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# Micro Focus Security ArcSight SmartConnectors

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## Configuration Guide for Application Security AppDetective DB SmartConnector

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Micro Focus  
The Lawn  
22-30 Old Bath Road  
Newbury, Berkshire RG14 1QN  
UK

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# Configuration Guide for SmartConnector for Application Security AppDetective DB

This guide provides information for installing the SmartConnector for Application Security AppDetective DB and for configuring the database for the SmartConnector to access the vulnerability scanner report events collected.

# Product Overview

Application Security AppDetective 5.1 is an audit tool capable of performing both authenticated audit tests and brute-force attacks against applications and databases. The solution accurately pinpoints any databases that require patches or that are misconfigured.

# Configuration

This section provides instructions to configure the device to send events to the ArcSight SmartConnector.

The SmartConnector for *Application Security AppDetective DB* supports the following modes of operation:

- **Interactive:** The Interactive mode is designed to be used by an operator that requires only certain reports to be sent to ArcSight. In this mode, the connector first retrieves a list of the scan reports contained in the AppDetective database and presents it in a UI window so that the scan reports to be sent to the SmartConnector can be chosen. After you click **Send**, all the selected scanner reports are sent to ArcSight.



**Important:** In this mode, the connector must not be run as a service.

- **Automatic:** The automatic mode is designed to automatically import the reports from AppDetective to the ArcSight Manager whenever a new scan is performed by using the AppDetective application. In this mode, the connector queries the database constantly to check for new completed scans. When the SmartConnector detects that a new scan has been successfully completed, it sends the report to the ArcSight ESM Manager. Because it is designed to run in unattended mode, the SmartConnector for Application Security AppDetective can be run as a service.

In both modes, the SmartConnector records the IDs of the reports that have been sent to the ArcSight ESM Manager. Therefore, only the list of reports available displays only the reports that are in the database and have not yet been sent to the ArcSight ESM Manager.

## Downloading the JDBC Driver

The SmartConnector installation requires JDBC driver to be present. During the installation process, you will be directed to leave the wizard and copy the JDBC driver file you downloaded to a SmartConnector folder.



**Note:** Different versions of the JDBC driver are required for different SQL Server database versions. The name of the jar file may be different for some JDBC driver versions. Make sure that you use the correct driver for your database version

Refer to the following information to download the correct jar file depending on the JRE version used by the SmartConnector:

- SmartConnector Version 8.3.0 uses JRE 1.8.0\_312 and supports jar files from version mssql-jdbc-6.4.0.jre8.jar to mssql-jdbc-9.4.0.jre8.jar.
- SmartConnector Version 7.2.1 and later use JRE 1.8 and require sqljdbc42.jar (available with Microsoft JDBC Driver 6.0 for SQL Server)
- SmartConnector Version 7.1.2 and later use JRE 1.7 and require sqljdbc41.jar (available with Microsoft JDBC Driver 6.0 for SQL Server)
- Earlier versions of SmartConnector run JRE 1.6 and require sqljdbc4.jar (available with Microsoft JDBC Driver 4.0 for SQL Server)

For more information and to download the MS SQL Server JDBC Driver, see [aa937724](#)



# Installing the SmartConnector

The following sections provide instructions to install and configure your selected SmartConnector.

ArcSight recommends that you do not install database connectors on the database server or any mission critical servers as this could cause performance issues.

## Preparing to Install the SmartConnector

Before you install any SmartConnectors, make sure that the Micro Focus ArcSight products with which the connectors will communicate have already been installed correctly (such as ArcSight ESM or ArcSight Logger).

For complete product information, refer to the *Administrator's Guide to ArcSight Platform*, available on [ArcSight Documentation](#).

If you are adding a connector to the ArcSight Management Center, see the *ArcSight Management Center Administrator's Guide* available on [ArcSight Documentation](#) for instructions.

Before installing the SmartConnector, make sure that the following are available:

- Local access to the machine where the SmartConnector is to be installed
- Administrator passwords

## Installing the SmartConnector


1. Start the installation wizard.
2. Follow the instructions in the wizard to install the core software.
3. Exit the installation wizard.
4. Copy the jar file associated with the version of the driver that you downloaded earlier to `$ARCSIGHT_HOME/current/user/agent/lib`
5. (Optional) To use JDBC driver with SmartConnectors to connect to Microsoft SQL Servers by using Windows authentication, copy the `sqljdbc_auth.dll` file from the JDBC driver download to the `$ARCSIGHT_HOME\jre\bin` directory.

An example of The JDBC driver download path for SQL JDBC driver is:

- For version 4.0 for 32-bit environment is `sqljdbc_4.0\enu\auth\x86\sqljdbc_auth.dll`
- For 64-bit environment, `sqljdbc_4.0\enu\auth\x64\sqljdbc_auth.dll`



**Note:** If you are upgrading the SmartConnector, you must copy the authentication file to `$ARCSIGHT_HOME\jre\bin` again after update, as the upgrade process overwrites the `$ARCSIGHT_HOME\jre\bin` directory.

6. To add JDBC Driver to ArcMC or Connector Appliance, see [Adding JDBC Driver to the Connector Appliance/ArcSight Management Center](#).
  7. Copy certificate and JDBC files to SmartConnector folders as follows:
    - Copy the `jssecacerts` certificate that you installed during the device configuration to the SmartConnector installation folder `$ARCSIGHT_HOME/current/jre/lib/security`.
- 

**Note:** You must copy this file again to the installation folder after upgrading the SmartConnector as this file gets overwritten during the upgrade process.
- Copy the `vjdbc.jar` and `commons-logging-1.1.jar` files to the SmartConnector installation folder `$ARCSIGHT_HOME/current/user/agent/lib`. These files are located in the `lib` directory that was created when you downloaded the JDBC driver and unzipped the package.
  8. Browse to `$ARCSIGHT_HOME/current/bin`, then double-click `runagentsetup.bat` file to start the SmartConnector Configuration Wizard.
  9. Specify the relevant Global Parameters, when prompted.
  10. Select **AppSecInc AppDetective Scanner DB** from the **Type** drop-down, then click **Next**.
  11. Enter the required SmartConnector parameters to configure the SmartConnector, then click **Next**.

Parameter	Description
AppDetective JDBC Driver	Select the 'com.microsoft.sqlserver.jdbc.SQLServerDriver' driver.
AppDetective Database URL	Enter: 'jdbc:sqlserver://<MS SQL Server Host Name or IP Address>:1433;DatabaseName=<MS SQL Server Database Name>', substituting actual values for <MS SQL Server Host Name or IP Address> and <MS SQL Server Database Name>.  <b>Note:</b> If using Windows authentication, append ;integratedSecurity=true to the end of the URL string. Note that you must use the name or instance of the database configured at installation/audit time. The following is an example: jdbc:sqlserver://mysqlserver:1433;DatabaseName=mydatabase;integratedSecurity=true
AppDetective Database User	Enter the login name of the database user with appropriate privilege.
AppDetective Database Password	Database password for Database User
Mode	Select either <a href="#">Interactive</a> or <a href="#">Automatic</a> mode.

12. Select a destination and configure parameters.
13. Specify a name for the connector.
14. If you have selected ArcSight Manager as the destination, the certificate import window for the ArcSight Manager is displayed. Select **Import the certificate to the connector from destination** and click **Next**. (If you select **Do not import the certificate to connector from destination**, the connector installation will end.) The certificate is imported and the **Add connector Summary** window is displayed.
15. Select whether you want to run the connector as a service or in the standalone mode.
16. Complete the installation.
17. Run the SmartConnector.

For instructions about upgrading the connector or modifying parameters, see [SmartConnector Installation and User Guide](#).



**Note:** When using Windows authentication, after completing the connector installation, if running on a Windows Server, change the service account to use the Windows account that should log in to the database. The connector will use the account used to start the service, regardless of the account value setting entered in the connector setup process.

## Adding the JDBC Driver to Connector Appliance/ArcSight Management Center

After downloading and extracting the JDBC driver, upload the driver into the repository and apply it to the required containers, as follows:

1. From the Connector Appliance/ArcSight Management Center, select **Setup > Repositories**.
2. Select **JDBC Drivers** from the left pane and click the **JDBC Drivers** tab.
3. Click **Upload to Repository**.
4. From the **Repository File Creation Wizard**, select **Individual Files**, then click **Next**.
5. Retain the default selection and click **Next**.
6. Click **Upload** and locate and select the .jar file you downloaded.
7. Click **Submit** to add the specified file to the repository and click **Next** to continue.
8. After adding all the files you require, click **Next**.
9. In the **Name** field, enter a descriptive name for the zip file (for example, JDBCdriver). Click **Next**.
10. Click **Done** to complete the process. The newly added file is displayed in the **Name** field under **Add Connector JDBC Driver File**.
11. To apply the driver file, select the driver .zip file and click the up arrow to invoke the **Upload Container Files** wizard. Click **Next**.
12. Select one or more containers into which you want to upload the driver, then click **Next**.
13. Click **Done** to complete the process.
14. Add the connector through the Connector Appliance/ArcSight Management Center interface. For more information, see the *Connector Appliance/ArcSight Management Center Online Help*.

## Device Event Mapping to ArcSight Fields

The following section lists the mappings of ArcSight data fields to the device's specific event definitions. See the *ArcSight Console User's Guide* for more information about the ArcSight data fields.

### Application Security AppDetective Mappings to ArcSight ESM Fields

ArcSight ESM Field	Device-Specific Field
Device Custom Number 1	CheckDetailID
Device Custom String 1	CheckDetailName
Device Custom String 2	CheckDetailValue
Device Custom String 3	VulnerabilityDescription
Device Custom String 4	Versions plus Fix
Device Custom String 5	HTMLReferences
Device Custom String 6	PenTestID
Device Product	'AppDetective'
Device Severity	Risk
Device Vendor	'Application Security'
Device Version	AppVersion
Message	Overview
Name	CheckName

# Troubleshooting

## **"What do I do when the connector can't reconnect to the MS SQL Server database?"**

In some cases, connectors using MS SQL Server databases are unable to reconnect to the database after losing and reacquiring network connection. Restarting the connector will resolve this problem.

## **"How do I deploy SQL Server Native Client?"**

When deploying an application that is dependent on SQL Server Native Client, you will need to redistribute SQL Server Native Client with your application. Unlike Microsoft Data Access Components (MDAC), which is now a component of the operating system, SQL Server Native Client is a component of SQL Server. Therefore, it is important to install SQL Server Native Client in your development environment and redistribute SQL Server Native Client with your application.

The SQL Server Native Client redistributable installation program, named sqlncli.msi, is available on the SQL Server installation media and is available as one of the SQL Server Feature Pack components on the Microsoft Download site. For more information about deploying SQL Server Native Client with your application, see "Deploying Applications with SQL Server Native Client" available from Microsoft.

## **"Why does my connection to SQL Server fail/hang?"**

Oracle has released Java 6 update 30 (6u30) that behaves differently from JRE 6u29, causing possible database connection problems for SQL Server database connectors using JDBC connection. These connection problems can occur with JRE 1.6.0\_29 (6u29) and later versions.

Microsoft recommends using JRE 6u30 (and above) instead of JRE 6u29. Apply the "SQL Server 2008 R2 Service Pack 1 Cumulative Update 6" patch to the SQL server if you are experiencing connection failures or hangs.

## **"Why am I receiving the message 'Login failed for user 'sqluser'. The user is not associated with a trusted SQL Server connection.'"**

Only Microsoft JDBC driver v4 or later support integrated authentication. The driver also does not provide function to supply Windows authentication credentials such as user name and password. In such cases, the applications must use SQL Server Authentication. When installing the connector on a non-Windows platform, configure the Microsoft SQL Server for Mixed Mode Authentication or SQL Server Authentication.

**"How can I keep the connector from becoming clogged with events after being shut down for awhile?"**

If the connector is shut down for some time on an active database, a lot of events can accumulate that can clog the connector on restart. The `preservestate` parameter can be used to avoid this situation. This parameter is enabled (true) by default. Setting `preservestate` to disabled (false) in the `agent.properties` file allows the connector to skip the old events and start from real time. The `agent.properties` file is located in the `$ARCSIGHT_HOME\current\user\agent` folder. Restart the connector for your change to take effect.

**"What do I do when I receive "Connector parameters did not pass the verification with error ..." message?"**

You may not have the correct version of jar file. When you download the JDBC driver, the version of the jar file depends on the version of JRE the connector uses. Versions 7.2.1 and later use JRE 1.8 and require `sqljdbc42.jar`. Versions 7.1.2 and later use JRE 1.7 and require `sqljdbc41.jar`. Prior versions of the connector that run JRE 1.6 require `sqljdbc4.jar`. please confirm that when customer used MySQL JDBC driver 5.1.38, they had issue to receive events. And the workaround is to apply older driver 5.0.8, after that connector is able to receive events.

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