

HP OpenView Select Identity

Connector for TFS BoKS Manager

Connector Version: 1.1

Installation and Configuration Guide

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- Commons-beanutils
- Commons-collections
- Commons-logging
- Commons-digester
- Commons-httpclient
- Element Construction Set (ecs)
- Jakarta-poi
- Jakarta-regexp
- Logging Services (log4j)

Additional third party software used by Select Identity includes:

- JasperReports developed by SourceForge
- iText (for JasperReports) developed by SourceForge
- BeanShell
- Xalan from the Apache XML Project
- Xerces from the Apache XML Project
- Java API for XML Processing from the Apache XML Project
- SOAP developed by the Apache Software Foundation
- JavaMail from SUN Reference Implementation
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- OpenSPML Toolkit from OpenSPML.org
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1 Documentation Map

This chapter describes the organization of HP OpenView Select Identity connector documentation and provides necessary information on how to use the documentation set to install and configure the connectors.

[Figure 1](#) illustrates the documentation map for HP OpenView Select Identity connector. For a list of available product documentation, refer to the [Table 1](#).

Figure 1 Documentation Map



Table 1 Connector Documentation

Document Title and Filename	Contents	Location
<i>Release Note</i> BoKS Connector v1.1 Release Note.htm	This file contains necessary information on new features of the connector, enhancements, known problems or limitations, and support information.	/Docs/ subdirectory under the connector directory.
<i>Connector Deployment Guide (for Select Identity 4.10)</i> connector_deploy_SI4.1.pdf	Connector deployment guides provide detailed information on: <ul style="list-style-type: none"> • Deploying a connector on an application server. • Configuring a connector with Select Identity. Refer to these guides when you need generic information on connector installation.	/Docs/ subdirectory under the connector directory.
<i>Connector Deployment Guide (for Select Identity 4.0/4.01.000)</i> connector_deploy_SI4.pdf		
<i>Connector Installation and Configuration Guide</i> BoKS_install.pdf	Connector installation and configuration guide provides installation instructions for a specific connector. It contains resource specific configuration details.	/Docs/ subdirectory under the connector directory.

2 Introduction

This chapter gives an overview of the HP OpenView Select Identity connector for TFS BoKS Manager. An HP OpenView Select Identity connector for TFS BoKS Manager enables you to provision users and manage identities on TFS BoKS Manager . At the end of this chapter, you will be able to know about:

- The benefits of the HP OpenView Select Identity.
- The role of a connector.
- The connector for TFS BoKS Manager.

About HP OpenView Select Identity

HP OpenView Select Identity provides a new approach to identity management. Select Identity helps you automate the process of provisioning and managing user accounts and access privileges across platforms, applications, and corporate boundaries. Select Identity communicates with the enterprise information system through connectors, and automates the tasks of identity management. The enterprise information system, which is also referred to as **resource**, can be a database, a directory service, or an ERP package, among many others.

About Connectors

You can establish a connection between a resource and Select Identity by using a connector. A connector is resource specific. The combination of Select Identity and connector helps you perform a set of tasks on the resource to manage identity. A connector can be **unidirectional** or **bidirectional**. A unidirectional connector helps you manage identities from Select Identity, but if any change takes place in resource, it cannot communicate that back to Select Identity. On the other hand, a bidirectional connector can reflect the changes made on resource back to Select Identity. This property of bidirectional connectors is known as **reverse synchronization**.

About BoKS Connector

The connector for TFS BoKS Manager — hereafter referred to as BoKS connector — enables HP OpenView Select Identity to perform the following tasks on BoKS servers running Secure Shell (SSH) scripts.

- Add, update, and remove users
- Retrieve user attributes

- Enable and disable users
- Verify a user's existence
- Change user passwords
- Reset user passwords
- Retrieve all entitlements
- Retrieve a list of supported user attributes
- Grant and revoke entitlements to and from users

The BoKS connector is a unidirectional connector and pushes changes made to user data in the Select Identity database to a target server. The mapping file controls how Select Identity fields are mapped to BoKS fields.



This connector can be used with Select Identity version 4.10, 4.01.000 and 4.0.

Overview of Installation Tasks

Before you start installing the connector, you must ensure that system requirements (hardware and software) and all the installation prerequisites are met. Refer to the [Table 2](#) for an overview of installation tasks.

Table 2 Organization of Tasks

Task Number	Task Name	Reference
1	Install the connector on the Select Identity server.	See Installing the Connector on page 13.
	— Meet the system requirements.	See System Requirements on page 13.
	— Extract contents of the Schema file (file that contains the mapping files for the connector) to location on the Select Identity server.	See Extracting Contents of the Schema File on page 14.
	— Install the Resource Adapter Archive (RAR) of the connector on an application server.	See Installing the Connector RAR on page 14.
	— Install the scripts.	See Installing SSH and BeanShell (BSH) Scripts on page 14.
	— Create a known host file.	See Creating a Known Hosts File on page 15.
2	Configure the connector with the Select Identity server.	See Configuring the Connector with Select Identity on page 17.

3 Installing the Connector

This chapter elaborates the procedure to install the BoKS connector on Select Identity server. At the end of this chapter, you will know about

- Software requirements to install the BoKS connector.
- Prerequisite conditions to install BoKS connector.
- Procedure to install BoKS connector.

BoKS Connector Files

The BoKS connector is packaged with the following files.

Table 3 BoKS Connector Files

Serial Number	File Name	Description
1	BoksConnector.rar	It is the Resource Adapter Archive (RAR) file of the connector. It contains the binaries for the connector
2	BoksConnectorSchema.jar	It contains the mapping file for the connector.
3	BoksScripts.tar.gz	It contains a set of scripts that perform user provisioning operations for the connector on UNIX.
4	BoksScripts.zip	It contains a set of scripts that perform user provisioning operations for the connector on Windows.

System Requirements

The BoKS connector is supported in the following environment:

Table 4 Platform Matrix for BoKS connector

Select Identity Version	Operating System, Database, and Application Server Platforms
4.0/4.01.000/4.10	The BoKS connector is supported on all the platform configurations of Select Identity 4.0, 4.01.000, and 4.10.

This connector is supported with BoKS 4.5 and 6.0.

You must ensure that SSH daemon runs on the systems on which you provision users using the connector. The SSH client must be installed on the Select Identity server.

Extracting Contents of the Schema File

The Schema file of the connector contains necessary mapping information to map resource attributes to Select Identity. Extract contents of the `BoksConnectorSchema.jar` file to a directory that is in the application server `CLASSPATH`. Refer to the *HP OpenView Select Identity Connector Deployment Guide* for detailed instruction to extract contents of the Schema file.

Installing the Connector RAR

To install the RAR file of the connector (`BoksConnector.rar`) on the Select Identity server, you must copy the file to a local subdirectory on the Select Identity server, and then deploy on the application server. Refer to the *HP OpenView Select Identity Connector Deployment Guide* for detailed information on deploying a RAR file on an application server.



While deploying the RAR on WebSphere, enter the JNDI Pool Name as `eis/BoksConnector`.

Installing SSH and BeanShell (BSH) Scripts

The BoKS connector performs operations over SSH using BSH scripts, which must be installed on the application server running Select Identity. Perform the following steps install SSH and the scripts:

- 1 Install SSH, if it is not already installed:

On UNIX

Install the SSH client from the operating system's installation CD.

On Windows

Download the SSH setup program from <http://www.openssh.com> and install it on the Windows server.

- 2 Install the BSH scripts on the application server:

On UNIX

Create a subdirectory called `boks` in the Select Identity home directory and extract the `BoksScripts.tar.gz` file using the following commands:

```
gzip -d BoksScripts.tar.gz
```

```
tar -xvf BoksScripts.tar
```

When deploying a resource for the BoKS connector, provide the location of this directory.

On Windows

Extract the `BoksScripts.zip` file to a local directory on the application server, such as `C:\Select_Identity\boks`. When deploying a resource for the BoKS connector, provide the location of this directory.

Creating a Known Hosts File

While entering the resource access parameters, you must provide the name of the file that contains the names and public keys of all the trusted BoKS machines to which you can provision users. You can store this information (names and public keys of trusted BoKS machines) in a text file, for example, `known_hosts.txt`, and enter this filename in the Ssh Known Hosts field while entering resource access information on Select Identity. It is not mandatory to create a Known Hosts in order to configure BoKS Connector. Providing Known Hosts parameter is optional while creating a Select Identity resource for BoKS Connector.

One way of obtaining this information is to use PuTTY (`putty.exe`) to connect to the machine and a pop up appears when you connect for the first time. This pop up displays the host key of the machine. You can connect to trusted BoKS machines individually from a Windows system by using PuTTY, capture this information, and put it in a text file, which can be used as known hosts file. PuTTY can be downloaded from www.putty.nl/download.



Sample contents of `known_hosts.txt` file:

```
16.73.17.88 ssh-rsa 1024 57993be4462bc4a536e8e58cad40f5ae
16.73.17.91 ssh-rsa 1024 664c2580121e2e06f702c195ae4e8885
```


4 Configuring the Connector with Select Identity

This chapter describes the procedure to configure the BoKS connector with Select Identity and the connector specific parameters that you must provide while configuring the connector with Select Identity.

Configuration Procedure

After you deploy the connector RAR on application server, you must configure the connector with Select Identity. Perform the following steps to configure the BoKS connector with Select Identity.

- 1 Add a New Connector
- 2 Add a New Resource
- 3 Map Attributes

Add a New Connector

Add a new connector in Select Identity by using the user interface. While adding the connector, do the following:

- In the Connector Name text box, specify a name for the connector.
- In the Pool Name text box, enter **eis/BoksConnector**.
- Select No for the Mapper Available section.

Refer to the *HP OpenView Select Identity Connector Deployment Guide* for detailed information on adding a new connector in Select Identity.

Add a New Resource

Add a new resource in Select Identity that uses the newly added connector. Refer to the *HP OpenView Select Identity Connector Deployment Guide* for detailed instructions on adding a resource in Select Identity.

Refer to the following table while entering the parameters in the Basic Information and the Access Information pages:

Table 5 Resource Configuration Parameters

Field Name	Sample Values	Description
Resource Name	BoKS_Server	Name given to the resource.
Connector Name	BoKSConnector	The newly deployed connector.
Authoritative Source	No	Whether this resource is a system that is considered to be the authoritative source for user data in your environment. You must specify No because the connector cannot synchronize account data with the Select Identity server.
BOKS Master	15.61.115.25	The IP address or host name of the BoKS system.
Port	22	The Port on the BoKS system.
User Name	accountadmin	Login account on the BoKS machine.
User Password	Password123	Password for the User Name account.
Admin Password	rootPassword	The password to gain administrator privileges.
Ssh known hosts	C:/Documents and Settings/.ssh/known_hosts	The SSH Known hosts file that contains the IP address and private key of the target resource; it is located in the user home directory. This is an optional field.
Script Location	On UNIX: /connectorScripts/ bsh/ On Windows: D:\boks\scripts\ v60\	Location of the scripts that are used by the connector. Note that on Windows, you should include a trailing slash in the path.
Mapping File	BoksConnectorMapping.xml	Location of the connector mapping file used to map resource attributes to Select Identity attributes.

Map Attributes

After successfully adding a resource for the BoKS connector, you must map the resource attributes to Select Identity attributes. Refer to the *HP OpenView Select Identity Connector Deployment Guide* for information on mapping and creating attributes. While mapping attributes, refer to the following table for resource specific mapping information:

Table 6 BoKS Mapping Information

Select Identity Resource Attribute	Attribute on Connector	Attribute on BoKS Resource	Description
User Name	username	-l option	The user name (mandatory field)
Password	password	-p option	The user's password (mandatory field)
Comment	comment	-r option	Comment for the user
Host Group	phgroup		The host group to which the user belongs. (mandatory field)
Home Directory	homedir	-h option	The user's home directory
Primary Group	pgid	-g option	The primary group of the user; can be specified as a string or as a number (mandatory field)
Primary User Class	puclass	-P option	The primary user class to which the user is attached
Shell	shell	-s option	The user's login shell

After mapping the attributes, you can use the connector to create a service, or you can associate the connector with an existing service. Refer to the *Service Studio* chapter of the *HP OpenView Select Identity Administration Online Help* for information on Select Identity services.

5 Uninstalling the Connector

If you want to uninstall a connector from Select Identity, perform the following steps:

- Remove all resource dependencies.
- Delete the connector from Select Identity.
- Delete the connector from application server.

See *HP OpenView Select Identity Connector Deployment Guide* for more information on deleting the connector from application server and Select Identity.

A Understanding the Scripts

The BoKS connector performs operations using BSH Java API. This API is packaged with the connector that resides on the application server running Select Identity.

Special variables and classes are available to the scripts when they are executed by the BoKS connector. Each is described in this chapter. The following scripts are provided by the connector:

- `adduser.bsh`
Adds a new user on the BoKS system.
- `modifyuser.bsh`
Modifies an existing user's details on the BoKS system.
- `resetpasswd.bsh`
Resets an existing user's password on the BoKS system.
- `changestatus.bsh`
Enables or disables an existing user on the BoKS system.
- `linkunlink.bsh`
Grants or revokes a group (UserClass, AdminGroup) from an existing user on the BoKS system.
- `listents.bsh`
Lists all of the groups (UserClass, AdminGroup) on the BoKS system.
- `finduser.bsh`
Tests whether a user exists on the BoKS system.
- `dotest.bsh`
Tests the connection parameters to the BoKS system.
- `deleteuser.bsh`
Deletes the user from the BoKS system.
- `common.inc`
Provides common functions such as login, logout, and so on.

B Troubleshooting

The following information is provided to help you diagnose connectivity and configuration problems that you may encounter when using the connector to provision users on the resource. You may need to consult your system or web application administrator for detailed help.

- If an error indicating that `org.apache.log4j.Logger` could not be found is displayed while deploying the connector, be sure to exclude `log4.jar` from the Java classpath.
- Verify that the path to SSH is configured properly on the BoKS system. Use the **which ssh** command to find the path of SSH.
- Ensure that the SSH daemons is configured and running on the target BoKS system. Use **ps -ef | grep sshd** to determine if the daemon is running.
- Verify that SSH allows for enough connections to handle provisioning requests. The number of connections depends on the number of connections allowed by the application server for the connector. To view the connection configuration and connections on the application server, perform one of the following procedures:

To view the connection configuration:

- a Log on to the WebLogic Server Console.
- b Navigate to **My_domain** → **Deployments** → **Connector Modules** → **connector**.
- c Click the **Monitoring** tab to view connections.

Consult with your system or application server administrator for further help diagnosing problems related to connections that do not close, connections that time out, connections that cannot be opened, and so on.

