

Google Search Appliance Connectors

Deploying the Connector for SharePoint User Profiles

Google Search Appliance Connector for SharePoint User Profiles software version 4.0.3
Google Search Appliance software version 7.2

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About this Guide

This guide is intended for anyone who needs to deploy the Google Search Appliance Connector 4.0.3 for SharePoint User Profiles. The guide assumes that you are familiar with Windows or Linux operating systems and configuring the Google Search Appliance by using the Admin Console.

See the [Google Search Appliance Connectors Administration Guide 4.0.3](#) for general information about the connectors, including:

- What's new in Connectors 4.0?
- General information about the connectors, including the configuration properties file, supported ACL features, and other topics
- Connector security
- Connector logs
- Connector Dashboard
- Connector troubleshooting

For information about using the Admin Console, see the [Google Search Appliance Help Center](#).

For information about previous versions of connectors, see the [Connector documentation page](#) in the [Google Search Appliance Help Center](#).

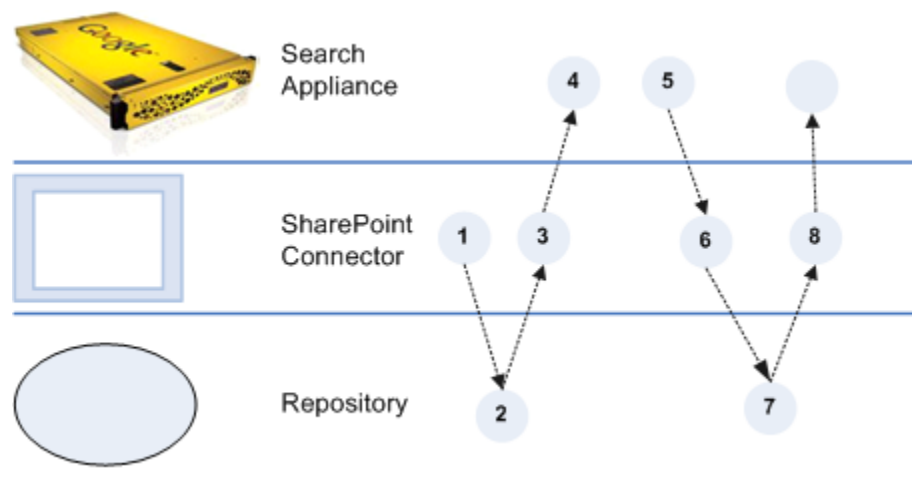
Overview of the GSA Connector for SharePoint User Profiles

The Connector for SharePoint User Profiles enables you to crawl and index information about users in the SharePoint User Profile Service Application. Once the search appliance has indexed this information, it can use it in the expert search feature.

Expert search enables your users to find experts in your organization by searching on keywords. For detailed information about this feature, see the [help page for Search > Search Features > Expert Search](#).

A single instance of the Connector for SharePoint User Profiles can have GSA index a single SharePoint web application. Each SharePoint web application can share the same SharePoint User Profile Service application.

The following diagram provides an overview of how the search appliance gets content (user profiles) from SharePoint through the connector. For explanations of the numbers in the process, see the steps following the diagram.



1. The Connector for SharePoint User Profiles starts communicating with the repository by presenting authentication credentials.
2. The repository sends Doc IDs of documents in the repository to the connector.
3. The connector constructs URLs from the Doc IDs and pushes it to the search appliance in a metadata-and-URL feed. Take note that this feed does not include the document contents.
4. The search appliance gets the URLs to crawl from the feed.

5. The search appliance crawls the repository according to its own crawl schedule, as specified in the GSA Admin Console. It crawls the content by sending GET requests for content to the connector.
6. The connector requests the content from the repository.
7. The repository sends the content to the connector.
8. The connector pushes the content to the search appliance for indexing in a content feed. If the content is in HTML format, the search appliance will follow links within the page and send more GET requests for the linked content to the connector.

After the initial process completes, the connector periodically informs the search appliance of new documents and deltas, according to the value set in the connector configuration. The default interval value is 15 minutes.

Supported SharePoint versions

The Connector for SharePoint User Profiles 4.0 supports the following SharePoint versions:

- SharePoint 2010
- SharePoint 2013

Supported operating systems for the connector

The Connector for SharePoint User Profiles 4.0 must be installed on one of the following supported operating systems:

- Windows Server 2012
- Windows Server 2008 (32 and 64 bit)
- Windows Server 2003 (32 and 64 bit)
- Ubuntu
- Red Hat Enterprise Linux 5.0
- SUSE Enterprise Linux 10 (64 bit)

Known connector limitation

- Supports one connector instance per User Profile Service Application instance.

Before you deploy the Connector for SharePoint User Profiles

Before you deploy the Connector for SharePoint User Profiles, ensure that your environment has all of the following required components:

- GSA software version 7.2.0.G.90 or higher
To download GSA software, visit the [Google for Work Support Portal](#) (password required).
- Java JRE 1.7u6 or higher installed on the Windows or Linux computer that runs the connector
- Connector for SharePoint User Profiles 4.0.3 JAR executable
For information about finding the JAR executable, see [Step 2 Install the Connector for SharePoint User Profiles](#).
- User account for the connector, with Full Control permissions to SharePoint User Profile Service Application
- If running the connector on Windows Server 2008, Windows Server 2008 R2 or Windows Server 2012 machine, specify the LAN Manager Authentication Level Policy.

Optionally, configure the search appliance for the authentication method in use (typically LDAP for Active Directory). For detailed information about configuring authentication, see [Managing Search for Controlled Access-Content](#).

Deploy the Connector for SharePoint User Profiles

Because the Connector for SharePoint User Profiles is installed on a separate host, you must establish a relationship between the connector and the search appliance.

To deploy the Connector for SharePoint User Profiles, perform the following tasks:

1. [Configure the search appliance](#)
2. [Install the Connector for SharePoint User Profiles](#)
3. Optionally, [configure adaptor-config.properties variables](#)
4. [Run the Connector for SharePoint User Profiles](#)

Step 1 Configure the search appliance

For the search appliance to work with the Connector for SharePoint User Profiles, the search appliance needs to be able to crawl information about users in the SharePoint User Profile Service Application and accept feeds from the connector. Once indexed by the search appliance, SharePoint User Profile information has to reside in a collection that contains only profile information.

To set up these capabilities, perform the following tasks by using the search appliance Admin Console:

1. [Add the URL](#) provided by the connector to the search appliance's follow patterns.
2. [Add the IP address](#) of the computer that hosts the connector to the list of Trusted IP addresses so that the search appliance will accept feeds from this address.
3. [Create and configure a collection](#) for user profile information.
4. [Set up security](#).

Add the URL

To add the URLs provided by the connector to the search appliance's crawl configuration follow patterns:

1. In the search appliance Admin Console, click **Content Sources > Web Crawl > Start and Block URLs**.
2. Under **Follow Patterns**, add the URL that contains the hostname of the machine that hosts the connector and the port where the connector runs.
For example, you might enter `http://connector.example.com:5678/doc/`

where connector.example.com is the hostname of the machine that hosts the connector.

By default the connector runs on port 5678.

3. Click **Save**.

Add the IP address

To add the IP address of the computer that hosts the connector to the list of trusted IP addresses:

1. In the search appliance Admin Console, click **Content Sources > Feeds**.
2. Under **List of Trusted IP Addresses**, select **Only trust feeds from these IP addresses**.
3. Add the IP address for the connector to the list.
4. Click **Save**.

Create and configure a collection

To create and configure a collection for user profile information:

1. In the search appliance Admin Console, click **Index > Collections**.
2. In the **Create New Collection** section, enter a unique name for the new collection.
3. For **Initial Configuration**, select **Empty** and click **Create**.
4. In the **Current Collections** section, click **Edit** for the newly-created user profile collection.
5. In the **Include Content Matching the Following Patterns** box, add the URL pattern for the connector, for example http://connector.example.com:5678/doc/.
6. Configure the default_collection to exclude user profile documents. In the **Current Collections** section, click **Edit** for default_collection.
7. In the **Do Not Include Content Matching the Following Patterns** box, add the URL pattern for the connector (see step 5).
8. Click **Save**.

Set up security

For information about setting up security, see “Enable connector security” in the [Administration Guide](#).

Step 2 Install the Connector for SharePoint User Profiles

This section describes the installation process for the Google Search Appliance Connector for SharePoint User Profiles on the connector host computer. This connector version does not support installing the connector on the Google Search Appliance.

You can install the Connector for SharePoint User Profiles on any host running one of the [supported operating systems](#).

As part of the installation procedure, you need to edit some configuration variables in the configuration file. Take note that you can encrypt the value for `sharepoint.password` before adding it to the file by using the Connector Dashboard, as described in “Encode sensitive values,” in the [Administration Guide](#).

To install the Connector for SharePoint User Profiles:

1. Log in to the computer that will host the connector by using an account with sufficient privileges to install the software.
2. Start a web browser.
3. Visit the connector 4.0.3 software downloads page at <http://googlegsa.github.io/adaptor/index.html>.
4. Download the `exe` file by clicking on MicrosoftSharePoint User Profiles in the Windows Installer table.
You are prompted to save the single binary file, `spup-install-4.0.3.exe`.
5. Start installing the file by double clicking `spup-install-4.0.3`.
6. On the **Introduction** page, click **Next**.
7. On the **GSA Hostname** page, enter the hostname or IP address of the GSA that will use the connector and click **Next**.
8. On the **Choose Install Folder** page, accept the default folder or navigate to the location where you want to install the connector files.
9. Click **Next**.
10. On the **Shortcut Folder**, accept the default folder or select the locations where you want to create product icons.
11. To create icons for all users of the Windows machine where you are installing the connector, check **Create Icons for All Users** and click **Next**.
12. On the **Pre-Installation Summary** page, review the information and click **Install**.
The connector Installation process runs.
13. On the **Install Complete** page, click **Done**.

14. In the folder where you installed the connector, edit `adaptor-config.properties` by providing the following configuration (replacing bolded items with your real configuration) within the file:

```
gsa.hostname=yourgsa.example.com or IP address  
sharepoint.server=http://yoursharepoint.example.com/
```

where the value of **gsa.hostname** is a fully-qualified domain name. If it is not a fully-qualified domain name, then you must set DNS override on the connector host.

Linux: Add these additional configuration options to `adaptor-config.properties`:

```
sharepoint.username=YOURDOMAIN\\ConnectorUser  
sharepoint.password=user_password
```

Windows: When SharePoint and the current user domain is the same or from the same domain hierarchy, Windows operating systems automatically use the credentials of the person currently signed on to Windows.

If not, you need to specify a username and password. For example, suppose that you run the connector from a corporate domain such as @mycompany.com against a SharePoint instance from another domain, such as GSA-CONNECTORS. In this case, you need to specify user credentials for GSA-CONNECTORS domain.

Note: See [Step 3](#) for optional variables that you can also configure for the connector.

15. In the same folder, review, and if needed, edit `logging.properties`.
For more information, See "Configure Connector Logs" in the [Administration Guide](#).
16. In the same folder, run the `run.bat` file.
17. Get a SharePoint certificate to add it as a trusted host for the connector by performing the following steps:
- Navigate to SharePoint in a browser.
A warning page appears with a message such as "This Connection is Untrusted." This message appears because the certificate is self-signed and not signed by a trusted Certificate Authority.
 - Click, "I Understand the Risks" and "Add Exception."

- c. Wait until the "View..." button is clickable, then click it.
 - d. Change to the "Details" tab and click "Export...".
 - e. Save the certificate in your connector's directory with the name "sharepoint.crt".
 - f. Click Close and Cancel to close the windows.
18. To allow the connector to trust SharePoint, enter the following command:

```
keytool -importcert -keystore cacerts.jks -storepass changeit -  
file sharepoint.crt -alias sharepoint
```

19. When prompted Trust this certificate?, answer yes.

Step 3 Configure adaptor-config.properties variables

Optionally, you can edit or add additional configuration variables to the `adaptor-config.properties` file. The following table lists the most important variables that pertain to the SharePoint User Profiles connector, as well as their default values. See also "Common configuration options" in the the [Administration Guide](#).

Variables	Description	Default
<code>server.dashboardPort</code>	Port on which to view web page showing information and diagnostics.	5679
<code>adaptor.namespace</code>	Namespace used for ACLs sent to GSA.	Default
<code>profile.setacl</code>	Whether user profile information is considered restricted or public.	True
<code>profile.mysitehost</code>	SharePoint Web application URL hosting my sites for users.	Virtual server

Step 4 Run the Connector for SharePoint User Profiles

After you install the Connector for SharePoint User Profiles, you can run it by using `cmd.exe` on the host machine:

```
java -Djava.util.logging.config.file=logging.properties -jar adaptor-  
sharepoint-user-profile-4.0.3-withlib.jar
```

Verify that the connector has started and is running by navigating to the Connector

Dashboard at `http://<CONNECTOR_HOST>:<nnnn>/dashboard` or

`https://<CONNECTOR_HOST>:<nnnn>/dashboard`

where `<nnnn>` is the number you specified as the value for the `server.dashboardPort` in the configuration file.

To run the connector as a service, use the Windows service management tool or run the `prunsrv` command, as described in “Run a connector as a service on Windows” in the [Administration Guide](#).

Uninstall the Google Search Appliance Connector for SharePoint User Profiles

To uninstall the Connector for SharePoint User Profiles:

1. Click the **Change GSA_SPUP_Adaptor Installation** icon on your desktop.
The **Uninstall GSA_SPUP_Adaptor** page appears.
2. Click **Next**.
3. On the **Uninstall Options** page, select an option:
 - a. **Complete Uninstall**. Google recommends selecting **Complete Uninstall**.
 - b. **Uninstall Specific Features**. If you click **Uninstall Specific Features**, select **Application**.
4. Click **Uninstall**.
Files are uninstalled.
5. On the **Uninstall Complete** page, select **No, I will restart my system myself**.
6. Click **Done**.

Troubleshoot the Connector for SharePoint User Profiles

For information about troubleshooting the Connector for SharePoint User Profiles, see “Troubleshoot Connectors,” in the [Administration Guide](#).