



# Operations Bridge Analytics

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# Operations Bridge Analytics Installation Guide

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# Chapter 1: About this Guide

Read this guide to understand the concepts required to install Operations Bridge Analytics most effectively.

**Note:** This manual includes examples that show script usage, command line usage, command line syntax, and file editing. If you copy and paste any examples from this manual, carefully review the results of your paste before running a command or saving a file. Be careful when copying code with the hyphen (-) character, as it is sometimes changed to a similar character and no longer recognized by tools as specifying an option.

## For Information about Operations Bridge Analytics

To obtain a complete set of information about Operations Bridge Analytics, use this guide along with other Operations Bridge Analytics documentation. The table below shows all Operations Bridge Analytics documents to date.

### Documentation for Operations Bridge Analytics

What do you want to do?	Where to find more information
I want to install Operations Bridge Analytics	<a href="#">HPE Operations Bridge Analytics Installation Guide</a>
I want to obtain help about the Operations Bridge Analytics console	<i>Operations Bridge Analytics Online Help</i>
I want to find the hardware and operating system requirements for Operations Bridge Analytics	<a href="#">HPE Operations Bridge Analytics System Requirements and Sizing Guide</a>
I want to read a list of the new features and review any last minute issues for Operations Bridge Analytics	<a href="#">HPE Operations Bridge Analytics Release Notes</a>
I want to view a list of software products integrated with Operations Bridge Analytics	<a href="#">HPE Software Integration and Suite Catalog</a>

# Environment Variables Used in this Document

This document refers to the following environment variables and other useful directories when explaining installation and configuration instructions for the Operations Bridge Analytics Software, including the Operations Bridge Analytics Server and the Operations Bridge Analytics Collector host. The environment variables are set automatically for the opsa user who can use all Operations Bridge Analytics functionality, and has access to data at the tenant level. See *Manage Users and Tenants* in the *Operations Bridge Analytics Help* for more information.

**Table 1: Environment Variables**

Variable Name	Path	Operations Bridge Analytics Server, Operations Bridge Analytics Collector host
OPSA_HOME	/opt/HP/opsa	Operations Bridge Analytics Server and Collector hosts
JAVA_HOME	/opt/HP/opsa/jdk	Operations Bridge Analytics Server and Collector hosts

**Table 2: Other Useful Directories**

Folder Name	Path	Operations Bridge Analytics Server, Operations Bridge Analytics Collector Host
JBOSS Home Directory	/opt/HP/opsa/jboss	Operations Bridge Analytics Server
JDK Folder	/opt/HP/opsa/jdk	Operations Bridge Analytics Server and Collector hosts
scripts Folder	/opt/HP/opsa/scripts	Operations Bridge Analytics Server and Collector hosts
conf Folder	/opt/HP/opsa/conf	Operations Bridge Analytics Server and Collector hosts
data Folder	/opt/HP/opsa/data	Operations Bridge Analytics Server and Collector hosts
log Folder	/opt/HP/opsa/log	Operations Bridge Analytics Server and Collector hosts
lib Folder	/opt/HP/opsa/lib	Operations Bridge Analytics Server and Collector hosts
bin Folder	/opt/HP/opsa/bin	Operations Bridge Analytics Server and Collector hosts

**Table 2: Other Useful Directories, continued**

Folder Name	Path	Operations Bridge Analytics Server, Operations Bridge Analytics Collector Host
Vertica Database Installation Folder	/opt/vertica	Operations Bridge Analytics Server and Collector hosts have the Vertica client installed in this folder
Operations Agent	/opt/OV	Operations Bridge Analytics Server and Collector hosts

## System Requirements

Before installing Operations Bridge Analytics you must partition the `/opt` directory for 13 GB of disk capacity and the `/tmp` directory for 10 GB of disk capacity.

See the [Operations Bridge Analytics System Requirement and Sizing Guide](#) for the hardware and operating system requirements for Operations Bridge Analytics.

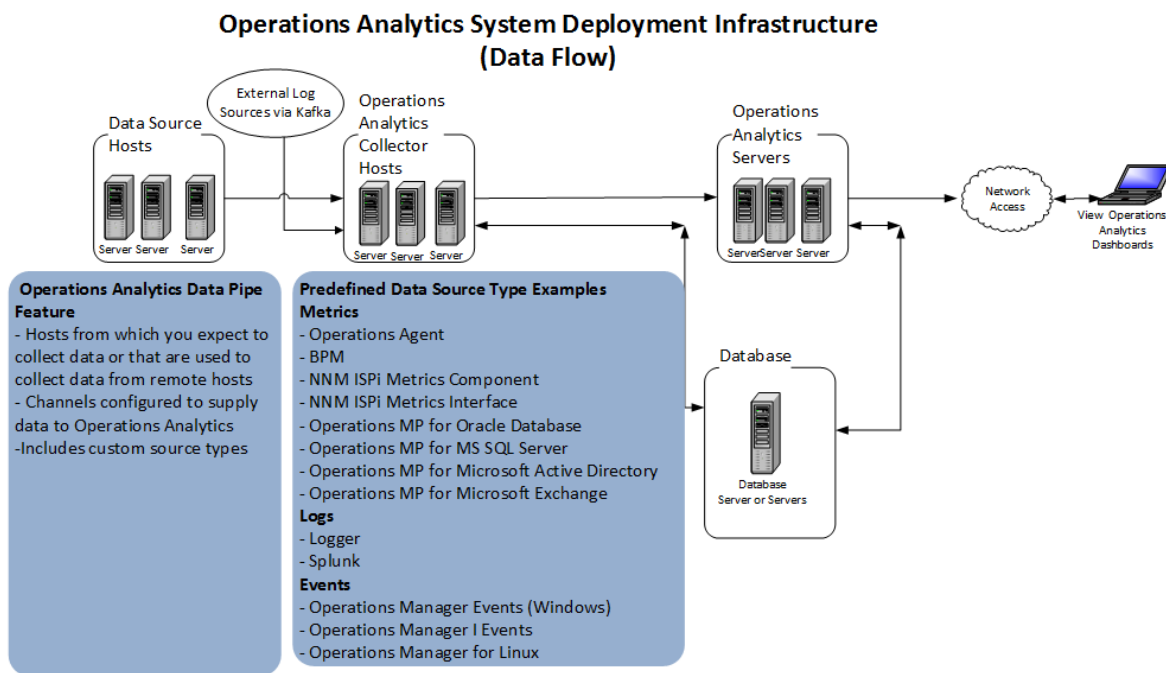


# Chapter 2: Deployment Preparation

Study the information in the following section before deploying Operations Bridge Analytics.


## Supported Deployments

Review the information shown in the following diagram to begin understanding the data Source Types supported by Operations Bridge Analytics, how Operations Bridge Analytics components are configured together, and to understand what the data flow among Operations Bridge Analytics components looks like to better plan your Operations Bridge Analytics installation. After installation, add to the initial information being collected by adding more Data Source Types. See the [HPE Operations Bridge Analytics User Guide](#) for more information.




## Predefined User Groups


Operations Bridge Analytics provides the following predefined User Groups:

- **Super Admin:** During installation, the `opsadmin` user gets created, and assigned to the Super Admin user group. **The default password for the `opsadmin` user is `opsadmin`.** The primary responsibility of users assigned to the Super Admin user group is to add, modify, and delete tenants and users assigned to the Tenant Admin user group. See the `opsa-tenant-manager.sh` reference page (or the Linux man page) for information about creating and managing tenants. To view Operations Bridge Analytics reference pages, select  > **Reference Pages** in the Operations Bridge Analytics console.

**Note:** Make sure to change the default password after the installation.

- **Tenant Admin:** During installation, the `opstenantadmin` user gets created, and assigned to the Tenant Admin user group. `opstenantadmin` is the tenant admin for the default `opsa` tenant. **The default password for the `opstenantadmin` user is `opstenantadmin`.** Only a user assigned to the Super admin user group is permitted to create a user assigned to the Tenant Admin user group. The primary responsibility of the Tenant Admin user is to add, modify, and delete users for a specific tenant. See the `opsa-tenant-manager.sh` reference page (or the Linux man page) for information about creating and managing users for a tenant. To view Operations Bridge Analytics reference pages, select  > **Reference Pages** in the Operations Bridge Analytics console.

**Note:** Make sure to change the default password after the installation.

- **User:** During installation, the `opsa` user gets created, and assigned a normal user role. **The default password for the `opsa` user is `opsa`.** Only a user assigned to the Tenant admin user group is permitted to create a user having a normal user role. This role is for the normal user who can use the Operations Bridge Analytics console and has access to data for the tenant to which it is assigned. This user account must be unique across all tenants. See *Manage Users and Tenants* in the *Operations Bridge Analytics Help* for more information. To view Operations Bridge Analytics reference pages, select  > **Reference Pages** in the Operations Bridge Analytics console.

**Note:** Make sure to change the default password after the installation.

## Terminology Used in this Document

**Collection:** Structured logs are log file data read by Operations Bridge Analytics. This log information is stored (as collections) in Operations Bridge Analytics. These collections exist so that users can perform analytics on the log file contents. For example, users might want to query for all outliers by host name and application for a particular time range.

**Operations Bridge Analytics Collector host:** This server is the host used to manage the data collections.

**Source Types:** Operations Bridge Analytics collects metrics, topology, event, and log file data from a diverse set of possible data Source Types.

**Operations Bridge Analytics Server:** This server is the host that serves Operations Bridge Analytics functions, such as integration configuration, and it is the server to which you connect your browser.

**Tenant:** Operations Bridge Analytics gathers metrics, topology, event, and log file data from a diverse set of possible data Source Types. Tenants enable you to separate information from these data Source Types into groups, such as collections, user accounts, and user groups. Collections can be separated by tenant and collection information cannot be shared among tenants. See *Manage Users and Tenants* in the *Operations Bridge Analytics Help* for more information.

## Installation Overview

The following section provides an overview of the Operations Bridge Analytics installation environment.

This section includes:

- ["Operations Bridge Analytics Components" below](#)
- ["Collection Source Types" on the next page](#)
- ["Setting up Your Operations Bridge Analytics System" on page 13](#)
- ["Operations Bridge Analytics Port Mapping" on page 14](#)

## Operations Bridge Analytics Components

The distributed version of Operations Bridge Analytics discussed in this manual is made up of the following main components:

- **Operations Bridge Analytics Server:**
  - Provides the business logic and presentation capabilities of Operations Bridge Analytics.
  - Deployed as a server installation.
  - Operations Bridge Analytics can have one or more Operations Bridge Analytics Servers,

depending on the amount of users the system needs to support.

- The server is JBoss-based.
- **Operations Bridge Analytics Collector Host:**
  - Connects to the different data Source Types and aggregates the data collected from them.
  - This data is pushed to the Operations Bridge Analytics Database.
  - Deployed as a server installation.
  - Operations Bridge Analytics can have one or more Operations Bridge Analytics Collector hosts, depending on the data Source Types to which the system is connected.
- **Operations Bridge Analytics Database:**
  - A Vertica database is used to support the big data analysis requirements of Operations Bridge Analytics.
  - An existing Vertica database installation can be used. The Operations Bridge Analytics database (opsadb) needs to be created on it.
  - A dedicated Vertica database can also be installed as part of Operations Bridge Analytics. In this case the Operations Bridge Analytics database (opsadb) will be created during the process.

**Note:** Although this document refers to the Vertica database name for Operations Bridge Analytics as opsadb, you can choose a different name when creating this database.

## Collection Source Types

Data from the data Source Types is brought into Operations Bridge Analytics using the Operations Bridge Analytics Collector host.

These Source Types include:

- **BSM Portfolio metric collectors:** Operations Bridge Analytics supports data collection from several BSM sources. These include HPE Operations Manager (OM), HPE OMi (Operations Manager i), HPE Network Node Manager (NNMi), HPE NNM iSPI Performance for Metrics, SiteScope, HPE Business Process Monitor (BPM), and RTSM.
- **Log Sources:** Operations Bridge Analytics supports the following log collectors Source Types:

- **HP ArcSight Logger Server:**
  - This optional approach involves connecting Operations Bridge Analytics with an ArcSight Logger server to bring in log data.
  - The server retrieves data from agents that are located on different machines in the IT environment. These agents include (but are not limited to) SmartConnectors and Flex Connectors, which provide access to different types of logs.
- **Splunk:** Integrating with this software application can also be used as a source of log files.
- **Custom Collections:** These collections can be leveraged to support data collection from additional Source Types. See the [OBA 3.0 White Paper for Kafka Log File Processing](#).

## Setting up Your Operations Bridge Analytics System

The information in this section gives you a high level overview of what will be done when setting up an Operations Bridge Analytics system.

Before beginning your Operations Bridge Analytics installation, it can save you time if you obtain the manuals shown in "[Documentation Resources Referenced During the Installation Process](#)" below.

### Documentation Resources Referenced During the Installation Process

Integrated Product	Link to Document
Operations Bridge Analytics	<a href="#">System Requirements and Sizing Guide</a>
Vertica	<a href="#">Installation Guide</a>
Vertica	<a href="#">Administrator's Guide</a>
Vertica	<a href="#">Product Documentation</a>

System setup includes the following steps:

#### 1. Installation:

- Install the Vertica Database (*optional* - you can connect to an existing Vertica instance).
- Install the Operations Bridge Analytics Server (*mandatory*).
- Install the Operations Bridge Analytics Collector host (*mandatory*).

#### 2. Post-Install Configuration

- Connect the Operations Bridge Analytics Servers to the Vertica Database.
- Connect the Operations Bridge Analytics Collector host to the Vertica Database.
- Configure passwords for the default Operations Bridge Analytics users (opsatenantadmin, opsaadmin, and opsa); this is important for securing the system.

### 3. **Configure Collection Sources:**

You might configure one or more of the following collection sources following a successful installation. See *Using the Collections Manager to Manage Source Types* in the *Operations Bridge Analytics Help* for more information.

- Configure the connection to several BSM data Source Types to collect metrics. Note that collection configuration creates a link between the Operations Bridge Analytics Server and the Operations Bridge Analytics Collector host.
- Configure a Log Integration to collect and ingest logs. For details, see the Operations Bridge Analytics Help and the [OBA 3.0 White Paper for Kafka Log File Processing](#).
- Configure collections from additional data Source Types using the custom collection capabilities.

## Operations Bridge Analytics Port Mapping

The well-known network ports described in the section need to be open in a secured environment for Operations Bridge Analytics to be able to function and collect data from the data Source Types you configured or plan to configure.

The Operations Bridge Analytics Server and Collector hosts, as well as the other component applications used by Operations Bridge Analytics must be installed on the same subnet with full network access among them. Operations Bridge Analytics also uses a Vertica database for big data storage. You might install and deploy this component as part of your Operations Bridge Analytics deployment, or you might choose to connect to an existing instance of this component that currently exists in your environment. If you deploy this component as part of Operations Bridge Analytics it will typically reside on the same subnet with no network restrictions between Operations Bridge Analytics and Vertica. If you choose to leverage your existing component instance, you must enable communication using information from the table shown below.

The communication ports shown in "[Well-Known Port Mapping \(Sources External to Operations Bridge Analytics\)](#)" on the next page must be open on any firewall in the path between the Operations Bridge Analytics Server and Collector hosts and all of the data collectors, in the direction listed within the table. The Operations Bridge Analytics Server validates the communication to the data collectors

before creating a collection. The Operations Bridge Analytics Collector host needs these open communication ports so it can collect data.

**Note:** In the tables shown in this section, the hosts shown in the **Open To** column listen on the port or ports shown in the **Port** column and the hosts shown in the **Open From** column initiate connections to the port or ports shown in the **Port** column.

**Note:** In the tables shown in this section, the listed connection type is TCP unless otherwise noted.

External traffic is the traffic coming into Operations Bridge Analytics Server and Collector hosts from a client that is not an Operations Bridge Analytics Server or an Operations Bridge Analytics Collector host. The communication ports shown in "[Well-Known Port Mapping \(Sources External to Operations Bridge Analytics\)](#)" below lists the ports used to transmit data between non-Operations Bridge Analytics hosts to an an Operations Bridge Analytics Server or an Operations Bridge Analytics Collector host.

**Well-Known Port Mapping (Sources External to Operations Bridge Analytics)**

Port	Open From	Open To	Comments
80, 1098, 1099, 2506, 2507, 29602, 21212	Operations Bridge Analytics Server and Collector hosts	BSM Data Processing Server	Operations Bridge Analytics collects BPM data from the BSM Data Processing Server and not directly from BPM.
137, 138, 139, 445	Operations Bridge Analytics Collector hosts	NNM iSPI Performance for Metrics and NNMi Custom Poller	Operations Bridge Analytics uses SMB protocol to mount a CSV data directory on the NNMi system to the Operations Bridge Analytics Collector host. Because of this mounted data directory, SMB ports must be open.
381-383	Operations Bridge Analytics Server and Collector hosts	Operations Agent (OM Performance Agent and Database SPI)"	
443 or 9000	ArcSight Connectors, Operations Bridge Analytics, Operations Bridge Analytics Server and Collector hosts	HPE ArcSight Logger	You can configure this port in HPE ArcSight Logger. By default, if installed as a privileged user, it is 443, otherwise, it is 9000. The Operations Bridge Analytics default installation uses port

**Well-Known Port Mapping (Sources External to Operations Bridge Analytics), continued**

Port	Open From	Open To	Comments
			443.
1433, 1521	Operations Bridge Analytics Server and Collector hosts	Database host used by OM or OMi	1443 if using MSSQL, 1521 if using Oracle. This port might have been changed by the OM or OMi database administrator.
514 UDP and 515 TCP	Managed System (the system initiating the syslog messages)	Operations Bridge Analytics	
4888	Operations Bridge Analytics	Operations Bridge Analytics Collector host	.
4447, 9990	Operations Bridge Analytics Server		JBOSS server ports
5433	Operations Bridge Analytics Server and Collector hosts	Vertica	The default Vertica port is 5433. This default value can be changed by the Vertica administrator.
8080	Web browsers on client devices that access the Operations Bridge Analytics console	Operations Bridge Analytics Server	Web browsers connect to the 8080 port using HTTP (non-SSL) to the Operations Bridge Analytics Server to access the Operations Bridge Analytics console. <b>(<a href="http://&lt;Operations Bridge Analytics Server&gt;:8080/opsa">http://&lt;Operations Bridge Analytics Server&gt;:8080/opsa</a>)</b>
8080	Operations Bridge Analytics Server and Collector hosts	SiteScope	Operations Bridge Analytics communicates with SiteScope. This port might have been configured differently by the SiteScope administrator.  <b>Note:</b> Although the default port 8080 is shown here, your SiteScope application might be using some other port.
8089	Operations Bridge Analytics	Splunk	Used if Splunk is used instead



**Well-Known Port Mapping (Sources External to Operations Bridge Analytics), continued**

Port	Open From	Open To	Comments
	Server and Collector hosts		of Logger.
8443 (https) 21212 (http)	Operations Bridge Analytics Server and Collector hosts	RTSM Inventory on the BSM Data Processing Server	
9443	SiteScope server	Operations Bridge Analytics Server and Collector hosts	This port is the default port of a SiteScope integration instance and can be changed by the SiteScope administrator.

Internal traffic is the traffic between Operations Bridge Analytics Servers and the Operations Bridge Analytics Collector hosts. The communication ports shown in "[Well-Known Port Mapping \(Sources Internal to Operations Bridge Analytics\)](#)" below lists the ports used to transmit data among Operations Bridge Analytics Server and Collector hosts. It works better to disable any firewalls between the Operations Bridge Analytics Servers and Operations Bridge Analytics Collector hosts. Each port listed in this table should be opened in both directions (send from it and receive to it).

**Note:** It works better to disable any firewalls between the Operations Bridge Analytics Server and Collector hosts. However, if a firewall is enabled, open the ports shown in "[Well-Known Port Mapping \(Sources Internal to Operations Bridge Analytics\)](#)" below.

**Well-Known Port Mapping (Sources Internal to Operations Bridge Analytics)**

Port	Open From	Open To	Comments
381-383	Operations Bridge Analytics Server and Collector hosts	Operations Bridge Analytics Server and Collector hosts	Used by local HPOM performance agents.
2181	Operations Bridge Analytics Server and Collector hosts	Operations Bridge Analytics Server	Any data flow that uses Apache Zookeeper within Operations Bridge Analytics.
2888, 3888	Operations Bridge Analytics Server and Collector hosts	Operations Bridge Analytics Server	Zookeeper leader election and peer ports.

**Well-Known Port Mapping (Sources Internal to Operations Bridge Analytics), continued**

Port	Open From	Open To	Comments
4242	Clients connection to Apache Storm (used internally by Operations Bridge Analytics)	Operations Bridge Analytics Server	Clients connecting to Apache Storm.
6627	Operations Bridge Analytics Server and Collector hosts	Operations Bridge Analytics Server	Apache Storm Nimbus thrift port.
6700-6703	Operations Bridge Analytics Server and Collector hosts	Operations Bridge Analytics Collector hosts	Apache Storm Nimbus worker ports.
9443	Operations Bridge Analytics Server and Collector hosts	Operations Bridge Analytics Collector hosts	Used by the Operations Bridge Analytics Server to register Operations Bridge Analytics Collector hosts.

## Installing Operations Bridge Analytics in Non-Default Locations

Operations Bridge Analytics uses specific file paths during installation. If you want to install Operations Bridge Analytics using different file paths to meet your company's needs, use the information shown in ["Default Installation Paths" on the next page](#) to set up symbolic links before installing Operations Bridge Analytics.

**Default Installation Paths**

Server or Collector	Path to Folder  (used during installation)	Purpose of Path
Server and Collector	/opt/HP or /opt/HP/opsa	This folder contains the Operations Bridge Analytics software application files.
Server and Collector	/opt/HPE	This folder contains the task server files for Operations Bridge Analytics.
Server and Collector	/opt/OV	This folder contains the Operations Agent application files. This application is delivered with Operations Bridge Analytics.
Server and Collector	/opt/perf	This folder contains the performance tools software application files.
Server and Collector	/opt/vertica	This folder contains the access tool for the Vertica database.
Server and Collector	/var/opt/OV	This folder contains Operations Agent data.
Server and Collector	/var/opt/perf	This folder contains data for the performance tools.
Collector	/opt/HP or /opt/HP/BSM	This folder contains the Operations Bridge Reporter (OBR) software application files. All Operations Bridge Analytics documentation refers to OBR as the HPE Embedded Collector.

# Chapter 3: Installation Workflow

This chapter guides you through the process of installing and configuring Operations Bridge Analytics. Complete the main tasks shown below:

1. ["Task 1: Planning your Deployment" below](#)
2. ["Task 2: Obtaining Licenses" on the next page](#)
3. ["Task 3: Installing and Configuring the Vertica Software" on page 22](#)
4. ["Task 4: Installing the Operations Bridge Analytics Server Software" on page 31](#)
5. ["Task 5: Installing and Configuring the Operations Bridge Analytics Collector Software" on page 33](#)

## Task 1: Planning your Deployment

Use the following checklist to prepare for installing and configuring Operations Bridge Analytics:

1.  Ensure that the required **dialog** packages are installed on the hosts you plan to use for the Vertica Database you plan to use for Operations Bridge Analytics:

- a. You should see output from the following command:

```
rpm -qa | grep dialog
```

- If you run this command on a server running RH6.7, you should see a result similar to the following:

```
dialog-1.1-9.20080819.1.e16.x86_6
```

- If you run this command on a server running RH7.x, you should see a result similar to the following:

```
dialog-1.1-9.20080819.1.e16.x86_6
```

- b. If you do not see any result from the previous command, you do not have a **dialog** package installed. You must install it before continuing.

Depending on your configuration you might be able to install it using a command similar to the following:

```
yum install dialog
```

2.  Review the following Topics:
  - o ["Terminology Used in this Document" on page 10](#)
  - o ["Supported Deployments" on page 9](#)
  - o [Operations Bridge Analytics Release Notes](#)
  - o [Operations Bridge Analytics System Requirements and Sizing Guide](#)
3.  Review the information in ["Operations Bridge Analytics Port Mapping" on page 14](#) and open the well-known ports discussed in that section before installing Operations Bridge Analytics.
4. For the instructions in this manual, use the information in ["Available Downloads for Operations Bridge Analytics 3.00" below](#) to obtain the installation packages.

**Note:** All installation files must be owned by the root user.

- a. Go to [My software updates](#) (use your HPE Passport credentials). ["Available Downloads for Operations Bridge Analytics 3.00" below](#) shows the available downloads for Operations Bridge Analytics.

#### Available Downloads for Operations Bridge Analytics 3.00

Download File Name	Purpose
HPE_OpsA_3.00_Linux_Installation.zip	Operations Bridge Analytics Linux Installations
HPE_OpsA_3.00_Vertica_Installation.zip	Operations Bridge Analytics Vertica Installations

5.  Review the prerequisites to install HP Operations Agent in [Operations Agent 12.01 and Operations Smart Plug-ins for Infrastructure Installation Guide](#) .

Continue your installation at ["Task 3: Installing and Configuring the Vertica Software" on the next page](#)

## Task 2: Obtaining Licenses

After purchasing Operations Bridge Analytics, you will need to download two licenses, one each for Operations Bridge Analytics and Vertica, and apply these licenses later. To obtain your licenses, do the following:

1. Using your browser, navigate to the licensing link shown in the license email you received (<http://www.hpe.com/software/entitlements>).
2. Log on using **HPE Passport** credentials.
3. When prompted, enter your order numbers.
4. Follow the instructions to download and apply your Operations Bridge Analytics and Vertica licenses.

## Task 3: Installing and Configuring the Vertica Software

Vertica is the database in which Operations Bridge Analytics stores configurations and collected data. The instructions in this section explain three ways to use Vertica with Operations Bridge Analytics.

### Host Prerequisites and Setup

See the **Databases** section of the [HPE Operations Bridge Analytics System Requirements and Sizing Guide](#) for important information about the Vertica versions and configurations supported by Operations Bridge Analytics.

Read the following if you plan to use Vertica in a virtual environment:

- [Supported Platforms](#)

Read the following if you plan to use Vertica installed on a physical (bare-metal) server:

[Configuring the HP DL380 Gen9 24-SFF CTO Server as an HPE Vertica Node](#)

Review the [Vertica 8.0.x installation Guide](#) and complete the following actions:

- [Set the Disk Readahead to a supported value](#)
- [Disable transparent hugePages](#)
- [Set the User Max Open Files Limit to at least 65536](#)

## Installing Vertica

Do the following prerequisite activities:

1. Download the `HPE_OpsA_3.00_Vertica_Installation` zip file and extract it to a local directory. See ["Task 1: Planning your Deployment" on page 20](#) for more information.
2. Obtain and Install the `dialog` rpm using the following command:  

```
yum install dialog
```

**Note:** The instructions in this manual include examples that show detailed command line usage. If you copy and paste any examples from this manual, carefully review the results of your paste before running a command. It is very important that you do not break lines when pasting, then running any of the commands shown in these examples. Be careful when copying code with the hyphen (-) character, as it is sometimes changed to a similar character and no longer recognized by tools as specifying an option.

Use only one of the following Vertica installation approaches:

- **Approach 1:** This is a single-node installation of the Vertica database. Use the wizard-driven installation approach shown in ["Approach 1: Wizard-Driven Installation of Vertica as a Single Node" below](#).
- **Approach 2:** Use an existing Vertica database as shown in ["Approach 2: Using an Existing Vertica" on page 26](#).
- **Approach 3:** Install a new Vertica database cluster. Using this approach installs the Vertica database as a multiple node. Complete the instructions shown in ["Approach 3: Installing a New Vertica Installation Cluster" on page 26](#).

## Approach 1: Wizard-Driven Installation of Vertica as a Single Node

1. The `opsa-vertica_3.00_setup.bin` stores Operations Bridge Analytics data in the `/opt/vertica` folder. To store data in a different directory, do the following before running the `opsa-vertica_3.00_setup.bin` script.

- a. Create the `/tmp/VerticaDBconf` file.
  - b. Add the following entry to the file:  
`data_folder='<folderA>/<folderB>/...<folderN>'`  
Example: `data_folder='/data/opt/vertica'`
  - c. Save your work.
  - d. Set the `VerticaDBconf` file permissions to 644 (`rw r r`).
2. From the local directory to which you downloaded and extracted the `HPE_OpsA_3.00_Vertica_Installation.zip` file, run the following command to begin the Vertica installation:  

```
bash ./opsa-vertica_3.00_setup.bin
```

Follow the interactive instructions until the Vertica installation is complete.

**Note:** When completing the steps in this section, ignore the warning messages regarding the existing packages.

**Note:** The installation process results in the creation of the `opsadb` database.

After the installation completes, it includes the following:

- o Vertica is installed.
- o The `opsadb` database is created.

**Note:** The default username is `dbadmin` and the password is `dbadmin`.

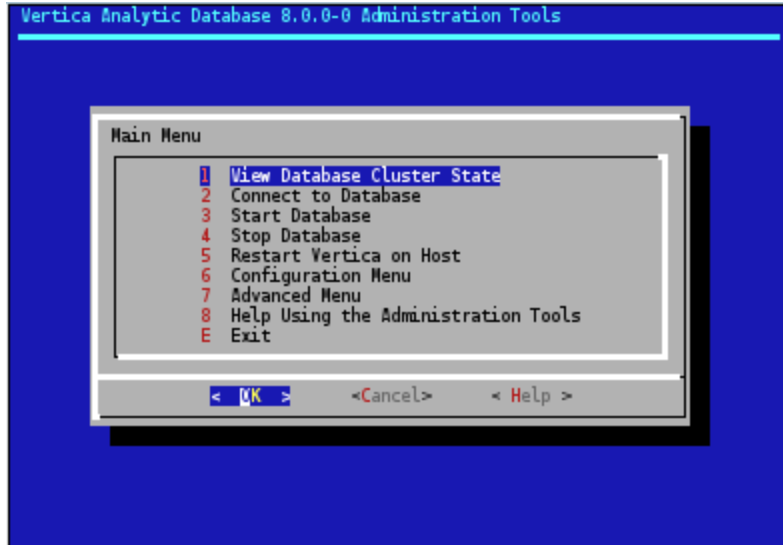
3. Remove the `/tmp/VerticaDBconf` file.
4. Optional Step: Complete the sub-steps here if you want to change the default database password, check the database status, or do both of these tasks.
  - a. The Vertica database admin user is `dbadmin`, and its default password is `dbadmin`. It is recommended that you change the default password now. Run the following command and follow the interactive instructions to change the password:  

```
vertica_change_default_password.sh
```

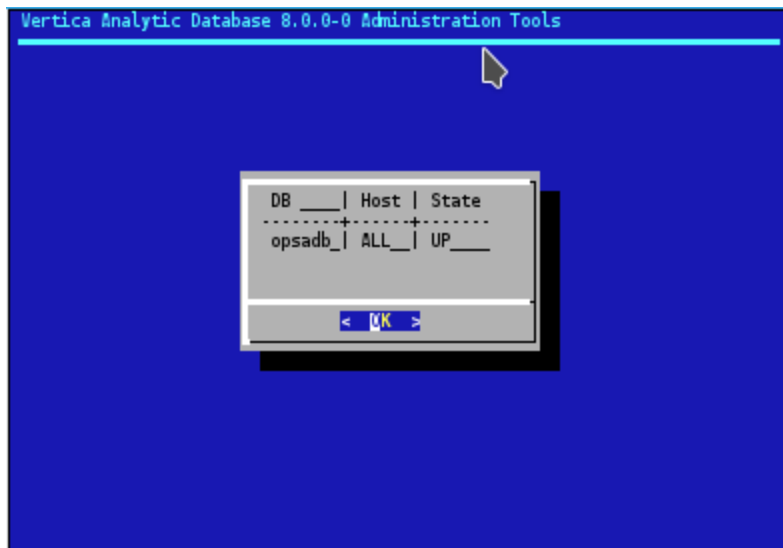
See the `vertica_change_default_password.sh` reference page or the Linux manpage for more information.



- b. Do the following to check the database:
  - i. Run the `su - dbadmin` command.
  - ii. Run the `/opt/vertica/bin/adminTools` command. You should see a screen similar to the following:



- iii. The **opsadb** database should have been created during the installation. Enter 1 to view the state of the database; then click **OK**. You should see a screen similar to the following if the **opsadb** database is running:



- iv. Click **OK** twice to exit the adminTools interactive command.

**Note:** If you must stop or restart the database, you can always do it from the first

screen shown in this step. You can also (carefully) complete other administrative operations using this tool.

Continue your Operations Bridge Analytics installation at "[Completing Other Steps after Installing Vertica](#)" on page 30.

## Approach 2: Using an Existing Vertica

If you want to use an existing Vertica installation (a Vertica that you had installed before deciding to purchase Operations Bridge Analytics, use this approach.

Run the following command as the dbadmin user to create and start opsadb:

```
/opt/vertica/bin/adminTools -t create_db -d opsadb -p dbadmin ----hosts=<List of Vertica nodes delimited by comma>
```

You can now use your existing Vertica software. There is no need to install the Vertica application included with Operations Bridge Analytics.

Continue your Operations Bridge Analytics installation at "[Completing Other Steps after Installing Vertica](#)" on page 30.

## Approach 3: Installing a New Vertica Installation Cluster

To install Vertica as a multiple node cluster, do the following:

1. Open the [HPE Vertica Installation Guide](#) and complete tasks to ensure that all of the nodes in your intended Vertica cluster meet all the prerequisites described in the HPE Vertica Installation Guide before you proceed.

**Note:** If these prerequisites are not met, the distribution of the cluster is likely to fail. If this happens, make sure the prerequisites are met, then start over using the installation steps in this approach.

2. On only one node in the cluster you want to create, log on as root and extract the contents of the HPE\_OpsA\_3.00\_Vertica\_Installation.zip file to a temporary location. For this example, assume you extracted it to the /var/tmp directory on each of the future Vertica cluster nodes:
  - a. `cd /var/tmp`
  - b. `unzip HP_OpsA_3.00_Vertica_Integration.zip`
3. On that same single node, change to the extracted Vertica directory and install the vertica 8.0.1 package. For example:
  - a. `cd /var/tmp/vertica`
  - b. `rpm -Uvh vertica-8.0.1-0.x86_64.RHEL5.rpm`
4. On that same single node, run the Vertica installation script, replacing the hosts with all of your intended cluster node host names. Refer to the Vertica documentation for other parameters that you might want to change (for example the data folder or the admin user name):

**Note:** If you copy and paste the commands from this example, carefully review the results of your paste in a text editor before pasting and running the command in a command window. It is very important that you do not have embedded line breaks when running any of the commands shown in these examples. Be careful when copying code with the hyphen (-) character, as it is sometimes changed to a similar character and no longer recognized by tools as specifying an option.

```
/opt/vertica/sbin/install_vertica --hosts  
VerticaHost1,VerticaHost2,VerticaHostN --rpm ./vertica-8.0.1-0.x86_64.RHEL5.rpm
```

**Note:** As this script runs, you will need to enter the root passwords for the nodes and set a password for the dbadmin user. The script also checks that you have implemented prerequisites from the Vertica documentation.

**Note:** The above command often fails due to warnings about the environment. If this happens, make sure you have implemented all of the prerequisites you can. Only use the following command if you have determined that you must override these warnings. For additional help on this command format, see the [Vertica documentation](#).

```
/opt/vertica/sbin/install_vertica --hosts  
VerticaHost1,VerticaHost2,VerticaHostN --rpm ./vertica-8.0.1-0.x86_64.RHEL5.rpm  
--failure-threshold FAIL
```

5. Install the Vertica license.

6. Complete the following steps on just one of your Vertica cluster nodes:
  - a. Log on as the dbadmin user.
  - b. Run the `/opt/vertica/bin/admintools` program.
  - c. The program should prompt you to enter a license file if you do not already have one. Click **OK** to use the community license or enter your license key obtained from the fulfillment center.
  - d. Exit the program.

7. Run the following command as the dbadmin user to create and start the opsadb database. See the Vertica documentation if you are using a non-default path to the database:

```
/opt/vertica/bin/admintools -t create_db -d opsadb -p dbadmin --  
hosts=VerticaHost1,VerticaHost2,VerticaHostN
```

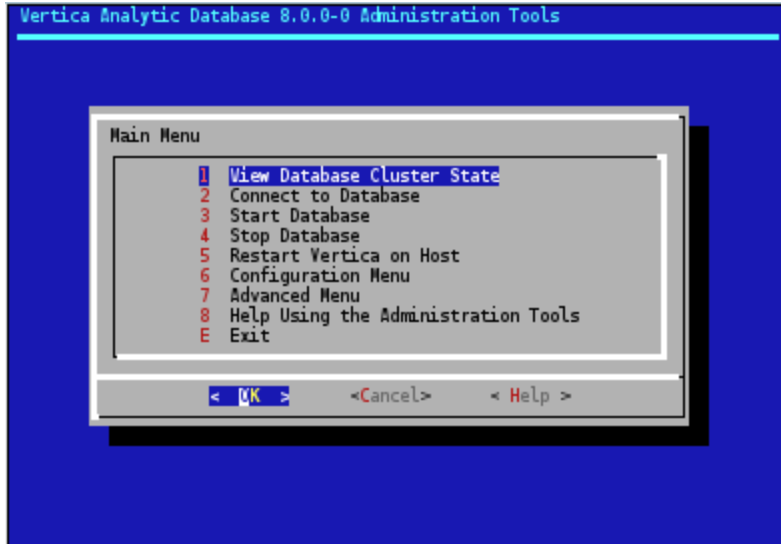
**Note:** The following example shows how you might use the `admintools` command with a non-default location: `admintools -t create_db -d opsadb -p --  
hosts=10.20.100.66,10.20.100.67,10.20.100.68 -c  
/catalogfilesystem/myopsadb/catalog -D /datafilesystem/myopsadb/data`

8. The Vertica database admin user is `dbadmin`, and its default password is `dbadmin`. For security, you might want to change the default password now. Run the following command and follow the interactive instructions to change the password:

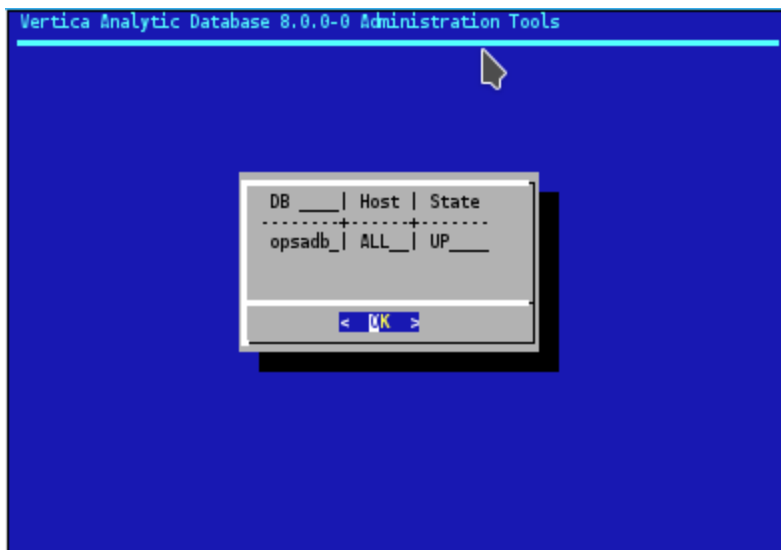
```
vertica_change_default_password.sh
```

See the `vertica_change_default_password.sh` reference page or the Linux manpage for more information.

9. Do the following to check the database:
  - a. Run the `su - dbadmin` command.
  - b. Run the `/opt/vertica/bin/adminTools` command. You should see a screen similar to the following:



- c. The **opsadb** database was created during the previous steps. Enter 1 to view the state of the database; then click **OK**. You should see a screen similar to the following if the **opsadb** database is running:



- d. Click **OK** twice to exit the adminTools interactive command.

**Note:** If you must stop or restart the database, you can always do it from the first screen shown in this step. You can also (carefully) complete other administrative operations using this tool.

Continue your Operations Bridge Analytics installation at "[Completing Other Steps after Installing Vertica](#)" below.

## Completing Other Steps after Installing Vertica

### Stabilizing the Vertica Connection when a Firewall is Enabled

The connection between the Vertica server and the client can be prematurely terminated by a firewall timeout. Examples of these clients with regards to Operations Bridge Analytics involve any connections from either the Operations Bridge Analytics Server or the Operations Bridge Analytics Collector hosts. This could happen when a long-running query is in progress but no data is being passed back to the client, or when the Operations Bridge Analytics internal connection pool is in an idle state and the firewall timeout is less than the TCP `KEEPALIVE` setting on the database server.

**Note:** On some Linux distributions, the default `KEEPALIVE` setting is 2 hours or 7200 seconds.

One possible solution would be to change the `KEEPALIVE` setting to a value lower than the firewall timeout. The following command is only an example of how to use the commands, so substitute different values to meet your needs. In the following example, you would run this command on each Vertica node to set the `KEEPALIVE` setting to 10 minutes (600 seconds): `echo 600 > /proc/sys/net/ipv4/tcp_keepalive_time`

Considering this example, you might do the following on the Vertica server, the Operations Bridge Analytics Server, and the Operations Bridge Analytics Collector host to save these values in the case of these servers resetting. Remember that the values used in the following steps are only there as an example. You must substitute different values to meet your needs:

1. Edit the `/etc/sysctl.conf` file.
2. Append the following lines to the end of the file you are editing:

```
net.ipv4.tcp_keepalive_time = 300
net.ipv4.tcp_keepalive_intvl = 60
net.ipv4.tcp_keepalive_probes=20
```

3. Save your work.
4. Run the following command as the root user: `sysctl -p`

### Database Load Balancing

Operations Bridge Analytics supports native resource load balancing to improve performance. To enable this native resource load balancing, run the following command as the Vertica dbadmin user: `/opt/vertica/bin/vsql -U dbadmin -c "SELECT SET_LOAD_BALANCE_POLICY ('ROUNDROBIN');"`

Continue your Operations Bridge Analytics installation at ["Task 4: Installing the Operations Bridge Analytics Server Software" below](#).

## Task 4: Installing the Operations Bridge Analytics Server Software

You can install the Operations Bridge Analytics Server software on a supported server.

**Note:** This process installs the Operations Agent 12.01 on the Operations Bridge Analytics Server. This Operations Agent installation includes permanent licenses for the Operation Agent, Performance Agent (Perfd), and Glance software applications. There must not be any version of the Operations Agent pre-installed on the system. If an agent version is installed already, remove it prior to Operations Bridge Analytics installation.

## Installing the Operations Bridge Analytics Server Software on a Supported Server

Complete the following steps to deploy Operations Bridge Analytics on a server ( Operations Bridge Analytics Server).

**Note:** It is recommended that you install Operations Bridge Analytics on a server that has a fresh operating system installed with no other software applications installed, such as HPE Operations Agent. If you do install Operations Bridge Analytics on a VM or server having additional software installed, it is recommended that you complete a snapshot of the VM or a backup of the server before proceeding.

1. Create a 10 GB partition, `/var/log`, for log files. Also create a minimum 30 GB partition, `/opt`.
2. Download the `HPE_OpsA_3.00_Linux_Installation.zip` file and extract the product files to a local directory. Navigate to that directory. See ["Task 1: Planning your Deployment" on page 20](#) for more information.

**Note:** Do not install Operations Bridge Analytics from the `/tmp` directory.

3. As the **root** user, run `bash ./opsa_3.00_setup.bin` from the directory to which you extracted the product files.

**Note:** Operations Bridge Analytics uses specific file paths during installation. If you want to install Operations Bridge Analytics using different file paths to meet your company's needs, see ["Installing Operations Bridge Analytics in Non-Default Locations " on page 18](#) for more information.

4. When prompted, specify that you are installing the Operations Bridge Analytics Server.
5. Follow the interactive prompts to complete the installation.

## Installer Troubleshooting

The Operations Bridge Analytics Linux installer requires full access to the default temporary directory (the `/tmp` directory). If this directory is restricted in any way (for example because of security requirements) you should choose a different temporary directory with full access before running the installer.

### How to Change the Installer Working Directory

In Linux, you can change the Installer's working directory (by default `/tmp`) by running the following commands:

```
export IATEMPDIR=/new/tmp
export _JAVA_OPTIONS=-Djava.io.tmpdir=/new/tmp
```

where `/new/tmp` is the new working directory.



# Task 5: Installing and Configuring the Operations Bridge Analytics Collector Software

You can install the Operations Bridge Analytics Collector software on a supported server.

**Note:** This will install the Operations Agent 12.01 on the Operations Bridge Analytics Collector host. This Operations Agent installation includes permanent licenses for the Operation Agent, Performance Agent (Perfd), and Glance software applications. There must not be any version of the Operations Agent pre-installed on the system. If an agent version is installed already, remove it prior to Operations Bridge Analytics installation.

## Installing the Operations Bridge Analytics Collector Software on a Supported Server

Complete the following steps for each Operations Bridge Analytics Collector host you plan to install.

**Note:** It is recommended that you install Operations Bridge Analytics on a server that has a fresh operating system installed with no other software applications installed, such as HPE Operations Agent. If you do install Operations Bridge Analytics on a VM or server having additional software installed, it is recommended that you complete a snapshot of the VM or a backup of the server before proceeding.

1. Download the `HPE_OpsA_3.00_Linux_Installation.zip` file and extract the product files to a local directory. Navigate to that directory. See ["Task 1: Planning your Deployment" on page 20](#) for more information.
2. As the **root** user, run `bash ./opsa_3.00_setup.bin` from the directory to which you extracted the product files (completed in Task 1).

**Note:** Do not install Operations Bridge Analytics from the `/tmp` directory.

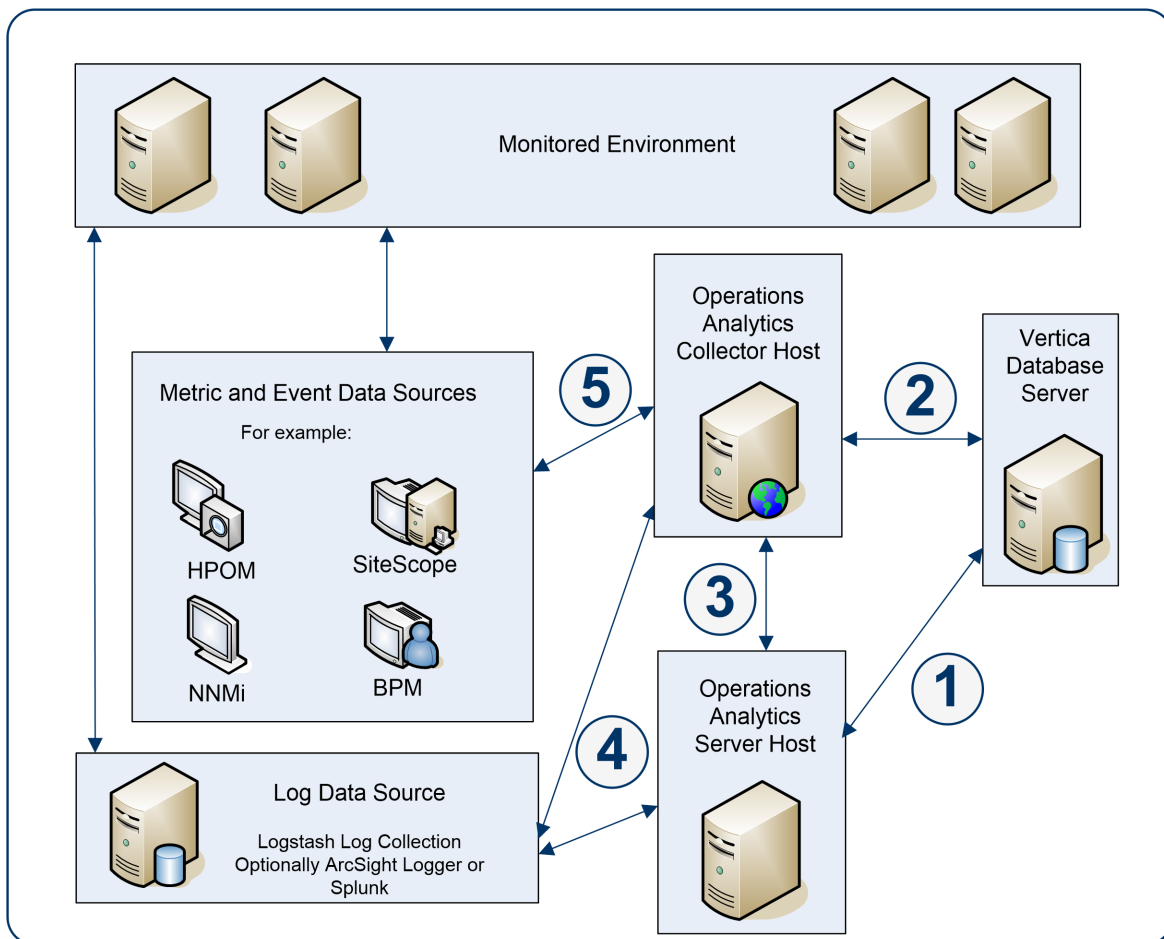
**Note:** Operations Bridge Analytics uses specific file paths during installation. If you want install Operations Bridge Analytics using different file paths to meet your company's needs, see ["Installing Operations Bridge Analytics in Non-Default Locations " on page 18](#) for more

information.

3. When prompted, specify that you are installing the Operations Bridge Analytics Collector host.
4. Follow the interactive prompts to complete the installation.

## Post-Installation Configuration Steps for Operations Bridge Analytics

After you complete the steps in this section, common communication with the distributed components of Operations Bridge Analytics needs to be established. The following diagram shows these connections and the order in which they are implemented.



1. This connection is established when running the `opsa-server-postinstall.sh` script on the Operations Bridge Analytics Server.
2. This connection is established when running the `opsa-collector-postinstall.sh` script on the Operations Bridge Analytics Collector Host.
3. This connection is established when registering the Operations Bridge Analytics Collector host using the following command: `opsa-collection-config.sh -register -collectorhost <collector hostname> -port <port>`
4. This connection is established after a Log Integration is created using the user interface or following the steps in the [OBA 3.0 White Paper for Kafka Log File Processing](#).
5. This connection is established after a collection is created using the Collections Manager in the user interface.

## Completing the Post-Installation Steps for the Operations Bridge Analytics Server

To finish the post-installation configuration steps and configure the communication connections for Operations Bridge Analytics, complete the actions in this section.

There are four different approaches to running the `opsa-server-postinstall.sh` script:

- **Common Approach:** Use the more common approach discussed in "[Option 1: Have the post-installation script prepare the database](#)" on page 37 to prepare a database that does not currently contain Operations Bridge Analytics schemas and tables. To use this option, a dbadmin database user (superuser) must have been created that has access to the Vertica database. This was accomplished if you used **Approach 1: Wizard-Driven Installation of Vertica as a Single Node** to install Vertica in "[Task 3: Installing and Configuring the Vertica Software](#)" on page 22.
- **Manual Approach:** If you do not plan to use the information discussed in the **Common Approach**, and need the Vertica database administrator to manually prepare the database and schemas, use the approach discussed in "[Option 2: Manually prepare the database:](#)" on page 37. Using this approach, all of the database schemas would be created by the Vertica database administrator and not by the `opsa-server-postinstall.sh` script.

- **Adding more Operations Bridge Analytics Servers:** As your Operations Bridge Analytics environment expands, you might need to add more Operations Bridge Analytics Servers. To do this, you would use the `opsa-server-postinstall.sh` script with the `-scaleout` option as described in the *Adding additional Operations Bridge Analytics Servers* in the *Operations Bridge Analytics Help*.

**Note:** Operations Bridge Analytics supports a maximum of three Operations Bridge Analytics Servers. Run the `opsa-server-postinstall.sh` script on the first Operations Bridge Analytics Server without any options as shown in the **Common Approach**. Use the instructions located the *Adding additional Operations Bridge Analytics Servers* in the *Operations Bridge Analytics Help* to add more Operations Bridge Analytics Servers.

Complete the following post-installation configuration steps on the Operations Bridge Analytics Server.

**Note:** The `opsa-server-postinstall.sh` script creates tables in the database. After these tables are created, you cannot run the `opsa-server-postinstall.sh` script again.

If you run the `opsa-server-postinstall.sh` script using a database that already had schemas and tables created by a previous execution of this script, the `opsa-server-postinstall.sh` script does not complete. It shows you a message explaining how to run the `opsa-server-postinstall.sh` script to remedy an already configured Vertica database. This issue could occur if you attempted to run the `opsa-server-postinstall.sh` script more than once to create on the same Operations Bridge Analytics Server to create the Operations Bridge Analytics schemas and tables.

To run the `opsa-server-postinstall.sh` script more than once, you must drop all of the tables or you must drop the existing `opsadb` database and create a new one before running the `opsa-server-postinstall.sh` script again. The `opsa-server-postinstall.sh` script does not support connecting to an existing database schema. See the [Vertica Administrator's Guide](#) for more information.

**Note:** The Vertica Installation steps explained in "[Task 3: Installing and Configuring the Vertica Software](#)" on page 22 does not create the Operations Bridge Analytics schemas and tables. It only creates the `opsadb` database.

## Prework: Setting up the Vertica Database

Operations Bridge Analytics uses database schemas to organize the data for administration and by individual tenants. Operations Bridge Analytics requires the creation of a database user that has access to the Vertica database. If this database user is `dbadmin` (superuser), then the creation of the

schemas and the setting of the `MaxClientSessions` configuration parameter (discussed below) happen without any further work. Operations Bridge Analytics does the schema creation and the `MaxClientSessions` configuration parameter setting).

**Note:** Although not mandatory, it is recommended that this created database user be a superuser. If you choose not to make this created database user a superuser, the Vertica database administrator must create database schemas before configuring Operations Bridge Analytics or any Operations Bridge Analytics tenants. See **Option 2** below for more information.

Before running the `opsa-server-postinstall.sh` script, do one of the following:

- **Option 1: Have the post-installation script prepare the database**

Verify that a `dbadmin` database user (superuser) exists that has access to the Vertica database. This was accomplished if you used the instructions shown in **Approach 1: Wizard-Driven Installation of Vertica as a Single Node** located in ["Task 3: Installing and Configuring the Vertica Software"](#) on page 22 to install Vertica. Continue with ["Running the Post-Installation Script"](#) on the next page.

- **Option 2: Manually prepare the database:**

If the Vertica database administrator does not want Operations Bridge Analytics to automatically create an Operations Bridge Analytics `dbadmin` database user (superuser), complete the following steps using the sql statements to create a database user (`<newusername>`), password `<password>`, and the two schemas (`opsa_admin` and `opsa_default`), specifying the user `<newusername>` as the owner of the schemas:

- `create user <newusername> identified by '<password>';`
- `create schema if not exists opsa_admin authorization <newusername>;`
- `create schema if not exists opsa_default authorization <newusername>;`
- `grant all on schema opsa_default to <newusername>;`
- `grant all on schema opsa_admin to <newusername>;`
- `grant usage on schema PUBLIC to <newusername>;`
- `select SET_CONFIG_PARAMETER('MaxClientSessions', 200);`

**Note:** If you use **Option 2**, you must run the `-skipSchemaCreation` option when running the `opsa-server-postinstall.sh` script in the next section.

Continue with ["Running the Post-Installation Script"](#) on the next page.

## Running the Post-Installation Script

Complete the following post-installation configuration steps on the Operations Bridge Analytics Server:

1. Log on as an `opsa` user to the Operations Bridge Analytics Server (the default password is `opsa`).

**Note:** The first time you log on, you will need to change the default password.

2. Run only one of the following commands:
  - **If using Option 1 from the previous section:** `$OPSA_HOME/bin/opsa-server-postinstall.sh` script (interactive mode).
  - **If using Option 2 from the previous section:** `$OPSA_HOME/bin/opsa-server-postinstall.sh -skipSchemaCreation` script (interactive mode).
3. The `opsa-server-postinstall.sh` script prompts for the following information, and includes a default value surrounded by brackets. To accept the default value, click **Enter** for each prompt.

- Vertica database host name
- Vertica database port number
- Vertica database name
- Vertica database user name

**Note:** Use either `dbadmin` or the `<newusername>` you created earlier.

- Vertica database password

**Note:** The `opsa-server-postinstall.sh` script shows an error message if any of the following problems exist:

- Vertica is not installed on the specified host.
- Vertica is down.
- The port number you specified for Vertica is not open.
- You entered the wrong Vertica username or password.
- The default tenant name, `opsa_default`, does not exist.

Correct these problems and rerun the `opsa-server-postinstall.sh` script.

For Vertica administration issues, run the `/opt/vertica/bin/adminTools` command and

view the cluster state. If the state is down, you might need to restart the database. See ["Task 3: Installing and Configuring the Vertica Software" on page 22](#) for more information.

4. The `opsa-server-postinstall.sh` script prompts you with the following message: Is the database created and running on host [yes/no]:  
If the database is created and running, enter yes; If the database is not created and running, enter no to stop the post install configuration script.

**Note:** The `opsa-server-postinstall.sh` script assumes the `opsadb` database is available on the Vertica server and will not create the `opsadb` database on the Vertica server.

**Note:** If you already have the `opsadb` schemas and tables created on your `opsadb` database or are running the `opsa-server-postinstall.sh` script more than once, you must drop all of the tables or you must drop the existing `opsadb` database and create a new one before running the `opsa-server-postinstall.sh` script. The `opsa-server-postinstall.sh` script does not support connecting to an existing database schema. See the [Vertica Administrator's Guide](#) for more information.

**Note:** Although this document refers to the Vertica database name for Operations Bridge Analytics as `opsadb`, you can choose a different name when creating this database.

5. If this is the first time running the `opsa-server-postinstall.sh` script on this server, it prompts you to change the passwords for the `opsaadmin`, `opsatenantadmin`, and `opsa` default application users. Follow the interactive instructions carefully to reset these passwords, and note the password values you set for later use.

**Note:** If you are running the `opsa-server-postinstall.sh` script to add additional servers, it does not require you to change these passwords.

**Note:** The passwords you set must contain at least 13 characters, both upper and lowercase characters, and a digit character.

**Note:** See ["Predefined User Groups" on page 9](#) for more information about the predefined user groups, default user names, and passwords used by Operations Bridge Analytics.

# Post-Installation Steps for the Operations Bridge Analytics Collector Host

Complete the following post-installation configuration steps on the Operations Bridge Analytics Collector host.

1. Log on as a `opsa` user to the Operations Bridge Analytics Collector host (the default password is `opsa`).
2. Run the `$OPSA_HOME/bin/opsa-collector-postinstall.sh` script (interactive mode).
3. The `opsa-collector-postinstall.sh` script prompts for following Vertica database host details (where the `opsadb` database is created), and includes the default values shown in the following list. To accept the default value, click **Enter** for each prompt.

**Note:** Although this document refers to the Vertica database name for Operations Bridge Analytics as `opsadb`, you can choose a different name when creating this database.

- o Vertica database host name
- o Vertica database port number
- o Vertica database name
- o Vertica database user name
- o Vertica database password (`dbadmin`, unless you reset this password earlier)

**Note:** The `opsa-collector-postinstall.sh` script shows an error message if any of the following problems exist:

- Vertica is not installed on the specified host.
- Vertica is down.
- The port number you specified for Vertica is not open.
- You entered the wrong Vertica username or password.
- The default tenant name, `opsa_default`, does not exist.

Correct these problems and rerun the `opsa-collector-postinstall.sh` script.

For Vertica administration issues, run the `/opt/vertica/bin/adminTools` command and



view the cluster state. If the state is down, you might need to restart the database. See ["Task 3: Installing and Configuring the Vertica Software" on page 22](#) for more information.

**Optional Step:** The Operations Bridge Analytics Collector host uses a timeout and reconnect approach to connect to the Vertica database. To optimize operating system resources and reduce the operating system resources used for networking (improving operating system resource utilization), consider shortening the TCP timeout period by completing these steps:

**Note:** Using these steps to shorten the TCP timeout period does not only affect communication with Vertica. It also affects all TCP connections on the Operations Bridge Analytics Collector host on which you make this change.

1. As root user, append the following two lines to the end of the `/etc/sysctl.conf` file on the Operations Bridge Analytics Collector host:

**Note:** The following numbers only show how you would change the values within the `/etc/sysctl.conf` file. Substitute values that relate to the performance of the system you are using.

```
net.ipv4.tcp_fin_timeout = 30
net.ipv4.tcp_keepalive_time = 30
```

2. Save your work.
3. As root user, run the following command on the Operations Bridge Analytics Collector host to apply the changes you made:

```
sysctl -p
```

That completes the post-installation configuration steps for the Operations Bridge Analytics Collector host.

**Note:** Your next steps are to register this Operations Bridge Analytics Collector host with the Operations Bridge Analytics Server you installed, then begin configuring data Source Types to collect data.

You must register each Operations Bridge Analytics Collector host you plan to use with the Operations Bridge Analytics Server. See *Registering Operations Bridge Analytics Collector Hosts* in the *Operations Bridge Analytics Help* for more information.

## Register the Collector Host

To register the Operations Bridge Analytics collector host, run the following command:

```
opsa-collection-config.sh -register -collectorhost <collector hostname> -port  
<port>
```

## Accessing Operations Bridge Analytics for the First Time

To log on to Operations Bridge Analytics do the following:

1. Access the following URL: **http://<IP Address or fully-qualified domain name of the Operations Bridge Analytics Server>:8080/opsa**
2. After the Operations Bridge Analytics log on screen appears, use the default user credentials to log on to Operations Bridge Analytics:  
User Name: opsa  
Password: Use the password for this user that you set during installation

**Note:** Click  to access the *Operations Bridge Analytics Help*.

## Installing the Operations Bridge Analytics License

Operations Bridge Analytics licensing is based on the number of Operations Bridge Analytics nodes for which data is collected. An Operations Agent node is a real or virtual computer system, or a device (for example a printer, router, or bridge) within a network.

The following types of licenses can be applied to the Operations Bridge Analytics Server:

An **Instant On** license gets applied during the Operations Bridge Analytics Server installation. This *Instant On* license is valid for 60 days and has a capacity for 500 OA nodes.

A **Permanent** license is a license that you apply after your purchase Operations Bridge Analytics, and is based on the quantity of OA nodes.

When installing the Operations Bridge Analytics license, note the following:

- You can install a *Permanent* license even though an *Instant On* license is already installed.
- Installing a *Permanent* licenses disables the *Instant On* license.
- Operations Bridge Analytics license entitlements aggregate if you apply the same kind of license in addition to the existing licenses.

**Note:** For example, installing an Operations Bridge Analytics Permanent license for 100 OA nodes on top of an existing Operations Bridge Analytics Permanent license for 200 OA nodes, will aggregate the license capacity to 300 OA nodes.

- There is no license for the Operations Bridge Analytics Collector host.

To install the Operations Bridge Analytics license, do the following:

1. As an OBA user, run the following command from the Operations Bridge Analytics Server to install the Operations Bridge Analytics license:


```
$OPSA_HOME/bin/opsa-license-manager.sh -add <path to license file>
```

You should see a message that, among other information, includes the following:

```
Added license from file /opt/HP/opsa/license/Neutron_License.txt successfully
```

2. Run the following command to verify that the Operations Bridge Analytics license installed correctly:

```
$OPSA_HOME/bin/opsa-license-manager.sh -list
```

See the *opsa-license-manager.sh* reference page (or the Linux man page) for more information. To view Operations Bridge Analytics reference pages, select  > **Reference Pages** in the Operations Bridge Analytics console,

## Chapter 4: Optionally Using HPE ArcSight Logger with HPE Operations Bridge Analytics

The instructions in this section provide you some direction if you need to set up an integration between HPE ArcSight Logger and Operations Bridge Analytics.

1. Review the [Integrations and Solutions Catalog](#) to determine the versions of HPE ArcSight Logger supported by Operations Bridge Analytics.
2. To configure Logger to send data to Operations Bridge Analytics, configure a Log Integration. For details, see *Configure Log Integrations* in the Operations Bridge Analytics User Guide.

## Chapter 5: Uninstalling Operations Bridge Analytics

This chapter guides you through a high level list of things to do when you decide to uninstall Operations Bridge Analytics.

1. Remove all of the collections you configured. See *Using the Collections manager to Manage Source Types* in the *Operations Bridge Analytics help* for more information.
2. On each of the Operations Bridge Analytics Server and Collector hosts do the following:
  - a. Navigate to `/opt/HP/opsa/Uninstall/opsa`
  - b. Run `setup.bin`.

**Note:** The Operations Agent is uninstalled by default during the OBA uninstallation.
3. *Optional.* Remove all Operations Bridge Analytics data from the Vertica database.

## Chapter 6: Maintenance Tasks

Use the information in this section to complete any necessary maintenance tasks.

### Installing Operating System Patches and Upgrades

Operations Bridge Analytics customers are responsible for installing operating system patches and upgrades as required by their company policy.

**Note:** It is recommended that you clean up the `/boot` partition before completing any Kernel upgrades. See the Operating System documentation for the server upon which you are installing Operations Bridge Analytics.

# Send Documentation Feedback

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**Feedback on Operations Bridge Analytics Installation Guide (Operations Bridge Analytics 3.00)**

Just add your feedback to the email and click send.

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