HP Service Health Analyzer Data Collector

For the Windows, Linux operating systems

Software Version: 9.20

Installation Guide

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Acknowledgements

This product includes software developed by the Apache Software Foundation (www.apache.org).

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The title page of this document contains the following identifying information:

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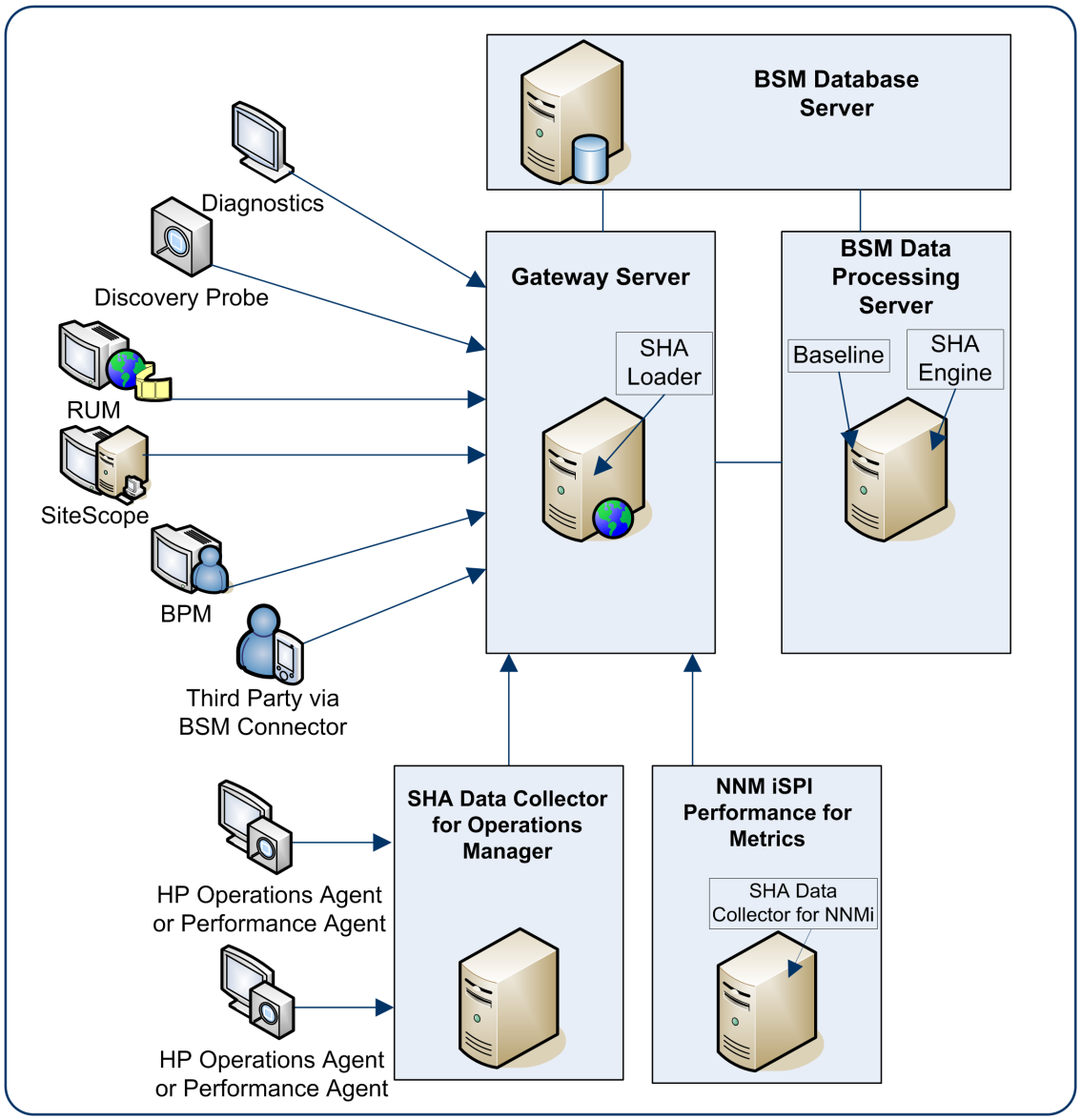
SHA Data Collectors

HP Service Health Analyzer (SHA) enables you to be more proactive in managing your data center's physical and logical infrastructure, with very low overhead. It uses a self learning algorithm to analyze historical and current data, and if certain criteria are met, reports on the current state of abnormal IT services and their topology location. SHA uses a run-time analytics engine that can anticipate IT problems before they occur, by analyzing abnormal service behavior and alerting IT managers of real service degradation before an issue impacts their business.

The following diagram summarizes SHA's architecture:



This document describes how to install the following data collectors that work with SHA:

- **SHA Data Collector for Network Node Manager i**

  This data collector uses the NNM iSPI Performance for Metrics to collect metrics from NNMi and convert them to a CSV format that can be read by SHA. For further information, see "SHA Data Collector for Network Node Manager i" on page 8.

- **SHA Data Collector for Operation Agent / Performance Agent**

  This data collector polls data from available HP Operation Agents (OA) or Performance Agents (PA). For further information, see "SHA Data Collector for Operations Manager" on page 10.

Required Information

Before installing the SHA Data Collector, the following information is needed to connect to the SHA Database:

For a Microsoft SQL server with the BSM Management Database

- **Host name** - The name of the machine on which the BSM Management database is installed.

  If you are connecting to a non-default Microsoft SQL server instance in dynamic mode, you will need to enter the server name in the following format:

  <host_name>\<instance_name>

- **Port name** - The Microsoft SQL server's TCP/IP port. The default port is **1433**.
- **Database name** - The name of the SHA database.
- **Authentication method**

  If you use select **SQL server authentication**, you need a username and password for a user with the administrator permissions.

For an Oracle Server with the BSM Management Database

- **Host name** - The name of the machine on which the BSM Management database is installed.
- **Port** - The Oracle listener port.
- **SID** -The Oracle instance name that uniquely identifies the instance of the Oracle database.
- **Schema name**
- **Schema password**

  For further information about SHA Database settings, see Managing SHA Databases in the BSM Application Administration Guide.

SHA Data Collector for Network Node Manager i

The HP SHA Data Collector for Network Node Manager i (NNMi), uses the NNM iSPI Performance for Metrics to collect metrics from NNMi and convert them to a CSV format that can be read by SHA.

The SHA Data Collector for NNMi is installed on the same server that the NNM iSPI Performance for Metrics is installed on. The NNM iSPI Performance for Metrics may be installed on the same server as NNMi, or on a separate server.

How to Install SHA Data Collector for Network Node Manager i

This task describes how to install the SHA Data Collector for NNMi.

1. On the server where the NNM iSPI Performance for Metrics is installed, insert or access the required SHA Data Collector DVD and run the following:

   There are separate DVDs for Windows and Linux.

   - **For Windows**, run **<BSM_SHA_Windows>\Windows_Setup\HPSHA_9.20_setup.exe**
   - **For Linux**, log into the server as the root user and run the following script: **<BSM_SHA_Linux>\Linux_Setup\HPSHA_9.20_setup.bin**
2. Follow the initial steps in the installation wizard.
3. In the Group Selection screen, select **HP Business Service Management - Analytics NNM Data Collector**.
4. Click **Next** until the Management Schema - Management Database Server Type screen appears. Select the server type with the BSM Management database (Microsoft SQL or Oracle) and click **Next**.
5. Depending on the Server Type selected the following appears:

   - **For Microsoft SQL Server** - In the Management Schema - MS SQL Settings screen, enter the required information for the Microsoft SQL server with the BSM Management Database.
   - **For Oracle:** - In the Management Schema - Management Oracle Schema Settings screen, enter the required information for the Oracle server with the BSM Management Database.

   For further information, see "Required Information" on page 7.
6. Click **Next** until the Login Settings screen appears and enter the JMX password for the server on which you are installing the SHA Data Collector.
7. On the Summary screen, verify that the installation was completed successfully, and then

click **Finish**.

8. Once the wizard is complete, on the server where the Network Performance Smart Plug-In is installed, create the following folder:

   C:\NPSExportData

   This folder will store the CSV files.

9. Open a command prompt and run the following:

   configurecsvexport.ovpl –p interface_health –a "LIVE, C:\NPSExportData".

To confirm that the process ran successfully, open the folder **C:\NPSExportData** and confirm that there are CSV files in the folder. It may take up to five minutes for files to appear in this folder.

SHA Data Collector for Operations Manager

The SHA Data Collector for Operations Manager (OM) collects metrics from HP Operations Agent version 8.60 and above or Performance Agents (PA) 5.0 and above, and makes the data available in a format that can be read by SHA.

To configure the metric types in the SHA analysis, see How To Add and Remove Metric Types in the SiteScope, Diagnostics and PA XML Files in the BSM Application Administration Guide.

Before you install this data collector, you must have Operations agents or Performance Agents agents that report to BSM.

This data collector is installed on a standalone server.

System Requirements

Following are the system requirements for SHA Data Collector for Operations Manager:

- **Operating System**

  Windows:

  - Windows Server 2008 Enterprise Edition SP2 or later (64 bit)
  - Windows Server 2008 Standard Edition SP2 or later (64 bit)
  - Windows Server 2008 R2 Enterprise Edition SP1 or later (64 bit)
  - Windows Server 2008 R2 Standard Edition SP1 or later (64 bit)
  - Windows Server 2008 R2 Datacenter Edition SP1 or later (64 bit)

  > **Note:** User Access Control (UAC) must be disabled during the installation process. If you are running Windows Server 2008 SP2, User Access Control (UAC) must always be disabled.

  Linux:

  - RedHat Enterprise Linux 5.3 or any later 5.x version (Intel x64 64 bit)
  - Oracle Linux 5.5 (x86-64)

  > **Note:** Regardless of the operating system version, the entire Distribution (with OEM support) and the latest recommended Patch Cluster are required.

- **CPU:** 2 CPUs

The following CPU types are supported:

- Intel Dual Core Xeon Processor 2.4 GHz or higher
- AMD Operation Dual Core Processor 2.4 GHz or higher

- **Memory:** 2 GB
- **Virtual Memory/Swap Space:** 2 GB

Note: The SHA Data Collector does not require its own database or web server capabilities.

How to Install SHA Data Collector for OM

This task describes how to install the SHA Data Collector for Operations Manager.

1. On the server, insert or access the required SHA Data Collector DVD and run the following:

   There are separate DVDs for Windows and Linux.

   - **For Windows**, run **<BSM_SHA_Windows>\Windows_Setup\HPSHA_9.20_setup.exe**
   - **For Linux**, log into the server as the root user and run the following script: **<BSM_SHA_Linux>\Linux_Setup\HPSHA_9.20_setup.bin**
2. Follow the initial steps in the installation wizard.
3. In the Group Selection screen, select **HP Business Service Management - Analytics PA data collector**.
4. Click **Next** until the Management Schema - Management Database Server Type screen appears. Select the server type with the BSM Management database (Microsoft SQL or Oracle) and click **Next**.
5. Depending on the Server Type selected the following appears:

   - **For Microsoft SQL Server** - In the Management Schema - MS SQL Settings screen, enter the required information for the Microsoft SQL server with the BSM Management Database.
   - **For Oracle:** - In the Management Schema - Management Oracle Schema Settings screen, enter the required information for the Oracle server with the BSM Management Database.

   For further information, see "Required Information" on page 7.
6. Click **Next** until the Login Settings screen appears and enter the JMX password for the server on which you are installing the data collector.
7. On the Summary screen, verify that the installation was completed successfully, and then click **Finish**.

Hardening SHA Data Collectors

You can harden the SHA Data Collectors so that they can be part of a secure architecture, and can therefore meet the challenge of dealing with security threats to which it could potentially be exposed.

1. Obtain a client certificate (certificate.jks) and place it on all BSM Gateway, Data Processing, and SHA Data Collector servers. This certificate must be in jks format.
2. Open **<BSM installation directory>\bin\service_manager.bat** on **all** BSM Gateway and Data Processing servers and all SHA Data Collector servers and make the following changes on each server:
   a. Add the following line somewhere before the line **set JAVA_OPTS=....**

      set SECURITY_OPTS=-Djavax.net.ssl.keyStore=<path to certificate.jks> -Djavax.net.ssl.keyStorePassword=<keystore password> -Djavax.net.ssl.keyStoreType=JKS

   b. Add the following line after the line **set JAVA_OPTS=...**

      set JAVA_OPTS=%JAVA_OPTS% %SECURITY_OPTS%
3. Restart all BSM Gateway, Data Processing, and SHA Data Collector servers.