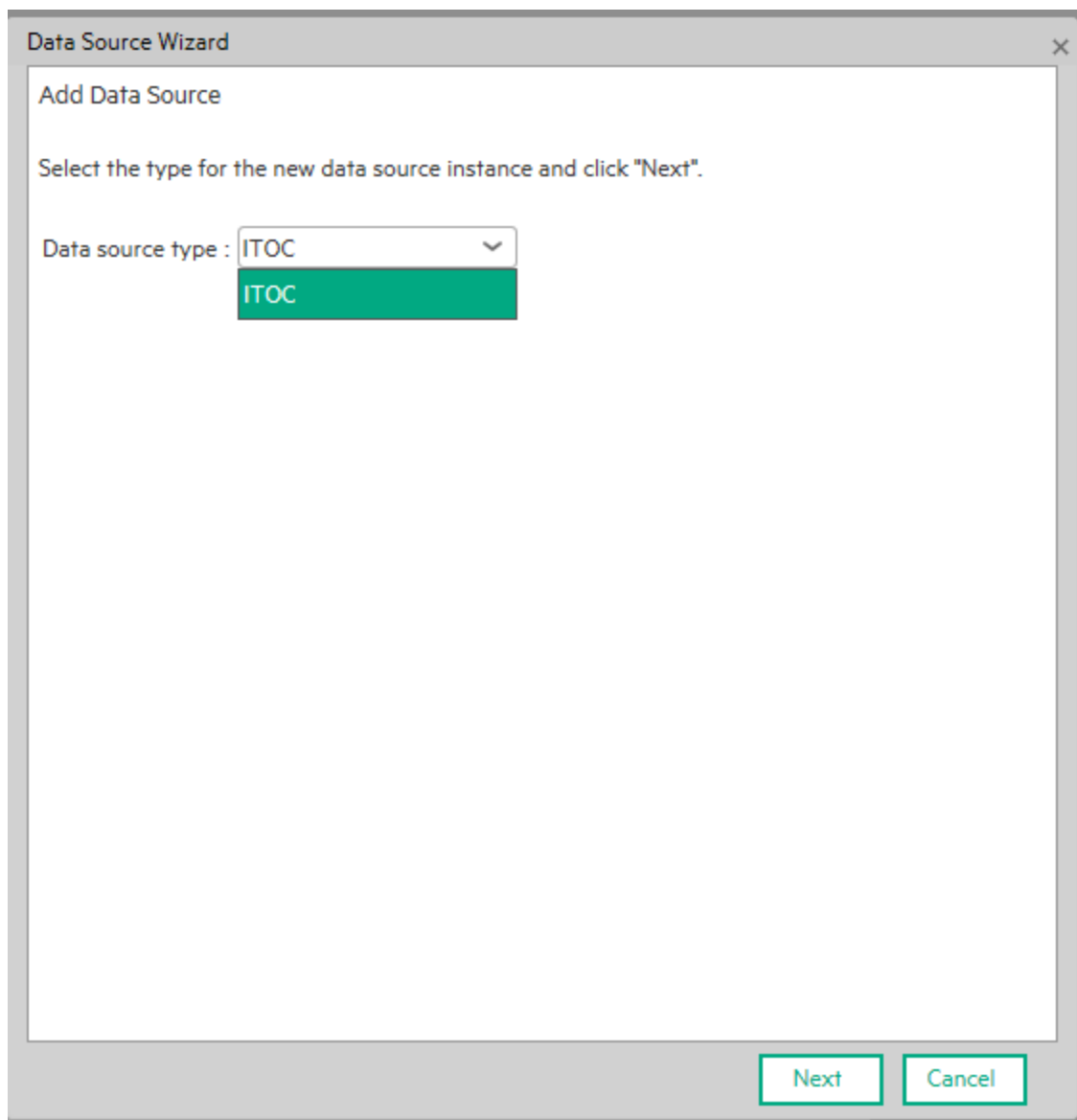
## Configure data sources

The **Data Source** page enables you to manage the integration of data into the data warehouse through the activation of data sources. The available data source content packs are registered in the deployment process and can then be activated in the **Connect Data Source** page.

## Add and activate a new data source instance

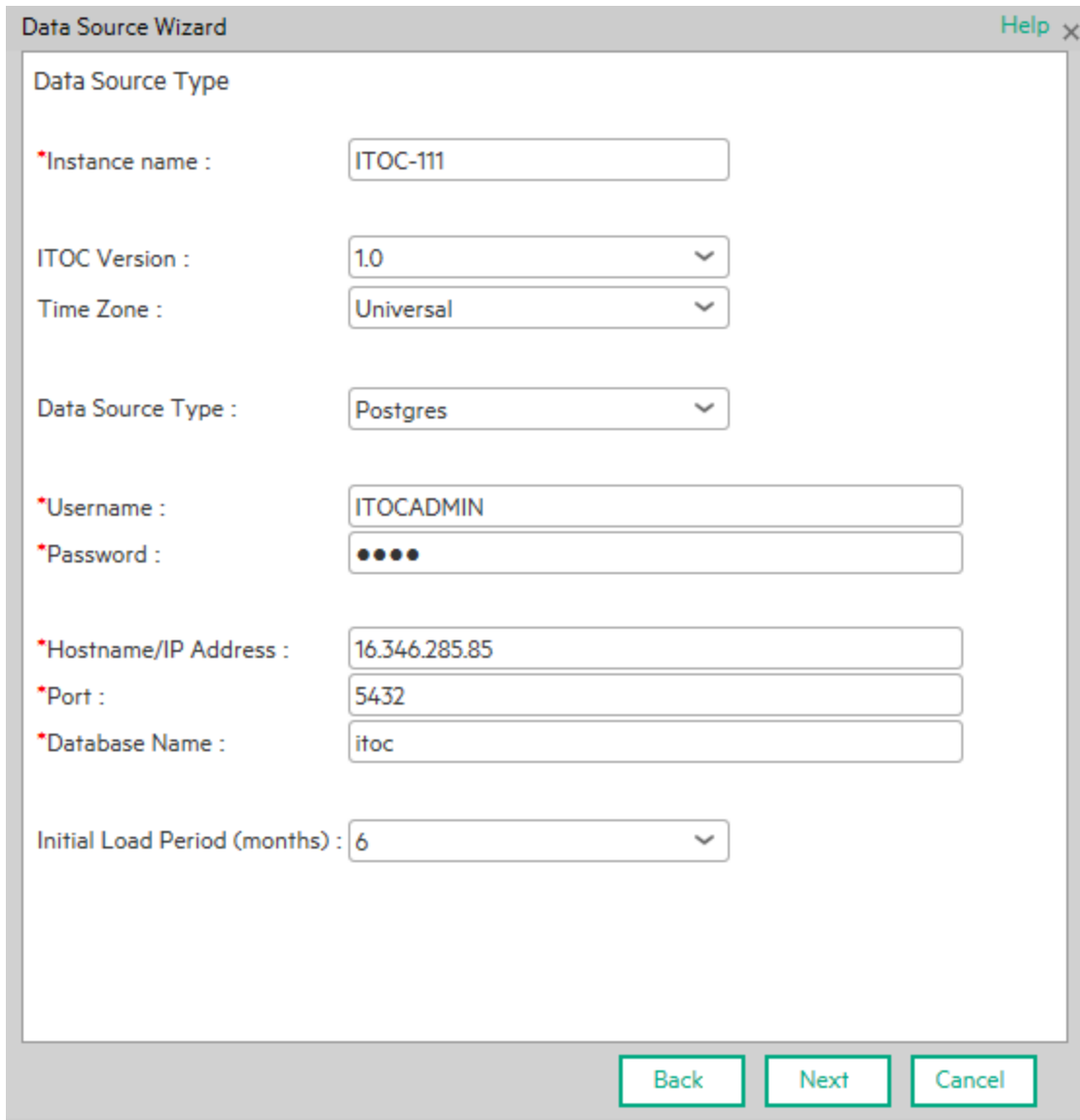
The process of integrating a data source into the data warehouse is done through activation of the source instance.

1. In the ITBA application, select **Admin > Data Management > Connect Data Source > Add data source**.



2. Click **Add data source** to open the Data Source wizard. The **Add Data Source** page opens.

3. Select the data source type (ITOC) and click **Next**. The relevant data source page opens.



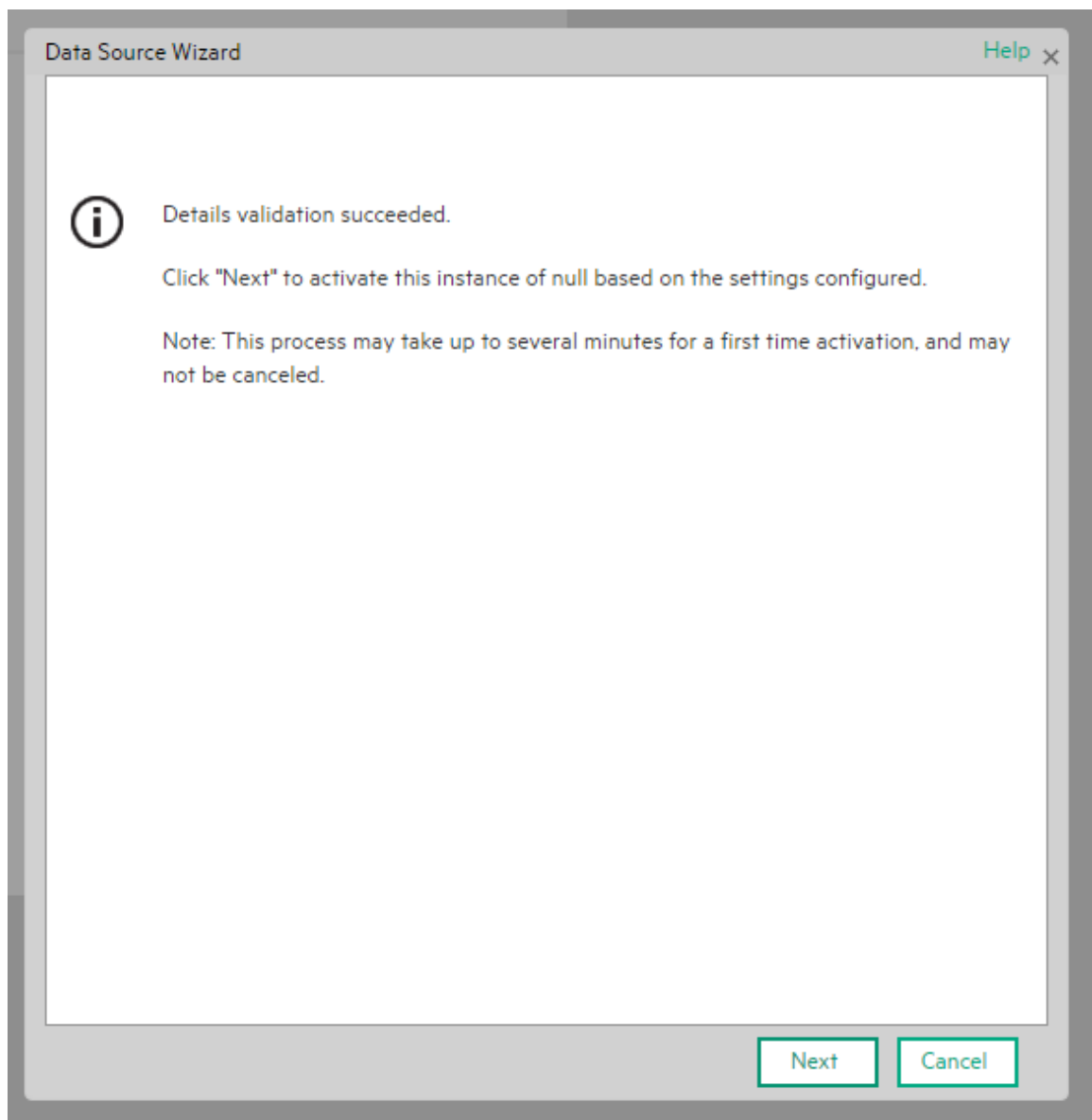
The screenshot shows a 'Data Source Wizard' window with a 'Help' button in the top right corner. The window is titled 'Data Source Wizard' and contains the following fields and options:

- Data Source Type** (Section Header)
- \*Instance name :** Text input field containing 'ITOC-111'.
- ITOC Version :** Dropdown menu with '1.0' selected.
- Time Zone :** Dropdown menu with 'Universal' selected.
- Data Source Type :** Dropdown menu with 'Postgres' selected.
- \*Username :** Text input field containing 'ITOCADMIN'.
- \*Password :** Password input field with four dots.
- \*Hostname/IP Address :** Text input field containing '16.346.285.85'.
- \*Port :** Text input field containing '5432'.
- \*Database Name :** Text input field containing 'itoc'.
- Initial Load Period (months) :** Dropdown menu with '6' selected.

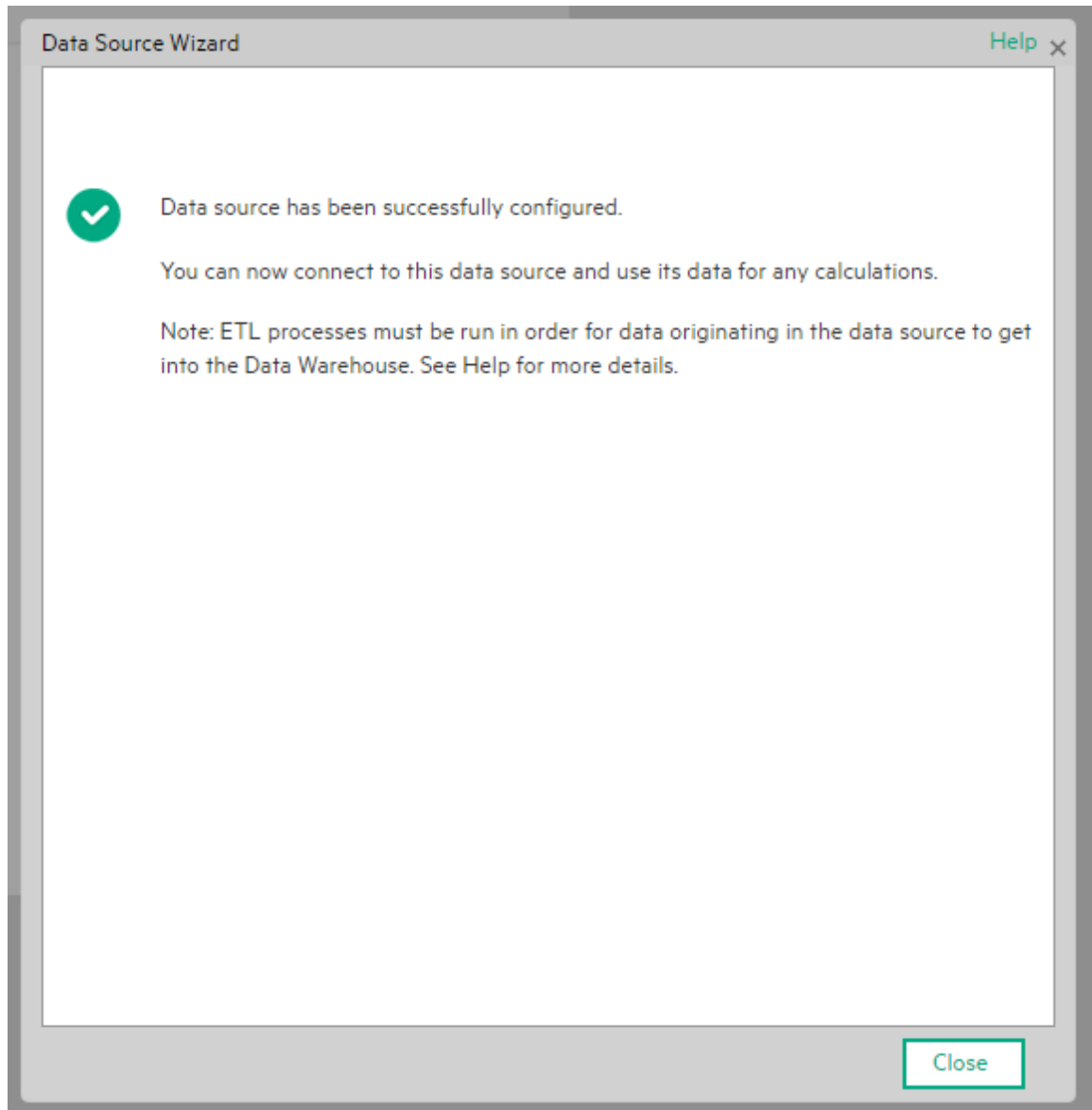
At the bottom of the window, there are three buttons: 'Back', 'Next', and 'Cancel'.

4. Enter configuration parameters:
  - a. Enter the instance name. The instance name can be your ITOC name or any name of your choice.
  - b. Select the ITOC version.
  - c. Select the time zone.
  - d. Select the data source type.
  - e. Enter the database user name.

- f. Enter the database password.
  - g. Enter the ITOC server host name or IP address.
5. Click **Next**.



6. The data source instance is activated.



**Note:** If the first-time activation of a data source instance fails, the instance is displayed in the source list with an Error status. You can then activate the data source by clicking **Edit Settings** and completing the configuration and activation.

## View data source configuration settings

1. Select **Admin > Data Management > Connect Data Source**.
2. Click **View Settings**. The relevant data source page opens.

## Edit data source settings and test the connection

1. Select **Admin > Data Management > Connect Data Source**.
2. Click **Edit Settings**, and edit the configuration parameters.
3. Click **Next** to validate your changes and test the connection to the data source.

**Note:** Multiple instances of HPE ITOC can be configured to ITBA.

## ETL management

After a content pack (CP) is activated, the content pack manager notifies the content flow manager to create a job stream for this CP instance. The job stream includes a series of predefined steps.

Each step is an individual job such as an extractor job or an ETL job. The job executes the back-end process to pull the data from the data source to the data warehouse.

Each content pack instance has an individual job, and each job can run in parallel.

**Note:** Do not modify the consolidation entity configuration when ETL is running or when the KPI engine is running.



## Run a job instance using the Content Flow Manager

1. In the ITBA application, select **Admin > Data Management > Run ETL**.
2. Click **Scheduler** for the relevant instance:

| Instance Id | Instance Name              | Content Pack Name | Last End Time          | Last Status | Next Start Time | Set Calculation | Scheduler/Trigger |
|-------------|----------------------------|-------------------|------------------------|-------------|-----------------|-----------------|-------------------|
| 3           | Itoc4.qa.opsware.com (New) | ITOC              | Never                  | Never       | Never           | Set             | Scheduler         |
| 2           | Itoc6.qa.opsware.com       | ITOC              | 2016-09-19 02:03:15 PM | Complete    | Never           | Set             | Scheduler         |
| 1           | Itoc7.qa.opsware.com       | ITOC              | 2016-09-16 12:12:21 PM | Complete    | Never           | Set             | Scheduler         |

3. Enter the relevant time stamp for scheduling the job instance run. The CronExpression is built in the box below the options. Click **Apply**.

Scheduler Settings | [Advanced](#) | [InstanceTrigger](#)

**Minute**

Every n minute     Each selected minute

---

**Hour**

Every hour     Every n hour     Each selected hour

---

Day of month     Day of week

Every day     Each selected day

---



**Month**

Every month     Each selected month

---


*You have not yet selected the scheduler settings.*




## View details of the job instance run


1. In the ITBA application, select **Admin > Data Management > Run ETL**.
2. Click the  icon for the relevant job instance run (you might have to use the scroll bar to see the button). The list of the job instance runs of the instance is displayed. Use the filter to select the runs you want to display.
3. Click the  icon for the relevant job instance run. The list of the job instance run steps is displayed.

Content Flow Management  
 Job Management > itoc7.qa.opsware.com



Execution detail of "itoc7.qa.opsware.com" content instance















Status :  From :  To :   

| Batch Id | Call Time              | Start Time             | End Time               | Duration | Status   |  |
|----------|------------------------|------------------------|------------------------|----------|--|---|
| 1        | 2016-09-16 12:09:58 PM | 2016-09-16 12:10:16 PM | 2016-09-16 12:12:21 PM | 2m4s     |  Complete |  |

4. Click the  icon to see the details of jobs run such as job name and status.

Content Flow Management  
 Job Management > itoc7.qa.opsware.com > Batch Id 1

Job entity details : itoc7.qa.opsware.com | Batch Id : 1 | Status :  Complete 

| Job Name | Step Name                | Start Time             | End Time               | Duration | Status   |
|----------|--------------------------|------------------------|------------------------|----------|--|
| DCS      | Flat File Generated.     | 2016-09-16 12:10:16 PM | 2016-09-16 12:10:22 PM | 6s       |  Complete |
| ETL      | ITOC_LIFECYCLE_LOOKUP_D  | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:00 PM | 30s      |  Complete |
| ETL      | ITOC_ORGANIZATION_D      | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:00 PM | 30s      |  Complete |
| ETL      | ITOC_RESOURCE_TYPE_D     | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:09 PM | 39s      |  Complete |
| ETL      | ITOC_SERVICE_REVISION_D  | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:09 PM | 39s      |  Complete |
| ETL      | ITOC_CONTROL_PARAMETER_D | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:09 PM | 39s      |  Complete |
| ETL      | ITOC_SERVICE_COMPONENT_D | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:09 PM | 39s      |  Complete |
| ETL      | ITOC_SLO_CONFORMANCE_F   | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:19 PM | 49s      |  Complete |
| ETL      | ITOC_RULE_D              | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:19 PM | 49s      |  Complete |
| ETL      | ITOC_RULE_PARAMETER_D    | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:30 PM | 1m       |  Complete |
| ETL      | ITOC_PERSON_D            | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:31 PM | 1m1s     |  Complete |
| ETL      | ITOC_PERSON_ROLE_D       | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:31 PM | 1m1s     |  Complete |
| ETL      | ITOC_REQUIREMENT_D       | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:39 PM | 1m9s     |  Complete |
| ETL      | ITOC_JOB_D               | 2016-09-16 12:10:29 PM | 2016-09-16 12:11:39 PM | 1m9s     |  Complete |

## Configure secure connection for SAP BusinessObjects server

After the SAP BusinessObjects installation, perform the following steps to configure a secure HTTPS connection.

1. Generate the keystore for SAP BusinessObjects Enterprise server. On the SAP BusinessObjects Enterprise server, SSH to the SAP BusinessObjects server and run the following commands in the Tomcat server.xml config file:
  - a. `keytool -genkey -alias tomcat -keyalg RSA -keystore /home/bocacerts`
  - b. `openssl genrsa -des3 -out /home/server.key 4096`
  - c. `openssl req -new -key /home/server.key -out /home/server.csr`
  - d. `openssl x509 -req -days 999 -in /home/server.csr -signkey /home/server.key -out /home/server.crt`
  - e. `keytool -import -alias root -keystore /home/bocacerts -trustcacerts -file /home/server.crt`

2. Edit `<BOE>/sap_bobj/tomcat/conf/server.xml`:  
Remove the comment for the connector with port 8443 and modify it as shown in the following example.

**Note:** Port 9443 is used in the example; however, you can use any free port in your environment:

...

```
<Connector port="9443" protocol="HTTP/1.1" SSLEnabled="true"
maxThreads="150" scheme="https" secure="true"
keystoreFile="/home/bocacerts" keystorePass="<keystore password set in above
step>" clientAuth="false" sslProtocol="TLS" />
```

3. Restart Tomcat in the SAP BusinessObjects Enterprise Central Configuration Manager:
  - a. Open the `<BOE>/sap_bobj/` folder.
  - b. Run the following commands:

```
./tomcatshutdown.sh
./tomcatstartup.sh
```

4. Using a database client such as Squirrel, change the SAP BusinessObjects open doc port in the ITBA management database:
  - Postgres DB: `xs_mng`
  - User: `xsadmin`
  - Password: `openview`
  - Table: `fnd.settings_management`
  - SQL script: `Update fnd.settings_management set VALUE = 9443 where CONTEXT = 'bo' and NAME = 'bo.cms.opendoc.port'`
5. SSH to the ITBA server. Change the SAP BusinessObjects open doc protocol to `https` in the SAP BusinessObjects settings XML.
  - a. Open `<HPBA>/glassfish/glassfish/domains/BTOA/config/settings/bo-settings.xml`
  - b. Update the protocol from `http` to `https`:

```
...
<setting name="bo.cms.protocol"
sectionKey="sections.bo"
nameKey="settings.bo.cms.protocol.name"
descKey="settings.bo.cms.protocol.desc"
refreshRate="Immediate"
displayInUI="false"
settingType="tenant">
<string>https</string>
</setting>
...
```
6. Restart the HPBA services:
  - a. Open `<HPBA>/supervisor/configure`
  - b. Run the command:

```
./install_supervisor_conf.sh
```
  - c. Open `<HPBA>/supervisor/bin`.
  - d. Run the command:

```
./hpba-restart.sh
```

## ITOC reporting URLs

| Interface                                      | URL                                     |
|--|---|
| ITBA web administration user interface         | https://<ITBA_Hostname>:<port(8443)>/ba |
| Business Intelligence Launch Pad               | https://<SAP-BOIPADDRESS:port>/BOE/BI   |
| SAP BusinessObjects Central Management Console | https://<SAP-BOIPADDRESS:port>/BOE/CMC  |

## Start and stop HPE ITOC Reporting components

| Path                                       | Description  |
|--|--|
| %HPBA_HOME%/supervisor/bin/hpba-start.sh   | Enter this command as to start the ITBA core server as a non-root user.            |
| %HPBA_HOME%/supervisor/bin/hpba-stop.sh    | Enter this command as non-root user to stop the ITBA core server.                  |
| %HPBA_HOME%/supervisor/bin/hpba-restart.sh | Enter this command to restart the ITBA core server as a non-root user.             |
| %HPBA_HOME%/supervisor/bin/hpba-status.sh  | Enter this command as a non-root user to check the status of the ITBA core server. |

| Path  | Description  |
|---|--|
| <code>&lt;BIP_INSTALL_DIR&gt;/sap_bobj/init/ SAPBOBJEnterpriseXI40 start</code><br>or<br><code>/etc/init.d/SAPBOBJEnterpriseXI40 start</code> | Enter one of these commands to start SAP BusinessObjects as a root user. |
| <code>&lt;BIP_INSTALL_DIR&gt;/sap_bobj/init/SAPBOBJEnterpriseXI40 stop</code><br>or<br><code>/etc/init.d/SAPBOBJEnterpriseXI40 start</code>   | Enter one of these commands to stop SAP BusinessObjects as a root user.  |

## Directory structure for HPE ITOC Reporting components

| Path  | Description   |
|---|---|
| <code>%HPBA_HOME%/supervisor/log</code>                                   | Location of the log file for the ITBA start/stop process.                               |
| <code>%HPBA_HOME%/glassfish/glassfish/domains/BTOA/logs</code>            | Location of the log files related to content pack deployment and ETL jobs.              |
| <code>%HPBA_HOME%/supervisor/bin</code>                                   | Location of ITBA start, stop, restart, status, and to check Vertica connection scripts. |
| <code>&lt;BIP_INSTALL_DIR&gt;/sap_bobj/init/ SAPBOBJEnterpriseXI40</code> | Location of SAP BusinessObjects start and stop.   |

## Use ITBA Web Intelligence to build reports

ITBA Web Intelligence reporting provides the ability to report on data from source systems such as HPE ITOC. You can select data from the source system reporting universes to build Web Intelligence documents that define and display historical and trending information about your IT operations.

### Before creating reports

Before you create a report in ITBA Web Intelligence, perform the following tasks:

- ["Configure user groups and permissions" below](#)
- ["Set security on folders" below](#)

### Configure user groups and permissions

Make sure that users and user groups that possess proper permissions to create reports have been created. The administrator has no restrictions.

### Set security on folders

Set security access for a user or group at the folder level to limit the types of information you can use to build reports.

For more information, refer to the following sections in the [HPE IT Business Analytics Administrator Guide](#):

- User Management
- LDAP Management
- LDAP in BusinessObjects

## Standard reports

Several reports are available for HPE ITOC that present the various types of data and historical information an HPE ITOC report can display.

These reports are part of the HPE ITOC Reporting content pack available at the Live Network (HPE LN) site.

You can find more information about the HPE LN service in the "HPE LN Content" chapter of the *HPE ITOC 1.20 Installation Guide*.

## Run standard reports

HPE ITOC admin users and non-admin users (including HPE ITOC LDAP users) can view and launch reports.

To run a standard report, perform the following steps:

1. Log in to the BI launch pad:  
`https://<SAP-B0-IP-ADDRESS:port>/BOE/BI`

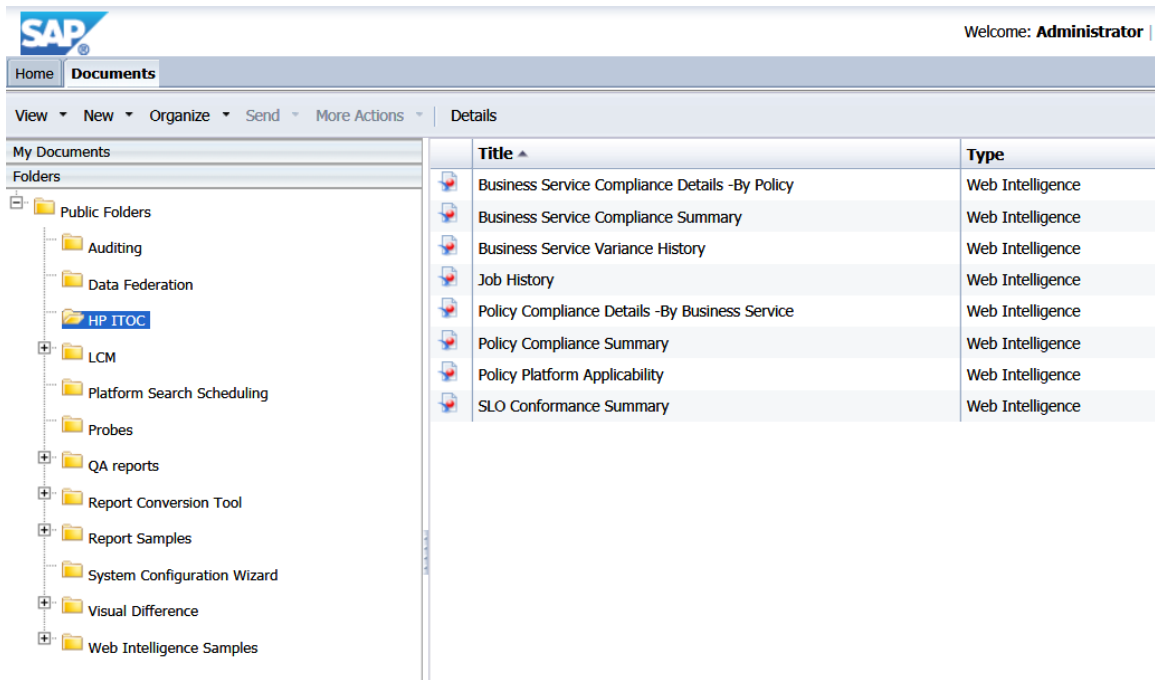
The BI launch pad login page opens.





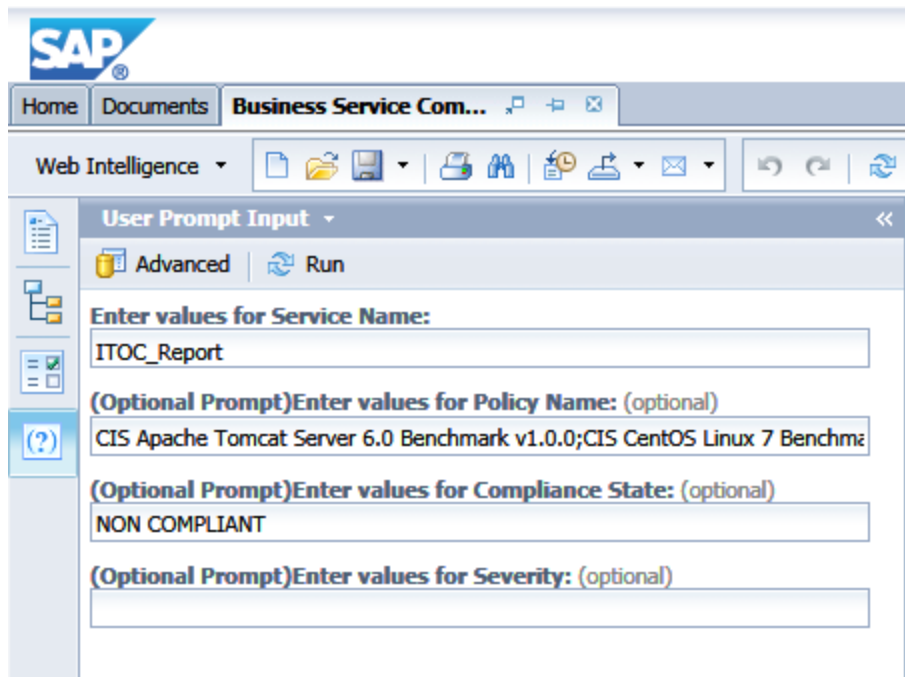
2. Enter the SAP BusinessObjects user name and password.
3. Click **Log On**.



4. In the BI launch pad, click the **Documents** tab.
5. Click to expand the **Folders** section.
6. Click **Public Folders**, then click to expand the **ITOC** folder.




7. Select **View** from the **View** menu or double-click the name of the report in the right pane to open the report.
8. Select the **User Prompt Input** (  ) icon and enter the required inputs for the report. You can also click the refresh (  ) icon to display a dropdown menu of user inputs.




9. Click **Run** to run the report.

## Build custom reports

1. Log in to the BI launch pad:  
<https://<SAP-BO-IP-ADDRESS:port>/BOE/BI>  
 The BI launch pad login page opens.



2. Enter the SAP BusinessObjects user name and password.
3. Click **Log On**.
4. From the **Applications** dropdown, select **Web Intelligence**. The **SAP BusinessObjects Web Intelligence** window opens.
5. In the **Web Intelligence** bar, click the New (  ) icon and select **Universe**. The **Create a Document** window opens.
6. Select **Universe**, and click **OK**.
7. The **Universe** window opens. Select the universe. For example, the ITOC 1.20 universe for HPE ITOC Reporting.
8. Click **Select**. The **Query Panel** opens.
9. In the left pane, expand the folders (classes) to view the available objects. Double-click an object to add it to the report.

**Note:** The objects that are available, and the combination of objects that can be used together in a report, depend on the universe. See the content pack user guides available from HPE LN for details about the objects and filters available in each universe.
10. Click **Run Query**.

## Configure the adaptive job server

The adaptive job server is the server responsible for scheduling jobs for SAP BusinessObjects reporting. To configure the adaptive job server, perform the following steps:

1. Log on to the CMC:  
<https://<SAP-BO-IP-ADDRESS>:port/BOE/CMC>
2. In the left pane, click **Servers List**.
3. In the **Server Name** column, right-click **SAP\_BO\_hostname.AdaptiveJobServer** and select **Properties**.
4. In the **Properties** window, click **Destination**.
5. Select the destination type (**FTP Server**, **BI Inbox**, **File System**, or **Email**).
6. Click **Save** and **Close** to return to the **CMC Servers** window.

## Schedule a report

The scheduling process allows you to run a report automatically at specified times. When you schedule a report, you choose the recurrence pattern that you want and specify additional parameters to control exactly when and how often the report will be run.

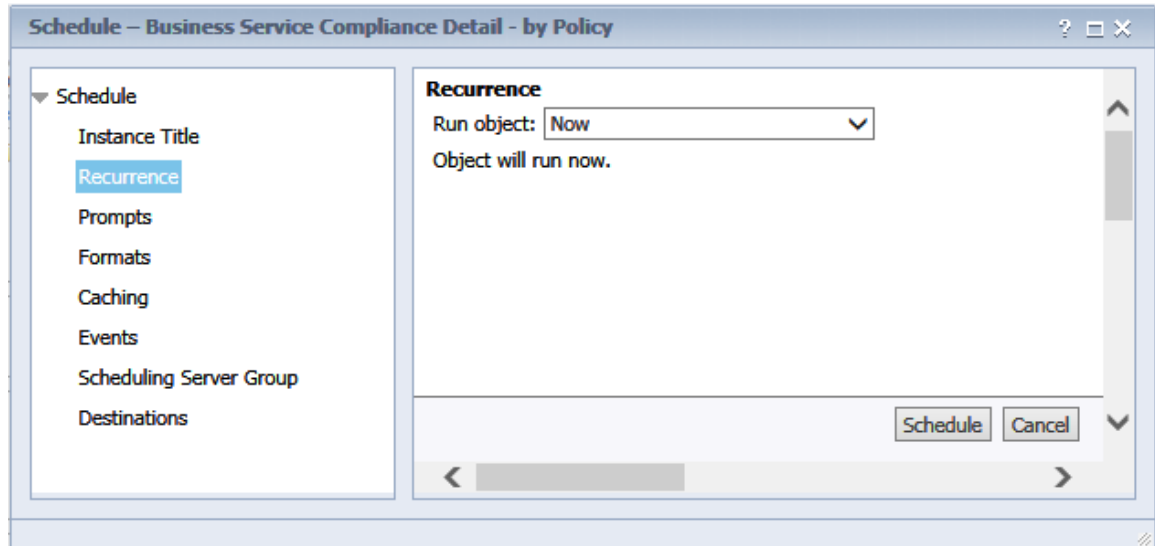
To schedule a report, perform the following steps:

1. Log in to the BI launch pad:  
<https://<SAP-BO-IP-ADDRESS:port>/BOE/BI>

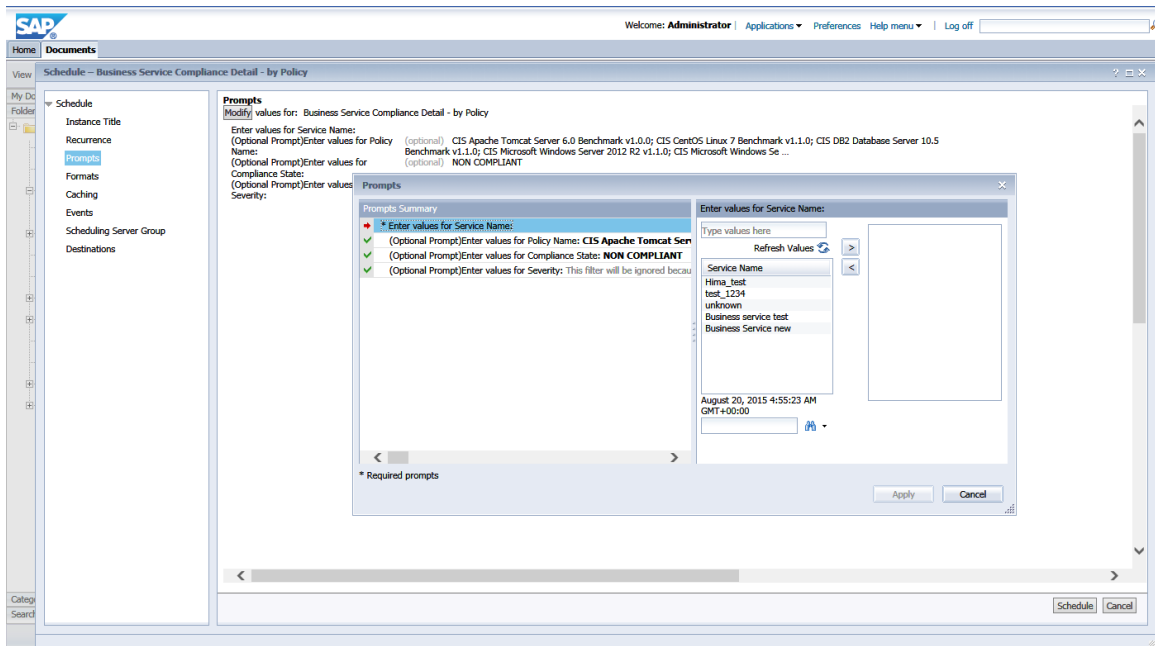
The BI Launch Pad login page opens:

2. Enter the HPE ITOC user name and password.
3. Click **Log On**.

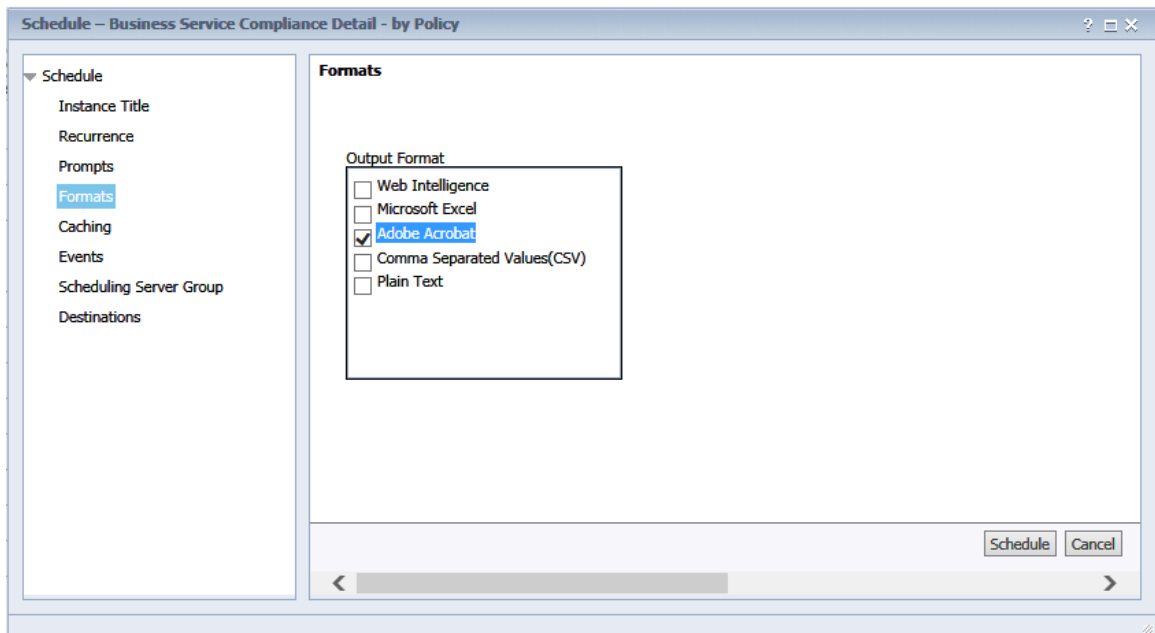
4. In the BI launch pad, click the **Documents** tab.
5. Click to expand the **Folders** section.
6. Click **Public Folders**, then click to expand the **ITOC** folder.
7. Right-click on the name of a report in the right pane and select **Schedule**. The **Schedule** window opens.
8. In the left pane, select **Recurrence**.



9. Select the recurrence you want from the **Run object** dropdown.
10. Click **Schedule**.
11. (Optional) In the left pane, select **Prompts** and click **Modify** to change the user input prompt values for the report. Select the prompt values, and click **Apply**.



12. (Optional) In the left pane, select **Formats** to change the output format for the report.




13. (Optional) In the left pane, select **Destinations** to configure the destination for the report. In the **Destinations** dropdown, select the destination type.

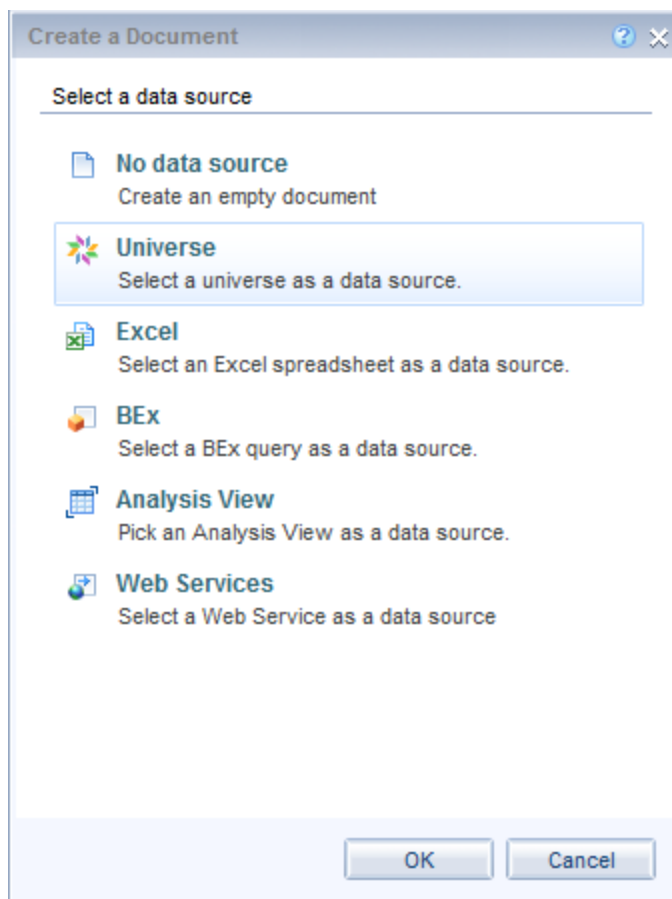
14. Click **Schedule**. The system creates a scheduled instance and runs it according to the schedule information you specify. You can view the scheduled instance on the **History** page for the object.

For more information about working with SAP BusinessObjects Web Intelligence reports, see the [SAP BusinessObjects Web Intelligence Users Guide](#).

## Merge objects from different classes

To create a report using multiple classes (ITOC inventory, ITOC compliance, and ITOC users and roles), perform the following steps:

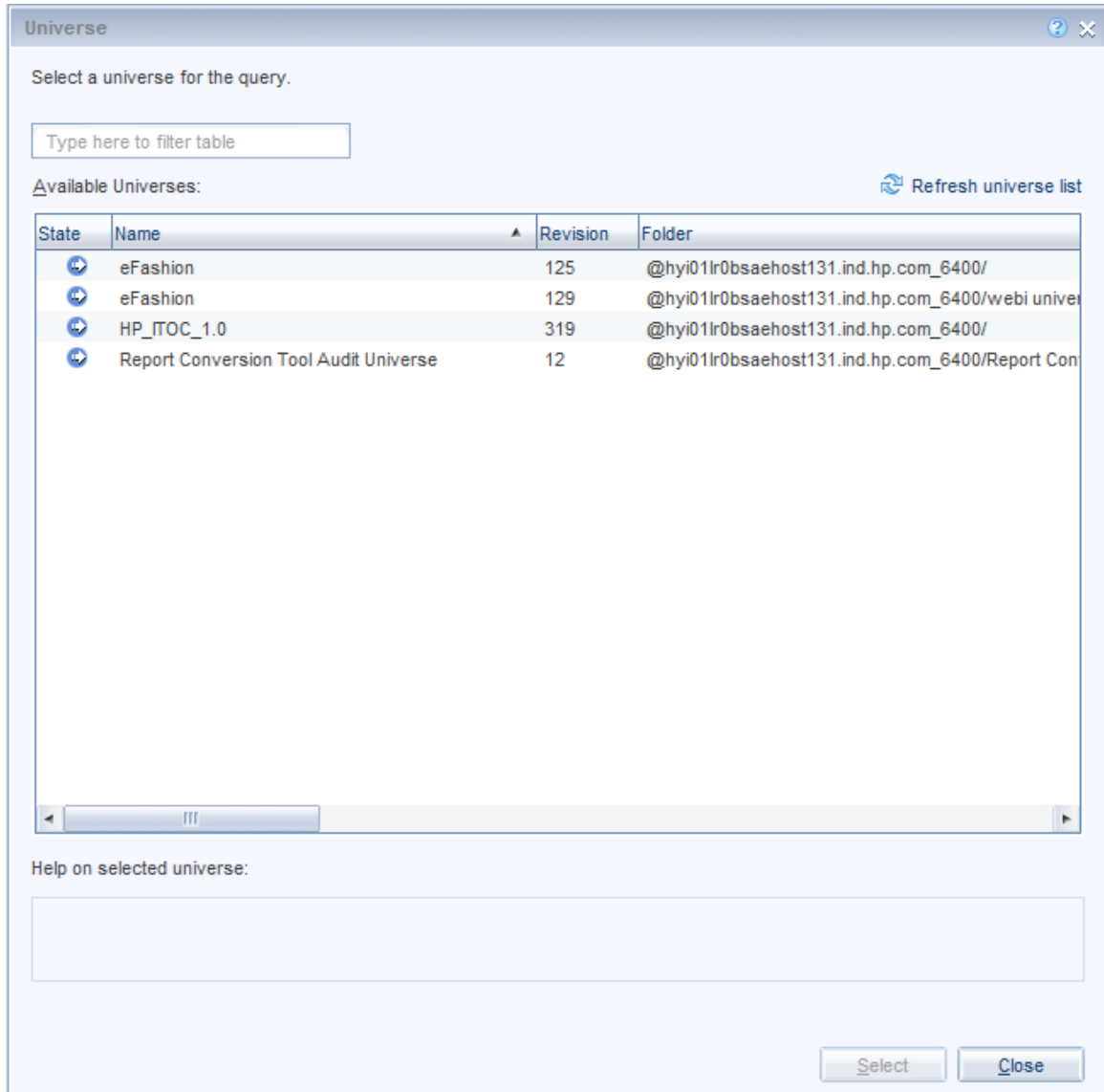
1. Log in to the BI launch pad:  
`https://<SAP-B0-IP-ADDRESS:port>/BOE/BI`
2. Enter the HPE ITOC user name and password.
3. Click **Log On**.
4. From the Applications dropdown, select **Web Intelligence**. The **SAP BusinessObjects Web Intelligence** window opens.
5. In the **Web Intelligence** bar, click the New (  ) icon and select **Universe**. The **Create a Document** window opens.



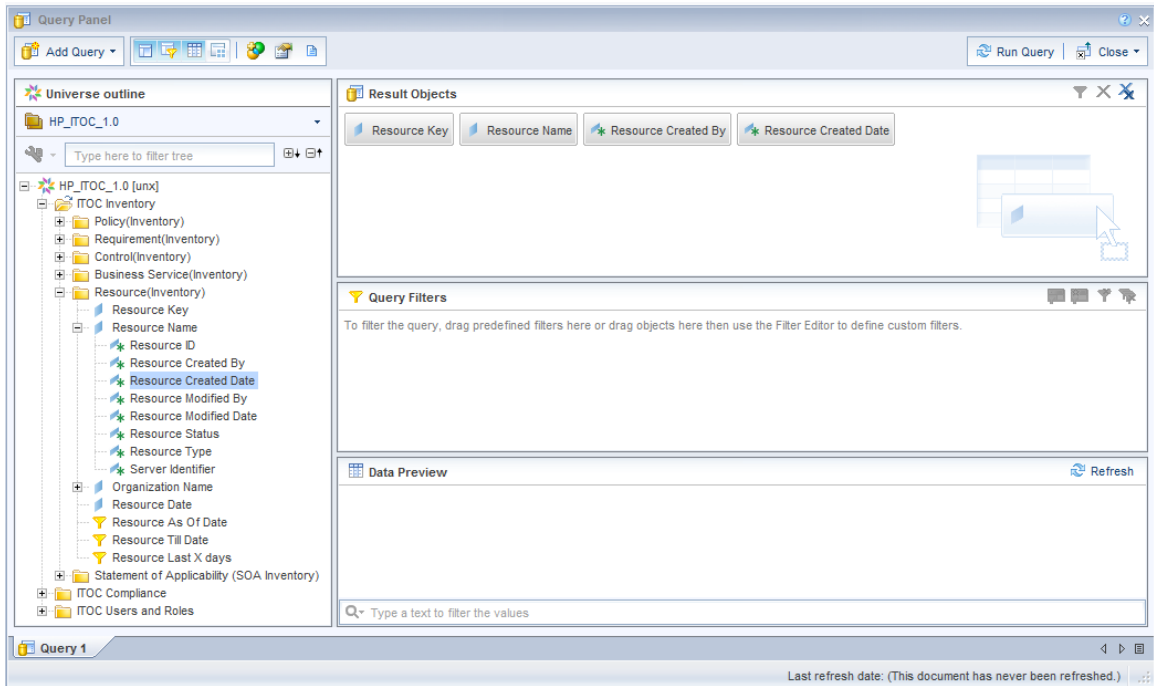
6. Select **Universe**, and click **OK**.



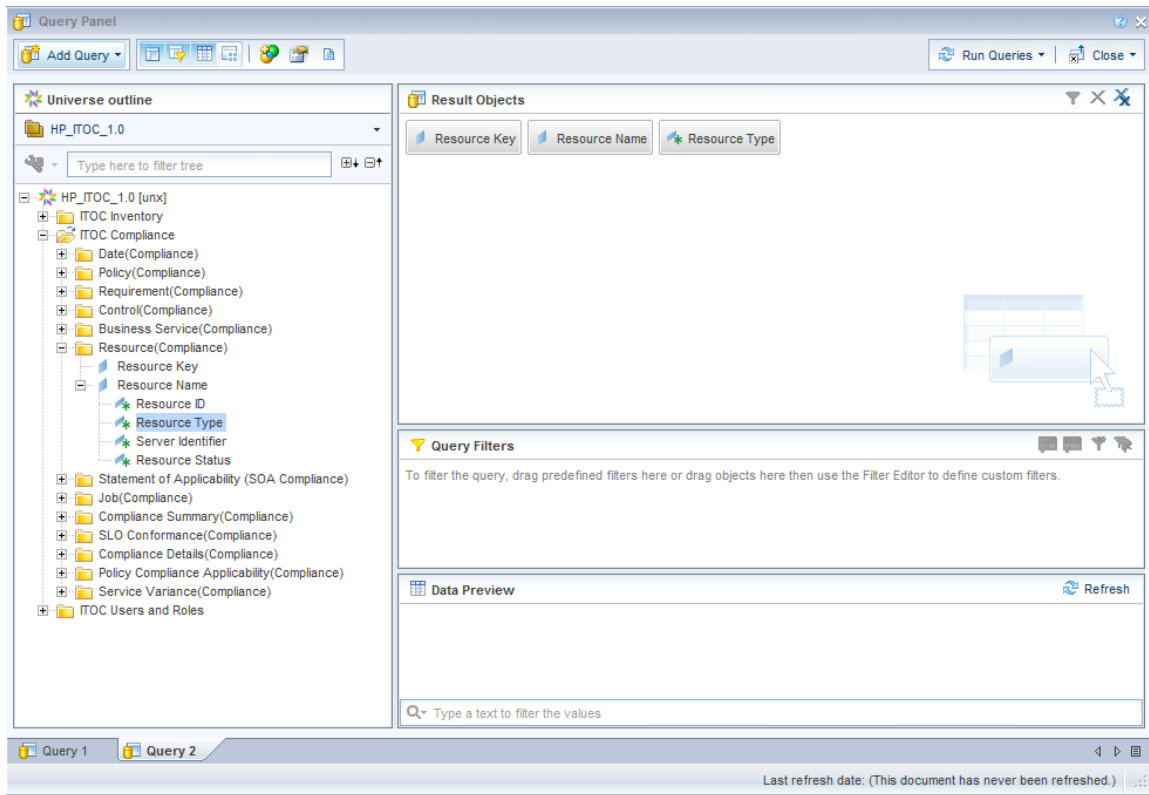
- The **Universe** window opens. Select the universe for HPE ITOC.




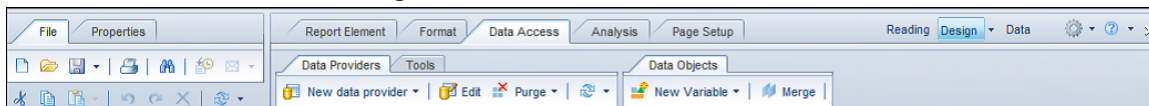
8. Click **Select**. The **Query Panel** opens.



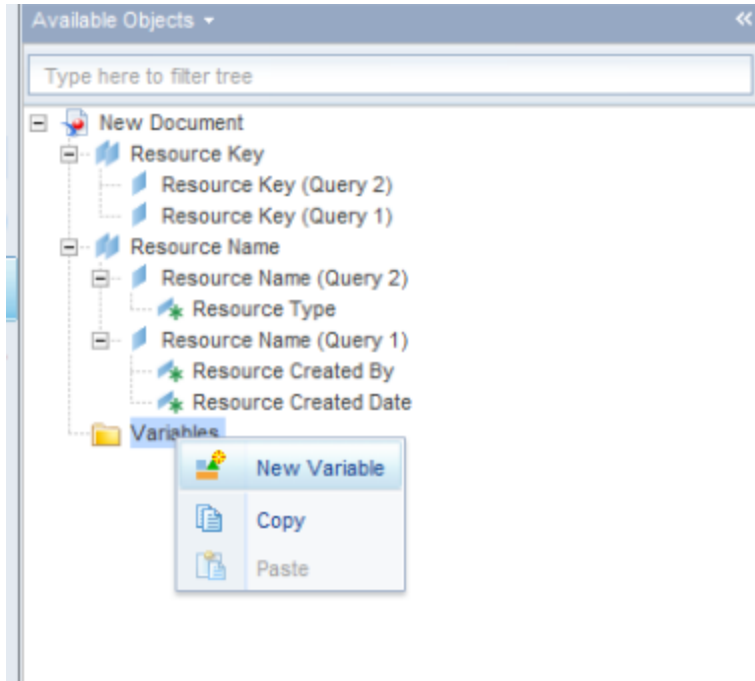
9. In the left pane, expand the folder in the **ITOC Inventory** section. Double-click an object to add it to the report. You must select at least one key object.
10. In the query pane, select **Add Query > From Universe** to select a second class (**ITOC Compliance** or **ITOC Users and Roles** in the example). The **Add Query** window opens.
11. Select the second class (**ITOC Compliance** or **ITOC Users and Roles** in the example) you want to include in your report.



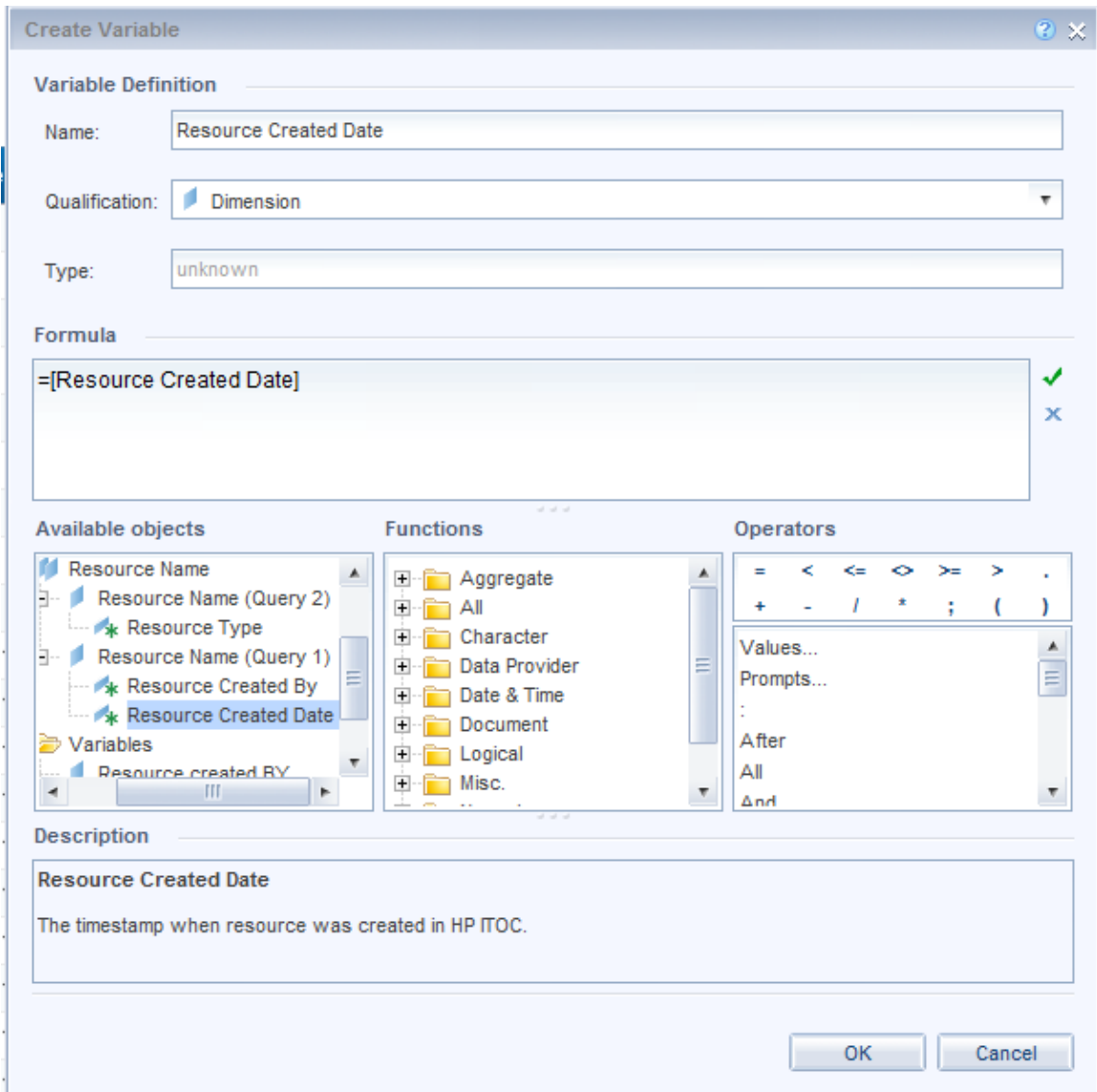
12. In the left pane, expand the **Objects** folder. Double click an object to add it to the report. You must select at least one key object.
13. Click **Run Queries**. If any user input prompts are required for the selected objects, the **Prompts** screen opens. Click the Refresh (  ) icon to display a dropdown menu of user input.
14. In the **Available Objects** window, select the objects that are common to both universes you selected.
15. In the **Data Access** tab, click **Merge**.




16. In the **Available Objects** window, right-click the **Variables** folder and select **New Variable**.

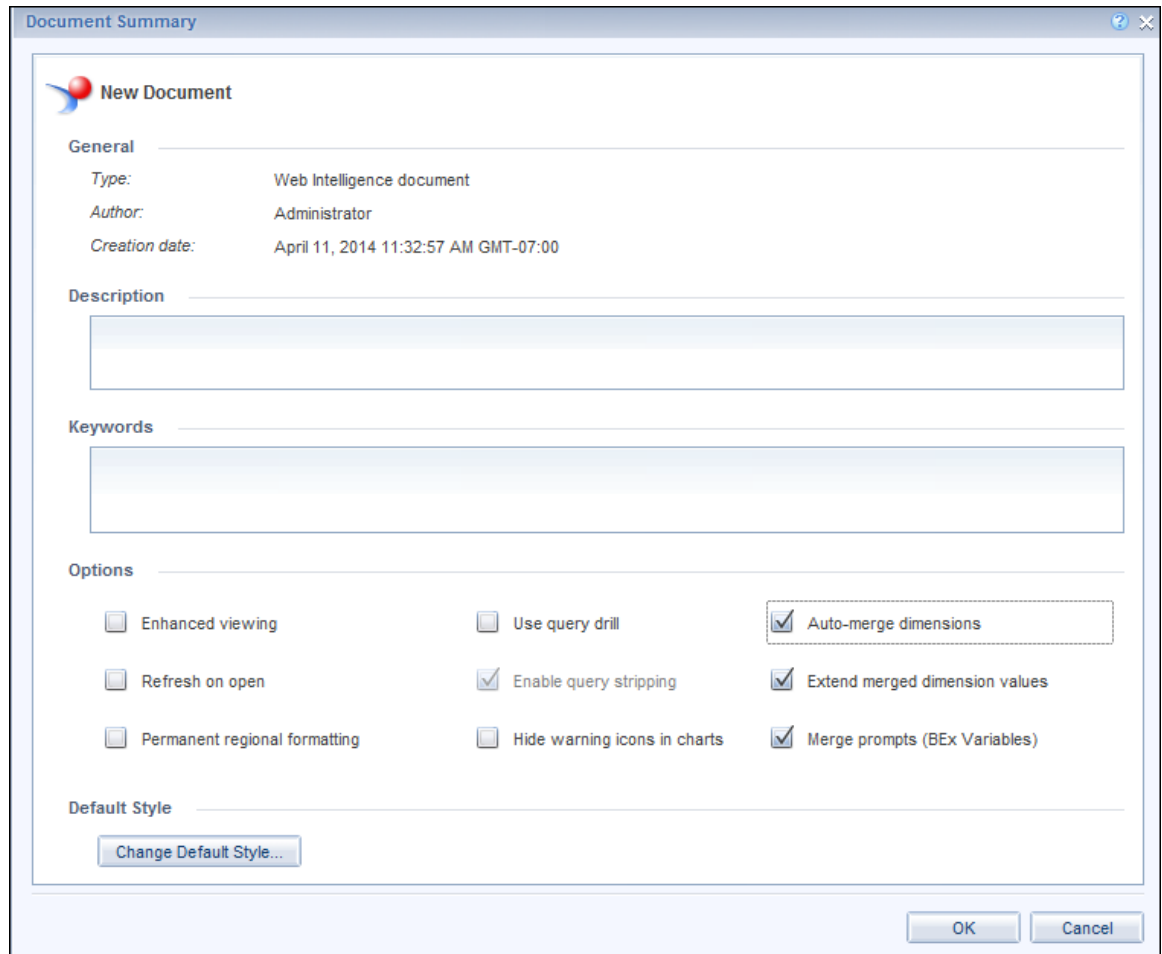


17. The **Create Variable** window opens. Enter a name for the object variable and select **Detail /Dimension** in the **Qualification** dropdown menu and create other detail object to dimension objects, as necessary.



18. Click the box next to the **Associated Dimension** field. The **Available Objects** window opens.
19. Select the objects you want to convert. Click **OK**.
20. Repeat steps 16 and 17 to create an object variable for each object you want to display in your report. This converts the dimension objects to detailed object and vice versa, so objects from the two classes can be synchronized.
21. (Optional) To merge dimensions from multiple classes, perform the following steps to modify the document summary:
  - a. Click the Document Summary () icon.
  - b. Click **Edit**. The **Document Summary** window opens.

- c. Select the **Auto-merge dimensions**, **Extend merged dimension values**, and **Merge prompts (BEx Variables)** options.



- d. Click **OK**.

The following example shows a report that merges objects from different classes:

Resource Information based on Created by and Created date

| Resource Key | Resource Name-new | Resource Type    | Resource created BY     | Resource Created DATE | Total Business Service |
|--------------|-------------------|------------------|-------------------------|-----------------------|------------------------|
| 1            | rhel -238 -6.4    | RHEL 6           | ITOC Admin(itocadmin)   | 8/26/2015 1:10:30 PM  | 1                      |
| 2            | 178-rhel 5        | RHEL 5           | ITOC Admin(itocadmin)   | 8/26/2015 1:11:39 PM  | 4                      |
| 3            | 227-new resource  | RHEL 6           | ITOC Admin(itocadmin)   | 9/2/2015 2:28:26 PM   | 5                      |
| 4            | BUSINESS SERVICE  | Business Service | System Admin(hpsysuser) | 8/19/2015 1:59:12 PM  | 17                     |
| 5            | rhel6-151         | RHEL 6           | ITOC Admin(itocadmin)   | 8/19/2015 2:24:49 PM  | 4                      |
| 6            | 177-rhel6         | RHEL 6           | ITOC Admin(itocadmin)   | 8/19/2015 2:41:55 PM  | 2                      |
| 7            | rhel 6-121        | RHEL 6           | ITOC Admin(itocadmin)   | 8/20/2015 9:39:42 AM  | 1                      |

# HPE ITOC compliance reports

This topic describes HPE ITOC standard reports and compliance information.

- "Business service compliance detail - by policy" below
- "Business service compliance summary" on the next page
- "Business Service variance history" on page 50
- "Job history" on page 51
- "Policy ompliance Detail - by business service" on page 52
- "Policy compliance summary" on page 53
- "Policy platform applicability" on page 55
- "SLO conformance summary" on page 56

## Business service compliance detail - by policy

Run this report to see detailed **Compliance State** of a business service (or multiple business services) relative to a specific policy. This report provides rule-level information about the compliance scan run for each business service to which each selected policy is attached, along with the compliance severity and last scan date.

## Prerequisites for displaying meaningful data

Before you run this report, perform the following tasks on your HPE ITOC server:

- Define at least one policy that contains rules.
- Confirm that a compliance scan or remediation job runs against the revision of the current production policy and business service associated with the production revision of the SoA.
- Attach the business service to a server and run a job (to learn whether the server is compliant).
- Remediate non-compliant servers.

## User prompt input

**Business Service Name:** - Select the business service(s) for which the report needs to be run.

**Report Date:** - Enter the date of the report (the default value is today's date).

**Policy Name:** (optional) - Select the policy(s) for which the report needs to be run.

**Compliance State:** (optional) – Select the compliance state(s).

**Severity:** (optional) – Select the severity(s).

## Table

The following example table shows the detailed information of a business service on which this report was run.

|                      |         |
|----------------------|---------|
| Report Executed Date | 9/29/15 |
|----------------------|---------|

|                       |   |
|-----------------------|---|
| Business Service Name | 2 sep business service                          |
| Policy Name           | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 |
| Resource Name         | 227-new resource                                |
| Last Measurement Date | 9/2/15  |

| Requirement Name  | Rule Name  | Control Name                                     | Desired State  | Actual Value   | Compliance State | Severity | Days Non-Compliant |
|---|--|--|----------------|--|------------------|----------|--------------------|
| 1.1.17 Set Sticky Bit on All World Writable Directories | RHEL 6: Set Sticky Bit on All World-Writable Directories | Set Sticky Bit on All World-Writable Directories | "%All% %Z"     | "/opt/vertical/example/in/opt/vertical/examples/VMart_Schema/in/opt/vertical/config/logrotate" | Non-Compliant    | Medium   | 0                  |
| 1.3.2 Implement Periodic Execution of File Integrity    | RHEL 6:determine if there is a cron job scheduled(aide)  | determine if there is a cron job scheduled       | "usr/bin/aide" | -  | Non-Compliant    | Medium   | 0                  |
| 1.4.6 Check for Unconfined Daemons                      | RHEL 6:Check for Unconfined Daemons                      | Check for Unconfined Daemons                     | "%All% %Z"     | -  | Compliant        | Medium   |                    |

## Business service compliance summary

Run this report to see the compliance score of selected policies across all business services. Results show the compliance score of each policy to which each selected business service is attached, along with the last scan date and worst severity.

If a scan is performed multiple times during one day, then the report uses only the last scan run for that business service on that day.



## Prerequisites for displaying meaningful data

Before you run this report, perform the following tasks on your HPE ITOC server:

- Define at least one policy that contains rules.
- Confirm that a compliance scan or remediation job runs against the revision of the current production policy and business service associated with the production revision of the SoA.
- Attach the business service to a server and run a job (to learn whether the server is compliant).
- Remediate non-compliant servers.

## User prompt input

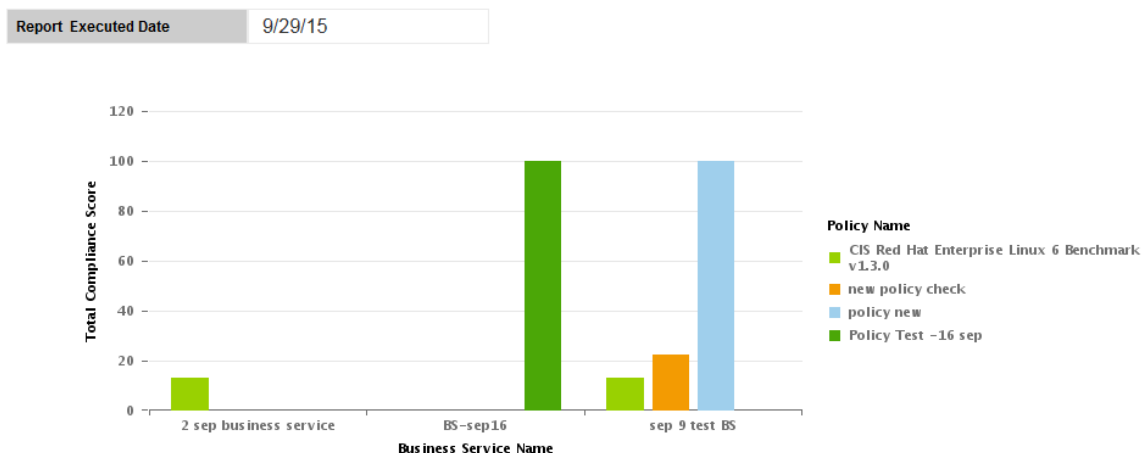
**Business Service Name:** - Select the business service(s) for which the report needs to be run.

**Policy Name:** - Select the policy(or policies) for which the report needs to be run.

**Report Date:** - Enter the report date. The report will display details until the date entered.

## Graph

The following example graph shows the compliance score for each policy to which each selected business service is attached.



## Table

The following example table lists the compliance score for each policy to which each selected business service is attached, along with the last scan date and worst severity.

|                              |               |
|------------------------------|---------------|
| <b>Business Service Name</b> | sep 9 test BS |
|------------------------------|---------------|

| Policy Name                                     | Policy Revision Lifecycle | Compliance Score | Worst Severity | Last Scan Date  |
|---|---------------------------|------------------|----------------|-----------------|
| CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 | 9(Production)             | 13               | Medium         | 9/16/15 9:29 AM |
| new policy check                                | 2(Production)             | 22               | High           | 9/10/15 5:50 AM |
| policy new                                      | 2(Production)             | 100              | High           | 9/16/15 9:33 AM |

## Business Service variance history

Run this report to see the compliance state change history, proving the chain of evidence for a business service across all its associated policies. Results show **State Changed Type** for each business service to which each selected policy is attached, along with the **SLO confirm** and **Actual State**.

## Prerequisites for displaying meaningful data

Before you run this report, perform the following tasks on your HPE ITOC server:

- Define at least one policy that contains rules.
- Confirm that a compliance scan or remediation job runs against the revision of the current production policy and business service associated with the production revision of the SoA.
- Attach the business service to a server and run a job (to learn whether the server is compliant).
- Remediate non-compliant servers.

## User prompt input

**Business Service Name:** - Select the business service(s) for which the report needs to be run.

**Policy Name:** (optional) - Select the policy(s) for which the report needs to be run.

**Severity:** (optional) – Select the severity(s).

**Start Date:** - Enter the start date of the report.

**End Date:** - Enter the end date of the report.

## Table

The following example table lists the detailed compliance state change history, proving the chain of evidence for a business service.

|                              |                  |  |  |  |  |  |
|------------------------------|------------------|--|--|--|--|--|
| <b>Business Service Name</b> | new bbusep 92015 |  |  |  |  |  |
| <b>Policy Name</b>           | new policy check |  |  |  |  |  |
| <b>Resource Name</b>         | 227-new resource |  |  |  |  |  |

| Requirement Name | Rule Name   | Control Name  | Actual State  | State Changed Date   | State Changed Type | SLO confirm |
|------------------|---|---|---------------|----------------------|--------------------|-------------|
| new              | Content Matching in specified file with remediation | Content Matching in specified file with remediation | COMPLIANT     | 9/15/2015 5:06:34 AM | RESOLUTION         | CONFIRMING  |
| sdsad            | Rsyslog.conf Parameter Setting                      | Rsyslog.conf Parameter Setting                      | NON-COMPLIANT | 9/15/2015 5:06:34 AM | VARIANCE           | CONFIRMING  |

## Job history

Run this report to see the status of the various jobs executed, fully documenting the history of actions related to the business service. Results show job details for each business service to which each selected policy is attached, along with **Number of Resources** and **Job Execution Time**.

## Prerequisites for displaying meaningful data

Before you run this report, perform the following tasks on your HPE ITOC server:

- Define at least one policy that contains rules.
- Confirm that a compliance scan or remediation job runs against the revision of the current production policy and business service associated with the production revision of the SoA.
- Attach the business service to a server and run a job (to learn whether the server is compliant).

## User prompt input

**Business Service Name:** - Select the business service(s) for which the report needs to be run.

**Job Type:** (optional) - Select the job type(s) for which the report needs to be run.

## Table

The following example table lists the detailed job information of a business service.

| Business Service Name | Business service test |           |   |            |                    |                       |                           |
|-----------------------|-----------------------|-----------|---|------------|--------------------|-----------------------|---------------------------|
| Job ID                | Job start Time        | Job Type  | Policy Name                                     | Job Status | Number of Resource | Job Run By            | Job Execution Time        |
| 1                     | 8/19/2015 2:33:40 PM  | SCAN      | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 | Completed  | 2                  | Job Runner(jobrunner) | 0 Hours 8 Mins 33 Seconds |
| 3                     | 8/20/2015 1:31:55 PM  | REMEDiate | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 | Completed  | 2                  | Job Runner(jobrunner) | 0 Hours 1 Mins 45 Seconds |
| 4                     | 8/20/2015 1:38:55 PM  | SCAN      | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 | Completed  | 2                  | Job Runner(jobrunner) | 0 Hours 1 Mins 44 Seconds |
| 5                     | 8/20/2015 2:04:02 PM  | SCAN      | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 | Completed  | 2                  | Job Runner(jobrunner) | 0 Hours 0 Mins 49 Seconds |
| 6                     | 8/22/2015 10:07:06 AM | SCAN      | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 | Completed  | 2                  | Job Runner(jobrunner) | 0 Hours 2 Mins 5 Seconds  |

## Policy ompliance Detail - by business service

Run this report to see the detailed **Compliance State** of a policy (or multiple policies) relative to a specific business service. This report provides rule-level information about the compliance scan run for each policy to which each selected business service is attached, along with the compliance **Severity** and last scan date.

## Prerequisites for displaying meaningful data

Before you run this report, perform the following tasks on your HPE ITOC server:

- Define at least one policy that contains rules.
- Confirm that a compliance scan or remediation job runs against the revision of the current production policy and business service associated with the production revision of the SoA.

- Attach the business service to a server and run a job (to learn whether the server is compliant).
- Remediate non-compliant servers.

## User prompt input

**Policy Name:** - Select the policy(s) for which the report needs to be run.

**Report Date:** Enter the report date. The report will display details until the date entered.

**Business Service Name:** (optional) - Select the business service(s) for which the report needs to be run.

**Compliance State:** (optional) - Select the compliance state(s) (the default is **Non-Compliant**).

**Severity:** (optional) - Select the severity(s).

## Table

The following example table shows the detailed information about the compliance scan run for each policy.

|                       |   |  |  |  |  |  |  |
|-----------------------|---|--|--|--|--|--|--|
| Report Executed Date  | 9/30/15   |  |  |  |  |  |  |
| Policy Name           | CIS Red Hat Enterprise Linux 5 Benchmark v2.1.0 |  |  |  |  |  |  |
| Business Service Name | laxmi-business                                  |  |  |  |  |  |  |
| Resource Name         | 178-rhel 5                                      |  |  |  |  |  |  |
| Last Measurement Date | 8/31/15   |  |  |  |  |  |  |

| Requirement Name  | Rule Name  | Control Name                                     | Desired State   | Actual Value   | Compliance State | Severity | Days Non-Compliant |
|---|--|--|-----------------|----------------|------------------|----------|--------------------|
| 1.1.17 Set Sticky Bit on All World Writable Directories | RHEL 5: Set Sticky Bit on All World-Writable Directories | Set Sticky Bit on All World-Writable Directories | "WAlle"lZ"      | "opt/Oracle32" | Non-Compliant    | Medium   | 0                  |
| 1.3.2 Implement Periodic Execution of File Integrity    | RHEL 5: determine if there is a cron job scheduled(aide) | determine if there is a cron job scheduled       | "usr/sbin/aide" | -              | Non-Compliant    | Medium   | 0                  |
| 1.4.6 Check for Unconfined Daemons                      | RHEL 5: Check for Unconfined Daemons                     | Check for Unconfined Daemons                     | "WAlle"lZ"      | -              | Compliant        | Medium   |                    |

## Policy compliance summary

Run this report to see the **Compliance Score** of selected business services across all policies. Results show the **Compliance Score** for each business service to which each selected policy is attached, along with the **Business Service Priority** and **Last Scan Date**.

If a scan is performed multiple times during one day, then the report uses only the last scan run for that business service on that day.

## Prerequisites for displaying meaningful data

Before you run this report, perform the following tasks on your ITOC server:

- Define at least one policy that contains rules.
- Confirm that a compliance scan or remediation job runs against the revision of the current production policy and business service associated with the production revision of the SoA.
- Attach the business service to a server and run a job (to learn whether the server is compliant).
- Remediate non-compliant servers.

## User input prompts

**Policy Name:** - Select the policy(s) for which the report needs to be run.

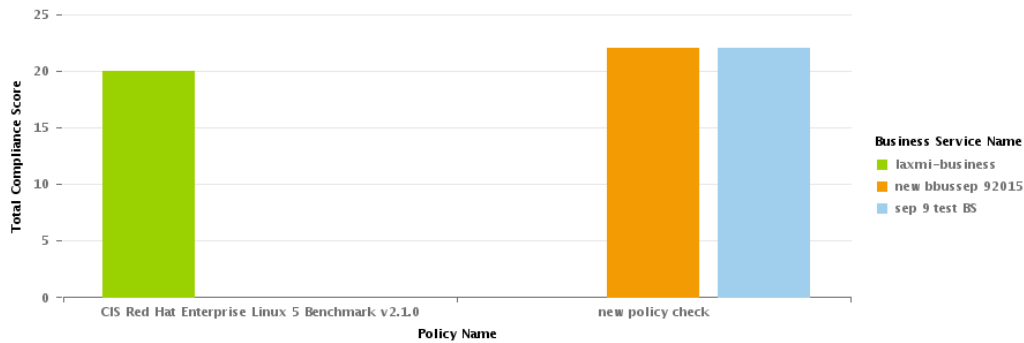
**Business Service Name:** - Select the business service(s) for which the report needs to be run.

**Report Date:** - Enter the report date. The report will display details until the date entered.

## Graph

The following example graph shows the compliance score of a selected business service across all policies.

Report Executed Date 9/30/15



## Table

The following example table lists the compliance for each business service to which each selected policy is attached, along with the business service priority and last scan date.

|                 |   |
|-----------------|---|
| Policy Name     | CIS Red Hat Enterprise Linux 5 Benchmark v2.1.0 |
| Policy Revision | 4(Production)                                   |

| Business Service Name | Business Service Priority | Compliance Score | Worst Severity | Last Scan Date |
|-----------------------|---------------------------|------------------|----------------|----------------|
| laxmi-business        | Gold                      | 20               | Medium         |                |

|                 |                  |
|-----------------|------------------|
| Policy Name     | new policy check |
| Policy Revision | 2(Production)    |

| Business Service Name | Business Service Priority | Compliance Score | Worst Severity | Last Scan Date  |
|-----------------------|---------------------------|------------------|----------------|-----------------|
| new bbusep 92015      | Silver                    | 22               | High           | 9/15/15 5:06 AM |
| sep 9 test BS         | Silver                    | 22               | High           | 9/10/15 5:50 AM |

## Policy platform applicability

Run this report to see the applicability of controls by platform (resource type) for a specific policy. Results show the control **Parameter Name** and **Target Value** based on the policy name and its

revision.

## User prompt input

**Policy Name:** - Select the policy(s) for which the report needs to be run.

**Resource Name:** (optional) - Select the resource(s) for which the report needs to be run.

**Policy Revision:** - Select the revision(s) for which the report needs to be run.

## Table

The following example table shows the control **Parameter Name** and **Target Value** based on the policy name and its revision.

|                        |   |
|------------------------|---|
| <b>Policy Name</b>     | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 |
| <b>Policy Revision</b> | 8   |
| <b>Resource Type</b>   | RHEL 6  |

| Requirement Name  | Rule Name   | Control ID  | Control Name                                     | Parameter Name | Target Value   | Severity |
|---|---|-------------|--|----------------|----------------|----------|
| 1.1.17 Set Sticky Bit on All World Writable Directories | RHEL 6:Set Sticky Bit on All World-Writable Directories | CTRL_000050 | Set Sticky Bit on All World-Writable Directories | expectedValue  | Wls*Z          | Medium   |
| 1.3.2 Implement Periodic Execution of File Integrity    | RHEL 6:determine if there is a cron job scheduled(aide) | CTRL_000045 | determine if there is a cron job scheduled       | expectedValue  | /usr/sbin/aide | Medium   |
| 1.3.2 Implement Periodic Execution of File Integrity    | RHEL 6:determine if there is a cron job scheduled(aide) | CTRL_000045 | determine if there is a cron job scheduled       | File System    | aide           | Medium   |
| 1.4.6 Check for Unconfined Daemons                      | RHEL 6:Check for Unconfined Daemons                     | CTRL_000048 | Check for Unconfined Daemons                     | expectedValue  | Wls*Z          | Medium   |

## SLO conformance summary

Run this report to see the compliance score of selected business services across all selected policies. Results show measurement SLO and remediation SLO for each policy across every selected business service.

If a scan is performed multiple times during one day, then the report uses only the last scan run for that business service on that day.



## Prerequisites for displaying meaningful data

Before you run this report, perform the following tasks on your HPE ITOC server:

- Define at least one policy that contains rules.
- Confirm that a compliance scan or remediation job runs against the revision of the current production policy and business service associated with the production revision of the SoA.
- Attach the business service to a server and run a job (to learn whether the server is compliant).
- Remediate non-compliant servers.

## User prompt input

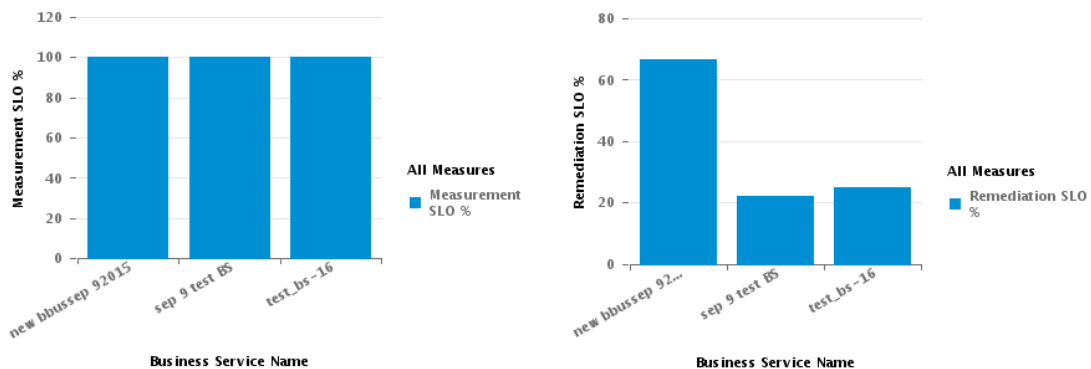
**Business Service Name:** - Select the business service(s) for which the report needs to be run.

**Policy Name:** - Select the policy(s) for which the report needs to be run.

**Report Date:** - Enter the report date. The report will display details until the date entered.

## Graph

The following example shows measurement SLO and remediation SLO for each policy across every selected business service.



## Table

The following example table shows **Measurement Percent within MSLO**, **Measurement SLO Level**, **Remediation SLO Level (in Days)**, and **Remediate Percent within RSLO** for each policy across every selected business service.

| Business Service Name | Policy Name                                     | Measurement Percent within MSLO | Remediate Percent Within RSLO | Measurement SLO Level | Remediation SLO Level (In Days) |
|-----------------------|---|---------------------------------|-------------------------------|-----------------------|---------------------------------|
| new bbusep 92015      | new policy check                                | 100                             | 66.67                         | 1 Month               | 14                              |
| sep 9 test BS         | CIS Red Hat Enterprise Linux 6 Benchmark v1.3.0 | 100                             | 0                             | 12 Months             | 14                              |
| sep 9 test BS         | new policy check                                | 100                             | 66.67                         | 1 Month               | 50                              |
| sep 9 test BS         | policy new                                      | 100                             | 0                             | 2 Weeks               | 14                              |
| test_bs-16            | new test policy                                 | 100                             | 50                            | 1 Month               | 14                              |
| test_bs-16            | Policy Test -16 sep                             | 100                             | 0                             | 1 Month               | 14                              |

# HPE ITOC universe





The HPE ITOC Universe defines classes that contain typical HPE ITOC objects related to compliance and inventory. When you run either a standard or a custom compliance report, you will use these objects. The resulting reports provide information about the compliance levels of your HPE ITOC devices.


## Universe elements

Universes contain three basic elements: objects, classes, and query filters.

### Object

An object represents a specific set of data in your HPE ITOC database. Each object is given a term that has specific meaning in HPE ITOC. The types of objects are as follows:

- **Dimension** - A dimension object (  ) retrieves the data that provides the basis for analysis in a report. Dimension objects typically retrieve character type data. For example, on an HPE ITOC machine, the business service contains dimensions such as Business Service Name, Business Service ID, and Business Service Priority.
  - An associated dimension object (  ) is related to the dimension above it.
- **Measure** - A measure object (  ) performs a numerical evaluation on the data in the database report. An example of a measure object is Number of Policies.
- **Class** - A class is a logical grouping of related objects. Web Intelligence represents a class with a folder (  ) icon. Each class can contain one or more subclasses. Subclasses contain objects that are further categorized into subcategories.

When you create queries on a universe, classes help you to find the objects that represent the information that you want to find.
- **Query Filter** - A query filter object allows you to restrict the data returned by an object in a query. Query filters are represented by a yellow funnel (  ) icon. Two examples of query filters are Till Date and As Of Date. These query filters enable you to select the time frame for the report.

**Note:** Date filters carry a timestamp of 00:00:00. A report with a date filter of "Today" will not include items that were inserted in the database after midnight. To capture items inserted in the database after midnight, set the date filter to tomorrow's date.

## Universe descriptions

- **ITOC Universe:** This universe contains information about HPE ITOC inventory, HPE ITOC compliance, and HPE ITOC users and roles.


## Log in to the HPE ITOC universe

Perform the following steps to log in to the HPE ITOC Universe.

1. Log in to the BI Launch Pad:  
`https://<SAP-BO-IP-ADDRESS:port>/BOE/BI`

The BI Launch Pad login page opens:



2. Enter the SAP BO user name and password.
3. Click **Log On**.
4. From the **Applications** drop-down, select **Web Intelligence**. The **SAP BusinessObjects Web Intelligence** window opens.
5. In the **Web Intelligence** bar, click the **New** (  ) icon and select **Universe**. The **Create a Document** window opens.
6. Select **Universe**, and click **OK**.
7. The **Universe** window opens. Select the universe.

The following sections describe the classes and objects for the ITOC Universe:

- ["HPE ITOC inventory" below](#)
- ["HPE ITOC compliance" on page 71](#)
- ["HPE ITOC users and roles" on page 83](#)

## HPE ITOC inventory

The HPE ITOC Inventory class represents HPE ITOC inventory-related classes and objects.







By using HPE ITOCinventory, users can:












- See all business services and policies for a resource.
- See all inventory-related details.
- See all requirements and rules for policies.










## Policy (Inventory)

The Policy (Inventory) class represents the policies in HPE ITOC.

### ITOC Inventory > Policy (Inventory) class

| Object                | Object type  | Data type | Description  |
|-----------------------|--|-----------|--|
| Policy Key            |  Dimension            | Number    | The policy key in HPE ITOC   |
| Policy Name           |  Dimension            | String    | Policy name in HPE ITOC  |
| Policy ID             |  Associated dimension | Number    | Policy ID in HPE ITOC  |
| Policy Modified Date  |  Associated dimension | Date      | Timestamp when a policy was modified in HPE ITOC   |
| Policy Modified By    |  Associated dimension | String    | User who modified the policy in HPE ITOC. This attribute is in the format of "First_name Last_Name(Login_name)". |
| Policy Effective Date |  Associated dimension | Date      | Effective date of the policy in HPE ITOC. The date when the policy goes  |





| Object                        | Object type  | Data type | Description   |
|-------------------------------|--|-----------|---|
|                               |  |           | to activation state in HPE ITOC.  |
| Policy Created Date           |  Associated dimension   | Date      | Timestamp when the policy was created in HPE ITOC   |
| Policy Created By             |  Associated dimension   | String    | User who created the policy in HPE ITOC. This attribute is in the format of "First_name Last_Name(Login_name)".   |
| Policy Description            |  Associated dimension   | String    | Detailed description of a policy in HPE ITOC  |
| Policy Revision Lifecycle     |  Dimension              | String    | Revision of the policy along with the lifecycle state of the policy. This attribute is in the format of "Policy_Revision(Lifecycle_state). For example, "1(Draft)".                                 |
| Policy Revision Modified Date |  Associated dimension   | Date      | Modified date of a policy revision  |
| Policy Revision Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified this policy revision   |
| Policy Revision Created Date  |  Associated dimension | Date      | Timestamp when the policy revision was created  |
| Policy Revision Created By    |  Associated dimension | String    | First name, last name, and login name of the user who created this policy revision  |
| Remediation SLO               |  Dimension            | Number    | The service level objects (SLOs) defined for remediation. When the remediation level is defined as 15 days, remediation must happen with 15 days of discovery of the non-compliant state of a rule. |
| Measurement SLO               |  Dimension            | String    | SLOs defined for measurement. When the measurement level is defined as 1 month, the measurement must happen within the defined MSLO level to meet the MSLO.   |
| Organization Name             |  Dimension            | String    | Organization name with which the policy is associated in HPE ITOC.  |






| Object                     | Object type  | Data type | Description   |
|----------------------------|--|-----------|---|
| Organization Modified Date |  Associated dimension | Date      | Timestamp when an organization was modified in HPE ITOC.                        |
| Organization Modified By   |  Associated dimension | String    | User who modified the organization in HPE ITOC.                                 |
| Organization Created Date  |  Associated dimension | Date      | Timestamp when the organization was created in HPE ITOC.                        |
| Organization Created By    |  Associated dimension | String    | First name, last name, and login name of the user who created the organization. |
| Number of Business Service |  Measure              | Number    | Total number of business services.  |
| Policy Date                |  Dimension            | Date      | Represents a policy date value in UTC.  |
| Policy Till Date           |  Filter               | Date      | Historical data is shown until the user-selected date.                          |
| Policy Last X Days         |  Filter             | Number    | Query results for the last <x> number of days.                                  |
| Policy As Of Date          |  Filter             | Date      | User-selected date. If no date is selected, today's date is used.               |

## Requirement (Inventory)

The Requirement (Inventory) class represents requirements in HPE ITOC.

### ITOC Inventory > Requirement (Inventory) class







| Object                  | Object type  | Data type | Description   |
|-------------------------|--|-----------|---|
| Requirement Key         |  Dimension            | Number    | Requirement key.  |
| Requirement Name        |  Dimension            | String    | Requirement name in HPE ITOC.                                     |
| Requirement Description |  Associated dimension | String    | Requirement description in HPE ITOC.                              |
| Requirement Created By  |  Associated dimension | String    | First name, last name, and login name of the user who created the |

| Object                    | Object type  | Data type | Description   |
|---------------------------|--|-----------|---|
|                           |  |           | requirement in HPE ITOC.  |
| Requirement Created Date  |  Associated dimension | Date      | Timestamp when a requirement was created in HPE ITOC.                                       |
| Requirement Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified the requirement in HPE ITOC. |
| Requirement Modified Date |  Associated dimension | Date      | Timestamp when a requirement was modified in HPE ITOC.                                      |
| Requirement Severity      |  Associated dimension | String    | Severity of a requirement in HPE ITOC.  |
| Requirement Order         |  Associated dimension | Number    | Order in which subrequirements are placed inside the parent requirement.                    |


## Rule (Inventory)

The Rule (Inventory) class represents rules in HPE ITOC. This class is a subclass of the Requirement (Inventory) class.

### Requirement (Inventory) > Rule (Inventory) class

| Object             | Object type  | Data type | Description  |
|--------------------|--|-----------|--|
| Rule Key           |  Dimension            | Number    | Rule key.  |
| Rule Name          |  Dimension            | String    | Rule name in HPE ITOC.   |
| Rule Modified Date |  Associated dimension | Date      | Timestamp when a rule was modified in HPE ITOC.                                      |
| Rule Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified the rule in HPE ITOC. |
| Rule Created Date  |  Associated dimension | Date      | Timestamp when a rule was created in HPE ITOC.                                       |
| Rule Created By    |  Associated dimension | String    | First name, last name, and login name of the user who created the rule               |



























| Object    | Object type  | Data type | Description            |
|-----------|--|-----------|------------------------|
|           |  |           | in HPE ITOC.           |
| Rule Type |  Associated dimension | String    | Rule type in HPE ITOC. |

## Control (Inventory)

The Control (Inventory) class represents controls in HPE ITOC.

### ITOC Inventory > Control (Inventory) class












| Object                     | Object type  | Data type | Description  |
|----------------------------|--|-----------|--|
| Control Key                |  Dimension              | Number    | Control key.   |
| Control Name               |  Dimension              | String    | Control name in HPE ITOC   |
| Control ID                 |  Associated dimension   | String    | Control ID in HPE ITOC   |
| Control Modified Date      |  Associated dimension | Date      | Timestamp when a control was modified in HPE ITOC                                      |
| Control Modified By        |  Associated dimension | String    | First name, last name, and login name of the user who modified the control in HPE ITOC |
| Control Created Date       |  Associated dimension | Date      | Timestamp when a control was created in HPE ITOC                                       |
| Control Created By         |  Associated dimension | String    | First name, last name, and login name of the user who created the control in HPE ITOC  |
| Control Type               |  Associated dimension | String    | Control type in HPE ITOC   |
| Control Category           |  Associated dimension | String    | Control category in HPE ITOC   |
| Control Description        |  Associated dimension | String    | Detailed description of a control in HPE ITOC  |
| Control Revision Lifecycle |  Dimension            | String    | The revision of the control along with the lifecycle state of the control.             |

| Object                         | Object type  | Data type | Description  |
|--------------------------------|--|-----------|--|
| Control Revision Modified Date |  Associated dimension   | Date      | Timestamp when the control revision was modified in HPE ITOC.                                    |
| Control Revision Modified By   |  Associated dimension   | String    | First name, last name, and login name of the user who modified the control revision in HPE ITOC. |
| Control Revision Created Date  |  Associated dimension   | Date      | Timestamp when a control revision was created in HPE ITOC.                                       |
| Control Revision Created By    |  Associated dimension   | String    | First name, last name, and login name of the user who created the control revision in HPE ITOC.  |
| Organization Name              |  Dimension              | String    | Organization name with which a control is associated in HPE ITOC.                                |
| Organization Modified Date     |  Associated dimension   | Date      | Timestamp when an organization was modified in HPE ITOC.   |
| Organization Modified By       |  Associated dimension   | String    | User who modified the organization in HPE ITOC.  |
| Organization Created Date      |  Associated dimension | Date      | Timestamp when the organization was created in HPE ITOC.   |
| Organization Created By        |  Associated dimension | String    | First name, last name, and login name of the user who created the organization.                  |
| Control Date                   |  Dimension            | String    | Represents a control date value in UTC.  |
| Control As Of Date             |  Filter               | Date      | User-selected date. If no date is selected, today's date is used.                                |
| Control Till Date              |  Filter               | Date      | Historical data is shown until the user-selected date.   |
| Control Last X Days            |  Filter               | Number    | Query results for the last <x> number of days.   |

## Business Service (Inventory)

The Business Service (Inventory) class represents the business services in HPE ITOC.

**ITOC Inventory > Business Service (Inventory) class**


| Object                                  | Object type  | Data type | Description   |
|---|--|-----------|---|
| Business Service Key                    |  Dimension              | Number    | Business service key.   |
| Business Service Name                   |  Dimension              | String    | Business service name in HPE ITOC.  |
| Business Service ID                     |  Associated dimension   | String    | Business service ID in HPE ITOC.  |
| Business Service Created By             |  Associated dimension   | String    | First name, last name, and login name of the user who created this business service..   |
| Business Service Created Date           |  Associated dimension   | Date      | Timestamp when a business service was created.  |
| Business Service Priority               |  Associated dimension   | String    | Priority of a business service in HPE ITOC.   |
| Business Service Modified Date          |  Associated dimension   | Date      | Timestamp when a business service was modified in HPE ITOC.   |
| Business Service Modified By            |  Associated dimension  | String    | First name, last name, and login name of the user who modified this business service.   |
| Business Service Description            |  Associated dimension | String    | Business service description in HPE ITOC.   |
| Business Service Revision Lifecycle     |  Dimension            | String    | Revision of the business service along with the lifecycle state of the business service. This attribute is in this format: "Business_Service_Revision(Lifecycle_state) eg:- 1 (Draft)". |
| Business Service Revision Modified Date |  Associated dimension | Date      | Timestamp when a business service revision was modified.  |
| Business Service Revision Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified the business service revision.   |
| Business Service Revision Created Date  |  Associated dimension | Date      | Timestamp when the business service revision was created.   |
| Business Service Revision Created By    |  Associated dimension | String    | First name, last name, and login name of the user who created the business service revision.  |
















| Object                       | Object type  | Data type | Description  |
|------------------------------|--|-----------|--|
| Organization Name            |  Dimension            | String    | Organization name with which a business service is associated in HPE ITOC.   |
| Organization Modified Date   |  Associated dimension | Date      | Timestamp when an organization was modified in HPE ITOC.   |
| Organization Modified By     |  Associated dimension | String    | First name, last name, and login name of the user who modified the organization.   |
| Organization Created Date    |  Associated dimension | Date      | Timestamp when the organization was created.   |
| Organization Created By      |  Associated dimension | String    | User who created an organization.  |
| Number of Policies           |  Measure              | Number    | This measure calculates the total number of policies attached to a business service across all SoAs. This measure can be used only with the objects from the business service class. |
| Business Service Date        |  Dimension          | Date      | Represents a business service date value in UTC.   |
| Business Service Till Date   |  Filter             | Date      | Historical data is shown until the user-selected date.   |
| Business Service Last X Days |  Filter             | Number    | Query results for the last <x> number of days.   |
| Business Service As Of Date  |  Filter             | Date      | User-selected date. If no date is selected, today's date is used.  |




## Resource (Inventory)

The Resource (Inventory) class represents the resources in HPE ITOC.

### ITOC (Inventory) > Resource (Inventory) class

| Object       | Object type   | Data type | Description               |
|--------------|---|-----------|---------------------------|
| Resource Key |  Dimension | Number    | Resource key in HPE ITOC. |










| Object                     | Object type  | Data type | Description  |
|----------------------------|--|-----------|--|
| Resource Name              |  Dimension              | String    | Resource name in HPE ITOC.   |
| Resource ID                |  Associated dimension   | String    | Resource ID in HPE ITOC.   |
| Resource Created By        |  Associated dimension   | String    | First name, last name, and login name of the user who created the resource in HPE ITOC.  |
| Resource Created Date      |  Associated dimension   | Date      | Timestamp when the resource was created in HPE ITOC.                                     |
| Resource Modified By       |  Associated dimension   | String    | First name, last name, and login name of the user who modified the resource in HPE ITOC. |
| Resource Modified Date     |  Associated dimension   | Date      | Timestamp when the resource was modified in HPE ITOC.                                    |
| Resource Status            |  Associated dimension   | String    | Resource status in HPE ITOC.   |
| Resource Type              |  Associated dimension | String    | Resource type in HPE ITOC.   |
| Server Identifier          |  Associated dimension | String    | Server identifier in HPE ITOC.   |
| Organization Name          |  Dimension            | String    | Organization name with which a resource is associated in HPE ITOC.                       |
| Organization Modified Date |  Associated dimension | Date      | Timestamp when an organization was modified in HPE ITOC.                                 |
| Organization Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified the organization.         |
| Organization Created Date  |  Associated dimension | Date      | Timestamp when the organization was created.   |
| Organization Created By    |  Associated dimension | String    | User who created an organization.  |
| Resource Date              |  Dimension            | String    | Represents a resource date value in UTC.   |

| Object               | Object type  | Data type | Description   |
|----------------------|--|-----------|---|
| Resource Till Date   |  Filter | Date      | Historical data is shown until the user-selected date.            |
| Resource Last X Days |  Filter | Number    | Query results for the last <x> number of days.                    |
| Resource As Of Date  |  Filter | Date      | User-selected date. If no date is selected, today's date is used. |

## Statement of Applicability (SoA inventory)

The SoA inventory represents the SoAs in HPE ITOC.

### ITOC Inventory > Statement of Applicability (SoA Inventory) class

| Object                     | Object type  | Data type | Description   |
|----------------------------|--|-----------|---|
| SoA Key                    |  Dimension              | Number    | SoA key.  |
| SoA ID                     |  Dimension            | String    | SoA ID in HPE ITOC  |
| SoA Modified Date          |  Associated dimension | Date      | Timestamp when the SoA was modified in HPE ITOC.                                    |
| SoA Modified By            |  Associated dimension | String    | First name, last name, and login name of the user who modified the SoA in HPE ITOC. |
| SoA Created Date           |  Associated dimension | Date      | Timestamp when the SoA was created in HPE ITOC.                                     |
| SoA Created By             |  Associated dimension | String    | First name, last name, and login name of the user who created the SoA in HPE ITOC.  |
| SoA Revision Lifecycle     |  Dimension            | String    | Revision of the SoA along with the lifecycle state of the business service.         |
| SoA Revision Modified Date |  Associated dimension | Date      | Timestamp when an SoA revision was modified.  |
| SoA Revision Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified the SoA.             |

| Object                     | Object type  | Data type | Description   |
|----------------------------|--|-----------|---|
| SoA Revision Created Date  |  Associated dimension | Date      | Timestamp when the SoA revision was created.                                    |
| SoA Revision Created By    |  Associated dimension | String    | First name, last name, and login name of the user who created the SoA revision. |
| Organization Name          |  Dimension            | String    | Organization name under which all policies and business services are defined.   |
| Organization Modified Date |  Associated dimension | Date      | Date an organization was modified.  |
| Organization Modified By   |  Associated dimension | String    | User who modified an organization.  |
| Organization Created Date  |  Associated dimension | Date      | Date an organization was created.   |
| Organization Created By    |  Associated dimension | String    | User who created an organization.   |
| SoA Date                   |  Dimension          | String    | Represents an SoA date value in UTC.  |
| SoA Till Date              |  Filter             | Date      | Historical data is shown until the user-selected date.                          |
| SoA Last X Days            |  Filter             | Number    | Query results for the last <x> number of days.                                  |
| SoA As Of Date             |  Filter             | Date      | User-selected date. If no date is selected, today's date is used.               |

## HPE ITOC compliance

The ITOC Compliance class represents HPE ITOC compliance-related classes and objects.

By using HPE ITOCCompliance, users can:




- See all compliance-related details.
- See the overall compliance score for a business service and its compliance status

- See all jobs (and their states, whether success, warning, failed) running on a specific HPE ITOCcore in the Job Content pane.

## Date (Compliance)

The Date (Compliance) class represents the compliance date.






### ITOC Compliance class > Date (Compliance) class

| Object         | Object type   | Data type | Description   |
|----------------|---|-----------|---|
| Date           |  Dimension | Date      | Represents a date value in UTC. The date format is mm-dd-yy. For example, 12-31-2015. |
| Till Date      |  Filter    | Date      | Historical data is shown until the user-selected date.                                |
| Number of Days |  Filter    | Number    | Use this filter to get data for the last number of X days from the system date.       |





## Policy (Compliance)

The Policy (Compliance) class represents the policies in HPE ITOC.

### ITOC Compliance > Policy (Compliance) class

| Object                      | Object type  | Data type | Description  |
|-----------------------------|--|-----------|--|
| Policy Key                  |  Dimension            | Number    | Policy key.  |
| Policy Name                 |  Dimension            | String    | Policy name in HPE ITOC.   |
| Policy ID                   |  Associated dimension | String    | Policy ID in HPE ITOC.   |
| Policy Description          |  Associated dimension | String    | Detailed description of a policy in HPE ITOC.  |
| Policy Revision Modified By |  Associated dimension | String    | First name, last name, and login name of the user who modified this policy revision. |







| Object                                | Object type   | Data type | Description  |
|---------------------------------------|---|-----------|--|
| Policy Revision Modified Date         |  Dimension | Date      | Modified date of a policy revision.  |
| Policy Revision Lifecycle             |  Dimension | String    | The revision of the policy along with the lifecycle state of the policy. This attribute is in this format: "Policy_Revision (Lifecycle_state). For example, 1(Draft)". |
| Policy Revision ID                    |  Dimension | Number    | Revision ID of the policy in HPE ITOC.   |
| Policy Revision by Policy Name Prompt |  Dimension | String    | Policy revision based on the policy name selected.   |

## Requirement (Compliance)

The Requirement (Compliance) class represents requirements in HPE ITOC.




### ITOC Compliance > Requirement (Compliance) class

| Object                  | Object type  | Data type | Description                            |
|-------------------------|--|-----------|--|
| Requirement Key         |  Dimension            | Number    | Requirement key.                       |
| Requirement Name        |  Dimension            | String    | Requirement name in HPE ITOC.          |
| Requirement Severity    |  Associated dimension | String    | Severity of a requirement in HPE ITOC. |
| Requirement Description |  Associated dimension | String    | Requirement description in HPE ITOC.   |

## Rule (Compliance)

The Rule (Compliance) class represents rules in HPE ITOC. This class is a subclass of the Requirement (Compliance) class.








### Requirement (Compliance) class > Rule (Compliance) class

| Object    | Object type  | Data type | Description           |
|-----------|--|-----------|-----------------------|
| Rule Key  |  Dimension            | Number    | Rule key.             |
| Rule Name |  Dimension            | String    | Rule name in HPE ITOC |
| Rule Type |  Associated dimension | String    | Rule type in HPE ITOC |

## Control (Compliance)

The Control (Compliance) class represents controls in HPE ITOC.








### ITOC Compliance > Control (Compliance) class

| Object                     | Object type  | Data type | Description   |
|----------------------------|--|-----------|---|
| Control Key                |  Dimension              | Number    | Control key.  |
| Control Name               |  Dimension              | String    | Control name in HPE ITOC.                           |
| Control ID                 |  Associated dimension | String    | Control ID in HPE ITOC.                             |
| Control Type               |  Associated dimension | String    | Control type in HPE ITOC.                           |
| Control Category           |  Associated dimension | String    | Control category in HPE ITOC.                       |
| Control Description        |  Associated dimension | String    | Detailed description of a control in HPE ITOC.      |
| Control Revision Lifecycle |  Dimension            | String    | Revision number and lifecycle state of the control. |

## Business Service (Compliance)

The Business Service (Compliance) class represents business services in HPE ITOC.







### ITOC Compliance > Business Service (Compliance) class

| Object                                  | Object Type  | Data Type | Description   |
|---|--|-----------|---|
| Business Service Key                    |  Dimension            | Number    | Business service key.   |
| Business Service Name                   |  Dimension            | String    | Business service name in ITOC.  |
| Business Service ID                     |  Associated dimension | String    | Business service ID in ITOC   |
| Business Service Priority               |  Associated dimension | String    | Priority of a business service in ITOC.   |
| Business Service Revision Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified the business service revision. |
| Business Service Revision Lifecycle     |  Dimension            | String    | Revision number and lifecycle state of the business service.                                  |
| Business Service Revision Modified Date |  Dimension            | String    | Timestamp when a business service revision was modified.                                      |

## Resource (Compliance)

The Resource (Compliance) class represents resources in HPE ITOC.







### ITOC Compliance > Resource (Compliance) class

| Object            | Object type  | Data type | Description                   |
|-------------------|--|-----------|-------------------------------|
| Resource Key      |  Dimension            | Number    | Resource key.                 |
| Resource Name     |  Dimension            | String    | Resource name in HPE ITOC     |
| Resource ID       |  Associated dimension | String    | Resource ID in HPE ITOC       |
| Resource Type     |  Associated dimension | String    | Resource type in HPE ITOC     |
| Server Identifier |  Associated dimension | String    | Server identifier in HPE ITOC |
| Resource Status   |  Associated dimension | String    | Resource status in HPE ITOC   |

## Statement of Applicability (SoA Compliance)

The Statement of Applicability (SoA Compliance) class represents SoAs in HPE ITOC.





### ITOC Compliance > Statement of Applicability (SoA Compliance) class










| Object                     | Object type  | Data type | Description   |
|----------------------------|--|-----------|---|
| SoA Key                    |  Dimension            | Number    | SoA key   |
| SoA ID                     |  Dimension            | Number    | SoA ID in HPE ITOC.   |
| SoA Revision Modified By   |  Associated dimension | String    | First name, last name, and login name of the user who modified the SoA.         |
| SoA Revision Lifecycle     |  Dimension            | String    | The revision of the SoA along with the lifecycle state of the business service. |
| SoA Revision Modified Date |  Dimension           | String    | Timestamp when an SoA revision was modified.                                    |
| Last Scan Date for SoA     |  Dimension          | Date      | Date of the most recent SoA scan.   |

## Job (Compliance)

The Job (Compliance) class represents jobs in HPE ITOC.

### ITOC Compliance > Job (Compliance) class



| Object          | Object type  | Data type | Description                  |
|-----------------|--|-----------|------------------------------|
| Job ID          |  Dimension            | Number    | Job ID in HPE ITOC.          |
| Job Type        |  Dimension            | String    | Job type in HPE ITOC.        |
| Job Status      |  Associated dimension | String    | Status of a job in HPE ITOC. |
| Job Description |  Associated dimension | String    | Job description in HPE ITOC. |

| Object                    | Object type   | Data type | Description  |
|---------------------------|---|-----------|--|
| Job Start Date            |  Dimension | Date      | Date the job will start or has started.                                |
| Job End Date              |  Dimension | Date      | Date the job will end or has ended.                                    |
| Job Created By            |  Dimension | String    | First name, last name, and login name of the user who created the job. |
| Job Created Date          |  Dimension | Date      | Timestamp when a job was created in HPE ITOC                           |
| Job Scheduled Date        |  Dimension | Date      | Scheduled date of a job in HPE ITOC                                    |
| Job Execution Time        |  Dimension | Number    | Time (in hour:minutes:seconds) taken to complete the job in HPE ITOC   |
| Job Run for Last X Days   |  Filter    | Number    | Jobs started in the last <x> days.                                     |
| Job Run for Last X Months |  Filter  | Number    | Jobs started in the last <x> months.                                   |
| Job Run for Last 365 Days |  Filter  | Number    | Job started in the last 365 days.                                      |





## Compliance Summary (Compliance)

The Compliance Summary (Compliance) class shows the overall compliance summary in HPE ITOC.

### ITOC Compliance > Compliance Summary (Compliance) class

| Object         | Object type   | Data type | Description  |
|----------------|---|-----------|--|
| Worst Severity |  Dimension | String    | Severity defined for the majority of requirements in the policy in HPE ITOC.                                   |
| Failed Rules   |  Measure   | Number    | Total number of failed rules determined by the result of an HPE ITOC scan. When used with business service and |



| Object                            | Object type   | Data type | Description   |
|-----------------------------------|---|-----------|---|
|                                   |   |           | policy objects, it is the total number of failed rules discovered across all business services for a policy.  |
| Total Rules                       |  Measure   | Number    | Total number of rules defined in a policy in HPE ITOC. When used with business service and policy objects, it is the total number of rules attached to the business service through the policy.   |
| Compliance Score                  |  Measure   | Number    | Compliance score of the business service and its attached policy in HPE ITOC.   |
| Non Compliant (out of RSLO) Rules |  Measure   | Number    | Number of non-compliant rules that are not remediated from RSLO level of days defined in HPE ITOC. When used with business service and policy objects, it is the number of non-compliant rules out of RSLO discovered across the business service for a policy.   |
| Non Compliant (within RSLO) Rules |  Measure | Number    | Number of non-compliant rules that are not remediated but the number of non-compliant days are less than the RSLO level defined in HPE ITOC. When used with business service and policy objects, it is the number of non-compliant rules within RSLO discovered across the business service for a policy. |
| Compliant Rules                   |  Measure | Number    | Total number of compliant rules determined by result of a scan in HPE ITOC. When used with business service and policy objects, it is the total number of compliant rules discovered across the business service for a policy.  |





| Object                          | Object type   | Data type | Description  |
|---------------------------------|---|-----------|--|
| Excepted Rules                  |  Measure   | Number    | Total number of excepted rules defined for a business service and its associated policies in HPE ITOC. When used with business service and policy objects, it is the total number of excepted rules discovered across the business service for a policy. |
| Summary Measurement Date        |  Dimension | Date      | Timestamp when a compliance summary for a business service and policy is measured in HPE ITOC.   |
| Last Scan Date                  |  Dimension | Date      | Last scan date of SoA regarding the compliance summary result in HPE ITOC.   |
| As Of Date (Compliance Summary) |  Filter    | Date      | User-selected date. If no date is selected, today's date is used.  |

## SLO Conformance (Compliance)

The Compliance Summary (Compliance) class shows the overall SLO conformance in HPE ITOC.

### ITOC Compliance > SLO Conformance (Compliance) class



| Object                       | Object type   | Data type | Description  |
|------------------------------|---|-----------|--|
| Remediation SLO Level (Days) |  Dimension | Number    | SLO defined for remediation. When the remediation level is defined as <x> days, remediation should happen with <x> days of discovery of a non-compliant state of a rule. |
| Measurement SLO Level        |  Dimension | String    | SLO defined for measurement. When the measurement level is defined as 1<x> month, the measurement should happen within the defined MSLO level to meet the measurement    |

| Object                          | Object type   | Data type | Description  |
|---------------------------------|---|-----------|--|
|                                 |   |           | SLO.   |
| Measurement Percent within RSLO |  Measure   | Number    | Percentage of MSLO met with respect to the defined MSLO limit. This object can be used with business service (compliance) and policy (compliance) objects to determine percentage of MSLO met. |
| Remediate Percent within RSLO   |  Measure   | Number    | Percentage of RSLO met with respect to the defined RSLO limit. This object can be used with business service (compliance) and policy (compliance) objects to determine percentage of RSLO met. |
| Conformance Measurement Date    |  Dimension | Date      | Timestamp when MSLO and RSLO is calculated for a business service and its associated policies in HPE ITOC.   |
| As Of Date (SLO Conformance)    |  Filter  | Date      | User-selected date. If no date is selected, today's date is used.  |

## Compliance Details (Compliance)

The Compliance Details (Compliance) class shows details of the compliance summary.

### ITOC Compliance > Compliance Details (Compliance) class

| Object             | Object type   | Data type | Description  |
|--------------------|---|-----------|--|
| Compliance State   |  Dimension | String    | Compliance state of rule discovered during a scan in HPE ITOC. |
| Days Non-Compliant |  Dimension | Number    | Number of days a rule is non-compliant in HPE ITOC.            |



| Object                   | Object type | Data type | Description  |
|--------------------------|-------------|-----------|--|
| Resolution Reason        | Dimension   | String    | Reason a non-compliant rule became compliant in HPE ITOC. One possible value is "By Remediation," which means the rule became compliant through remediation. |
| Actual Value             | Dimension   | String    | Actual value of the target resources in HPE ITOC.  |
| Expected Value           | Dimension   | String    | Expected value of the target resources in HPE ITOC.  |
| Old State                | Dimension   | String    | Previous state of the target resources in HPE ITOC.  |
| Severity                 | Dimension   | String    | Severity of the immediate parent requirement under which measured rules are defined in HPE ITOC.   |
| Stderr                   | Dimension   | String    | Stderr of a job in HPE ITOC  |
| Stdout                   | Dimension   | String    | Stdout of a job in HPE ITOC  |
| Compliance Modified Date | Dimension   | Date      | Timestamp when compliance state was measured for a rule across a business service in HPE ITOC.   |
| Last scan date           | Dimension   | Date      | Last scan date of an SoA with respect to the compliance detail result in HPE ITOC.   |

## Policy Compliance Applicability (Compliance)

ITOC Compliance > Policy Compliance Applicability (Compliance) class

| Object         | Object type | Data type | Description  |
|----------------|-------------|-----------|--|
| Parameter Name | Dimension   | String    | Parameter Name used in a rule in HPE ITOC.   |
| Severity       | Dimension   | String    | Severity of the immediate parent requirement under which measured rules are defined in HPE ITOC. |
| Target Value   | Dimension   | String    | Target value of the parameters in all rules in HPE ITOC.   |

## Service Variance (Compliance)

### ITOC Compliance > Service Variance (Compliance) class

| Object             | Object type | Data type | Description  |
|--------------------|-------------|-----------|--|
| Actual State       | Dimension   | String    | Actual state of a business service before the scan in HPE ITOC.  |
| SLO Confirm        | Dimension   | String    | When actual state is compliant and the difference between measured date and report date is less than the defined MSLO period, then SLO confirm confirms or not. When actual state is non-compliant and the difference between non-compliant date and report date is less than the defined RSLO period, then SLO Confirm confirms or not. |
| State Changed Date | Dimension   | Date      | Timestamp when a business service state is changed in HPE ITOC.  |
| State Changed Type | Dimension   | String    | When actual state is non-compliant, then state   |

| Object | Object type | Data type | Description  |
|--------|-------------|-----------|--|
|        |             |           | change type is variance. When actual state is compliant, then state change type is resolution. Otherwise, state change is error. |

## HPE ITOC users and roles







The HPE ITOC Users and Roles class represents HPE ITOC users and roles.












By using HPE ITOC Users and Roles, users can see all user-related details present in HPE ITOC (such as email address, created date, and so on).

## Users

The Users class represents the HPE ITOC user.

### ITOC Users and Roles > User class




| Object          | Object type   | Data type | Description   |
|-----------------|---|-----------|---|
| User ID         |  Dimension | Number    | User ID.  |
| First Name      |  Dimension | String    | First name of a user in HPE ITOC.   |
| Last Name       |  Dimension | String    | Last name of a user in HPE ITOC.  |
| Login Name      |  Dimension | String    | Login name of a user in HPE ITOC.   |
| Email Address   |  Dimension | String    | Email address of a user in HPE ITOC.  |
| User Created By |  Dimension | String    | First name, last name, and login name of user who has created this user in HPE ITOC. This attribute will be in this format: "First_Name Last_name(Login_name)". |




| Object                     | Object type  | Data type | Description  |
|----------------------------|--|-----------|--|
| User Created Date          |  Dimension            | Date      | Timestamp when the user was created in HPE ITOC.       |
| User Modified By           |  Dimension            | String    | User who modified information about this user.         |
| User Modified Date         |  Dimension            | Date      | Date when information about a user was modified.       |
| Organization Name          |  Dimension            | String    | Organization name.                                     |
| Organization Modified Date |  Associated dimension | Date      | Date an organization was modified.                     |
| Organization Modified By   |  Associated dimension | String    | User who modified an organization.                     |
| Organization Created Date  |  Associated dimension | Date      | Date an organization was created.                      |
| Organization Created By    |  Associated dimension | String    | User who created the organization.                     |
| Date                       |  Dimension          | Date      | Represents a person date value in UTC.                 |
| Till Date                  |  Filter             | Date      | Historical data is shown until the user-selected date. |
| Number of Days             |  Filter             | Number    | Number of days in ITOC.                                |

## Roles

The Roles class represents HPE ITOC roles.

### ITOC Users and Roles > Roles class

| Object           | Object type   | Data type | Description                                   |
|------------------|---|-----------|---|
| Role ID          |  Dimension | Number    | Role ID.                                      |
| Role Description |  Dimension | String    | Role description.                             |
| Role Created By  |  Dimension | String    | User name of the person who created the role. |

| Object             | Object type   | Data type | Description  |
|--------------------|---|-----------|--|
| Role Created Date  |  Dimension | Date      | Date the role was created.                           |
| Role Modified By   |  Dimension | String    | The user who modified information about this role.   |
| Role Modified Date |  Dimension | Date      | The date when information about a role was modified. |

# Send documentation feedback

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 Reports User Guide (IT Operations Compliance 1.20)**

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to [hpe\\_itoc\\_docs@hpe.com](mailto:hpe_itoc_docs@hpe.com).

We appreciate your feedback!