

***Bravura Security Fabric* Implementation:**

Proxy Server Management

1 Requirement

In some cases, the connection to a target system may be slow, insecure or blocked by a firewall. This is often true when the connection is made over a wide area network.

2 Solution

To address such connectivity problems, *Hitachi ID Bravura Security Fabric* includes an application proxy server. When a proxy server is deployed, the main *Bravura Security Fabric* server ceases to communicate with one or more (usually distant) target systems directly, and instead forwards all communication to those systems through one or more co-located proxy servers.

Communication from the main *Bravura Security Fabric* server to the proxy servers is encrypted, efficient, and tolerant of high latency.

When firewalls intervene, the TCP port number of the proxy is programmable, a port redirector can be used, and only a single opening through the firewall is required for multiple target systems.

Communication between the proxy server and target systems continues to use native protocols, but it is physically controlled, in a high-bandwidth, low-latency, high-security LAN.

The **psproxy** service allows the proxy server to execute account management connectors on behalf of the *Bravura Security Fabric* server.

This document shows you how to:

1. [Install a proxy server \(p2\)](#).
2. [Configure target systems to point to the proxy \(p9\)](#).
3. [Update the proxy server \(p9\)](#) with updated configuration from the *Bravura Security Fabric* server, if required.

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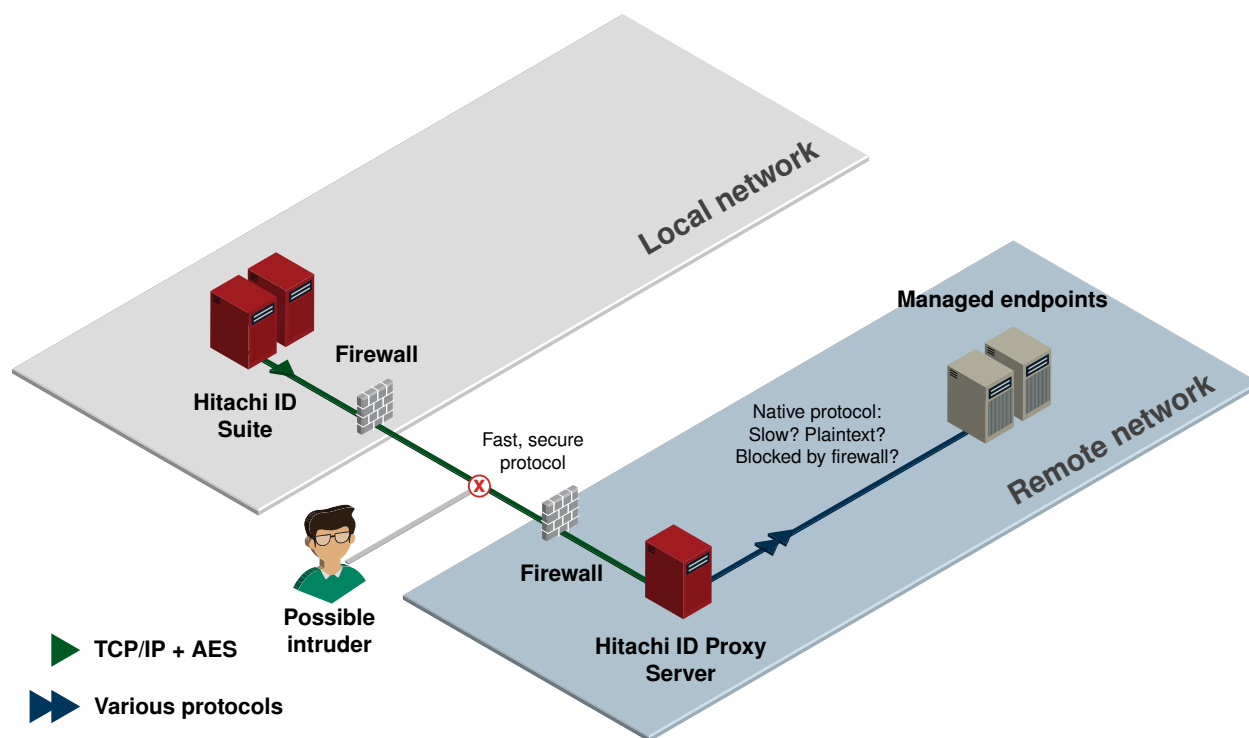


Figure 1: Target systems connected through a proxy server

3 Installing a Proxy Server

3.1 Proxy server requirements

Each *Hitachi ID Bravura Security Fabric* proxy server requires the following:

- **Operating system:**

- Windows Server 2012 R2.
- Windows Server 2016.
- Windows Server 2019.

It is recommended that the server is not a domain controller.

In addition to the above editions, core mode on Server 2012 R2 and Server 2016 is also supported.

- **Networking:**

- TCP/IP networking, with a static IP address and DNS name entry
- Microsoft .NET Framework 3.5 and 4.5+
- Web Service Enhancements (WSE) 2.0 SP3 for Microsoft .NET

- **Hitachi ID Connector Pack:**

- The *Connector Pack* contains connectors which integrate *Bravura Security Fabric* with target systems.
- The setup of the proxy server's *Connector Pack* must match the setup of the *Bravura Security Fabric's Connector Pack*; for example, if the *Bravura Security Fabric* install has an instance-specific *Connector Pack*, the proxy server must be instance-specific also. Or, if the *Bravura Security Fabric* is using the global *Connector Pack*, the proxy server must have the global *Connector Pack*.

See the Connector Pack Integration Guide for details.

• **Installed and tested software:**

- Native clients for the systems that *Bravura Security Fabric* will interface with
Refer to the *Connector Pack* documentation for information specific to each type of target system.
- Python 3.7.3+

Note: Python 3.7.3+ *must* be installed before installing *Bravura Security Fabric* or *Connector Pack*.

Ensure that Python is installed for all users. Python 3.7.3+ installs in the context of the current user by default. You must choose to do a custom install, then select "all users" when the selection becomes available. This will allow the *Bravura Security Fabric* service user (psadmin) account to have appropriate access to the Python installation.

Note: It is recommended to add Python to the system PATH. This may also be added by selecting the option for "Add Python 3.7 to PATH" during the Python installation.

Note: Python 3.8.x or later is not currently supported.

See [Installing Python](#) for detailed instructions.

- Microsoft Visual C++ 2015 Redistributable (x64)

Note: Microsoft Visual C++ 2015 Redistributable Package (x64) is required for *Bravura Security Fabric* 10.0 and higher. It is required for certain *Bravura Security Fabric* run-time components that use Visual C++ libraries. This is automatically installed during **setup**.

Note: The *Bravura Security Fabric* server and *Bravura Security Fabric* proxy server must be installed on separate machines.

3.2 Installing Python

Python 3.7.3+ *must* be installed before installing *Hitachi ID Bravura Security Fabric* or *Hitachi ID Connector Pack*. It is required for certain *Bravura Security Fabric* components, including the Python IDMLib library used to help create plugin programs, Health check monitor, and reference builds.

Ensure that you install the 64-bit version of Python.

Ensure that Python is installed for all users to allow the *Bravura Security Fabric* service user (psadmin) account to have appropriate access to the Python installation.

Note: Python 3.8.x or later is *not* currently supported.

To install Python 3.7.3+:

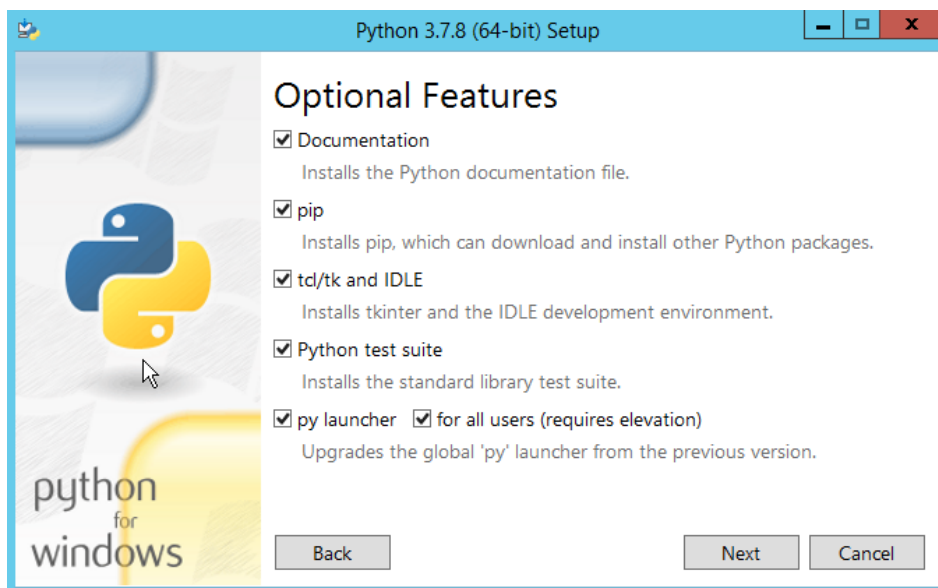
1. Download and run the 64-bit installer from python.org.
2. On the first screen, check the **Add Python 3.7 to PATH** option.



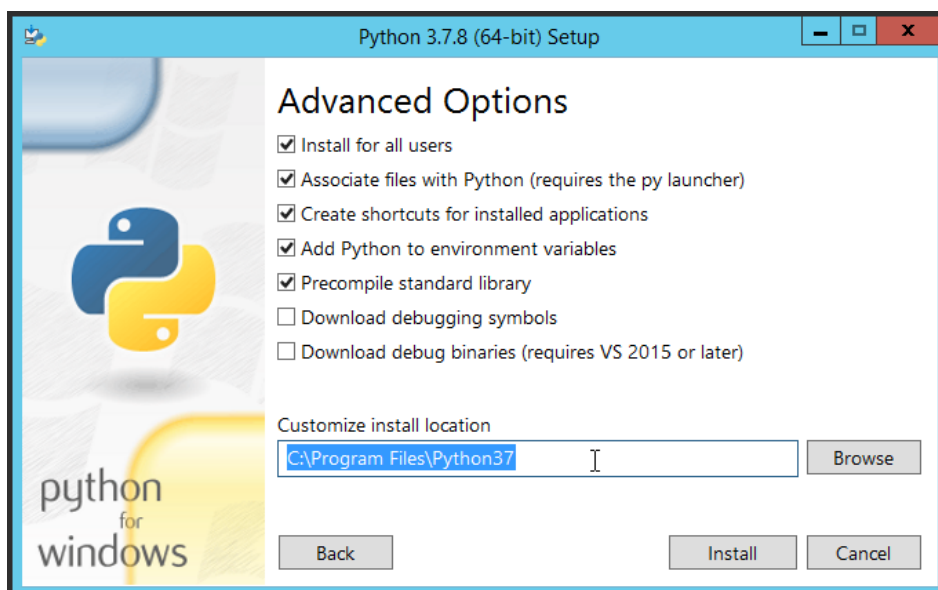
3. Click **Custom installation**.



4. Use all **Optional Features**.



5. On the **Advanced Options** screen, select **Install for all users**, and ensure that the path is correct in the **Custom install location**.



6. Click **Install**.

3.3 Installing a Proxy Server using idmsetup.inf

When you install *Hitachi ID Bravura Security Fabric* on the main server, an `idmsetup.inf` file is created in the `\<instance>\psconfig\` directory. You can use this file to aid the installation of proxy servers. It contains the encrypted communication key (or Master Key) and Connector encryption key and other correct default values for prompts during installation.

It is highly recommended that you:

- Copy the `idmsetup.inf` file to each proxy server and place it in the same directory from which you will run the installer (`proxy.msi`).
- Ensure the architecture of the proxy server matches the architecture of the primary server. For example, if the primary instance is installed on a 32 bit operating system, then `idmsetup.inf` should be used on a 32 bit operating system.

Note: Your proxy server configuration must match that of your *Bravura Security Fabric* server.

To install a proxy server using the `idmsetup.inf` configuration file:

1. Log into the host Windows server as member of the Administrators group.
2. If required, download and unzip the *Bravura Security Fabric* distribution folder.
Contact your Hitachi ID account representative for details.
3. Copy `idmsetup.inf` from the `\<instance>\psconfig\` directory on the primary server to the proxy server and place it in the root of the distribution folder.
4. Launch the `setup` program located at the root of the distribution folder.
5. If you already have an *Bravura Security Fabric* instance installed on the Windows server, `setup` displays the **Select an instance to configure** page. Click **Install New** to proceed.
The `setup` program asks you to choose a product to install.
6. Select **Hitachi ID Management Suite Proxy Server**.
Click **Next**.
7. Verify that instance name is already filled in and optionally enter a description.
Click **Next**.
8. Click **Next**.
The `setup` program performs a pre-installation check and verifies all of the requirements for installation.
9. If all of the checks are successful, click **Next** to proceed with the installation.

Note: If any of the pre-install checks produce warnings or errors, click **Report** for details.

The `setup` program launches `proxy.msi`.

10. Click **Next**.
11. Read and accept the license agreement.
Click **Next**.
12. Choose the setup type:

- **Typical** to accept recommended default settings.

Note: If the default port 3344 is in use, **setup** increments to the next available port. Ensure the port is open.

- **Custom** to select:
 - Components to install – Only the proxy server is available
 - Installation, log file, and lock file paths – must be the same relative paths as configured for the main *Bravura Security Fabric* server
 - Proxy port – default is 3344

13. Verify that the psadmin passwords are already filled in (masked with stars).

Click **Next**.

14. Verify that the communication key (or Master Key) and Connector encryption key are the same as those entered for the main *Bravura Security Fabric* server.

Click **Next**.

15. If you installed *Login Manager* or Bravura Privilege, verify that the Data Key is the same as the one entered for the main *Bravura Security Fabric* server.

Click **Next**.

The installer displays the **Confirm Installation** page.

16. Click **Next** to start the installation.

The installer begins copying files to your computer. The **Installation Complete** page appears after the Proxy Service (psproxy) has been successfully installed.

17. Click **Finish** to exit.

Next:

Install *Hitachi ID Connector Pack* and client software for the systems that *Hitachi ID Bravura Security Fabric* will interact with.

3.4 Installing *Connector Pack*

After installing the proxy server, install the same version of *Hitachi ID Connector Pack* that the *Hitachi ID Bravura Security Fabric* server uses. The setup of the proxy server's *Connector Pack* must match the setup of the *Bravura Security Fabric's Connector Pack*; for example, if the *Bravura Security Fabric* install has an instance-specific *Connector Pack*, the proxy server must be instance-specific also. Or, if the *Bravura Security Fabric* is using the global *Connector Pack*, the proxy server must have the global *Connector Pack*.

1. Navigate to the folder containing the setup program for *Bravura Security Fabric*.
2. Double-click **setup** to start the setup wizard.

You should see that the proxy server software is already installed.
3. To match your *Bravura Security Fabric* installation:

- If you need to install an instance-specific connector pack, select your instance so that the installer displays options, and click **Install a connector pack**.
- If you need to install a global connector pack, click **Install new** to see that option.

4. Choose **Connector Pack 64-bit**

Click **Next**.

The **setup** program performs a pre-installation check. There should be no errors. A warning may be shown for some components, such as .NET WSE test, that are required for certain targets.

5. Click **Next**.

After a period of time, the MSI should launch.

6. Click **Next** to start the setup wizard.

7. Select the **I accept the terms in the License Agreement** checkbox, then click **Next**.

8. Choose the setup type to match the *Connector Pack* installed for *Bravura Security Fabric*.

9. Click **Install**.

You may be notified that the system will need to reboot to complete the installation. If you do, click **OK** to continue.

After a period of time, the installation should complete.

10. Click **Finish**.


Once the installer has finished its tasks, the Hitachi ID product setup program will complete the post-installation process.

11. Click **Finish** to complete the installation.

Ensure that you install all native clients for the systems that *Bravura Security Fabric* will interface with. Refer to the *Connector Pack* documentation for information specific to each type of target system.

4 Configuring target systems to use proxy servers

To configure a target system to use a proxy server:

1. Log into *Manage the system* (PSA) module on the main *Hitachi ID Bravura Security Fabric* server.
2. Click **Manage the system** → **Resources** → **Target systems** → **Manually defined**.
3. Select  the target system you want to configure.
4. Type the server name and port number for the proxy server in the **List of proxies to run connectors on** field in the format: `<server name>/<port number>`.

If there are multiple proxy servers, separate them with a semicolon.

Note: The `<server name>/<port number>` string must be the same for all target systems that use the same proxy server.

If you write this string using the IP address and others using the DNS name, the **updateproxy** program can't recognize that the strings refer to the same machine. This is problematic because the proxy server is updated more than once during auto discovery.

5. Click **Update** at the bottom of the page.

Next:

Update the proxy server from the *Hitachi ID Bravura Security Fabric* server (p9)

5 Updating proxy servers

After the *Hitachi ID Bravura Security Fabric* software is installed on the proxy server, you must copy over files (scripts, configuration files) that have been created or modified on the *Bravura Security Fabric* server.

This procedure is only required once, because the proxy server is automatically refreshed whenever you run auto discovery.

Note: The Logging Service is installed as part of the proxy server installation.

To update the proxy server using file replication:

1. Log into *Manage the system* (PSA) module on the main *Bravura Security Fabric* server.
2. Click **Manage the system** → **Maintenance** → **File synchronization** to see a list of proxy servers.
3. Select all the proxy servers that you want to update.
4. Click **Synchronize** to begin synchronizing selected servers.

Note: The **UPDATE SYSTEM AGENT COUNT** controls how many proxy servers can be updated simultaneously.

You can update proxy servers manually from the command-line using the **updproxy** program.