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Smart Cards for Remote Authentication

During a support session, a support representative may need to operate with administrative rights in order to effectively troubleshoot the remote computer. Within environments where security implementations require smart card use for authentication, BeyondTrust enables the representative to pass administrative credentials to the remote computer from a smart card resident on the representative's local system.

Prerequisites

To use BeyondTrust smart card support through a Jump Client, the following prerequisites must be met:

- The representative's computer must have a BeyondTrust virtual smart card driver installed.
- Each supported computer must have a BeyondTrust virtual smart card driver installed.
- Each supported computer must be running Windows Vista or above.
- Each supported computer must be accessible by a BeyondTrust Jump Client running in elevated mode.

BeyondTrust smart card support can be used with the Jump To functionality when the following prerequisites are met:

- The representative's computer must have a BeyondTrust virtual smart card driver installed.
- Each supported computer must be running Windows Vista or above.

BeyondTrust smart card support can be used with customer-initiated sessions when the following prerequisites are met:

- The representative's computer must have a BeyondTrust virtual smart card driver installed.
- Each supported computer must have a BeyondTrust virtual smart card driver installed.
- Each supported computer must be running Windows Vista or above.
- Each supported computer must have the BeyondTrust elevation service installed.

Note: Contact BeyondTrust Technical Support for Automatic Elevation Service installer information.
Install the Smart Card Driver

1. Go to /login > My Account > Virtual Smart Card.
2. Download the representative installation package and the customer installation package for the appropriate versions of Windows.

**Note:** On Windows 10 machines, it is not possible to install both the representative and client smart card drivers. This is not a limitation on Windows 7 machines.

Choose Windows® Architecture:

![Download Virtual Smart Card Installer](image)

Requires Microsoft® Windows® XP with Service Pack 2, Windows Vista®, or newer.

If a Remote Support Representative needs to use their local smart card on a remote system being supported, then BeyondTrust Remote Support Virtual Smart Card driver must be installed on both the representative and customer systems.

Download and distribute the appropriate Virtual Smart Card Representative (VSC Representative Installer) driver to all representatives within your support center who require remote smart card functionality. The driver can be installed manually or via a software deployment tool. Once the driver is installed, it creates a service: Remote Support VSC Representative Service.

Next download and distribute the appropriate Virtual Smart Card Customer (VSC Customer Installer) driver. (If Jump To is used to access the remote system, the Virtual Smart Card Customer driver does NOT have to be pre-installed.)

Distribute the Virtual Smart Card Customer driver to all remote computers to which you will need to pass smart card credentials. The driver can be installed manually or via a software deployment tool. Once the driver is installed, it creates a service: Remote Support VSC Customer Service.
3. Install the representative virtual smart card driver.
   - Distribute the representative driver installer to all representatives within your support center who require remote smart card functionality.
   - The driver can be installed manually or via a software deployment tool.
   - Once the driver is installed, it creates a service called BeyondTrust Representative Service.

4. Install the customer virtual smart card driver. (If Jump To is used to access the remote system, the customer virtual smart card driver does NOT have to be pre-installed.)
   - Distribute the customer driver installer to all remote computers to which you will need to pass smart card credentials.
   - The driver can be installed manually or via a software deployment tool.
   - Once the driver is installed, it creates a service called BeyondTrust Customer Service.
Install a Jump Client, Jumpoint, or Elevation Service for Elevated Session Start

When attempting to operate with the credentials on a smart card, the user is prompted to enter a PIN. This User Account Control (UAC) prompt is inaccessible to the support representative if the BeyondTrust customer client is not already running in elevated mode. It is therefore necessary to access the remote computer in one of three ways:

- A Jump Client running as a system service
- A Jumpoint or local network Jump, using administrative credentials
- A customer-initiated or Jump session with the BeyondTrust elevation service pre-installed on the remote system

Accessing the remote computer in elevated mode allows the representative to interact with UAC prompts in order to enter the smart card PIN.

When attempting to operate with the credentials on a smart card, the user is prompted to enter a PIN. This UAC prompt is inaccessible to the support representative if the BeyondTrust customer client is not already running in elevated mode. It is therefore necessary to access the remote computer via a pre-installed Jump Client, which must be running as a system service, or through a Jumpoint or local network Jump using administrative credentials. Jumping to a remote computer via an elevated Jump allows the representative to interact with UAC prompts in order to enter the smart card PIN.

**Jumpoint Installation**

To install a Jumpoint, please see Jumpoint: Set Up Unattended Access to a Network at https://www.beyondtrust.com/docs/remote-support/getting-started/admin/jumpoint.htm. No special setup is required.

**Jump Client Installation**

To install a Jump Client in preparation for using smart card support, you must set certain options as described below.

1. From the /login interface of your Secure Remote Access Appliance, go to Jump > Jump Clients.
2. Configure the Jump Client settings as needed.
   - The connection type can be either active or passive.
   - Be sure to check **Attempt an Elevated Install if the Client Supports It** as well as **Prompt for Elevation Credentials if Needed**.

   For more information, please see Jump Clients: Manage Settings and Install Jump Clients for Unattended Access at https://www.beyondtrust.com/docs/remote-support/getting-started/admin/jump-clients.htm.

3. Click Create.
4. From this page, you may email the Jump Client installer to one or more remote users.

5. Alternatively, select a platform and download the Jump Client installer to your local system. You may then distribute this installer to multiple systems for manual installation, or you may distribute it via a software deployment tool.

Elevation Service Installation

In special cases, you may need a session to start with the customer client already in elevated mode, or you may need to elevate the customer client without providing credentials. To securely elevate the customer client without the prompt, download the Automatic Elevation Service from /login > My Account and install it beforehand on the remote Windows systems to which you need credential-less elevation access. You must install the elevation service using an account that has administrative privileges to the local machine.

When the elevation service runs, it adds to the registry a hash unique to your BeyondTrust site. Then, when the remote system begins a session through that site, the elevation service matches the registry hash against the hash in the client. If they match, the client attempts automatic elevation.

Elevation occurs following the rules set in /login > Public Portals > Customer Client > Other Options. If the rules set for the customer client do not allow it to elevate automatically, a matching hash will still make the elevation service the means for elevation when the representative clicks the Elevate button in the representative console. When the elevation service is used, neither the representative nor the customer is prompted for credentials.

After a BeyondTrust software update, your site hash changes. Download and run the elevation service registry file to update the registry hash on systems which already have the elevation service installed. You must run the elevation service registry file using an account that has administrative privileges to the local machine.
Use a Virtualized Smart Card

To use smart card credentials on a remote system, you must Jump to that system, or you must start a customer-initiated session with a system that has the BeyondTrust elevation service pre-installed.

If using a Jump Client, the Jump Client must be running in service mode, or the remote system must also have the elevation service pre-installed with its service running. The appropriate virtual smart card drivers must be installed on both your local system and the remote system, with their services running.

Alternatively, a system can be accessed using the Jump To functionality from within the representative console. Using the Jump To functionality does not require the virtual smart card driver to be pre-installed on the customer's system. In this scenario, BeyondTrust installs the driver as part of the Jump to the end system being accessed.

> **Note:** The customer smart card driver is ONLY installed during a Jump To push when the representative performing the Jump has the representative smart card driver installed on their local system.

If using a customer-initiated session, the elevation service must be pre-installed on the remote computer, and its service must be running. Also, the appropriate virtual smart card drivers must be installed on both your local system and the remote system, with their services running.

Begin a screen sharing session, and then click the **Smart Card** button to access a dropdown of available smart card readers on your system. Select the reader you would like to share with the remote computer.

Once the reader has been virtualized on the remote system, a message indicating that you have shared this reader is logged in the chat window. The smart card in the selected reader is now available to use on the remote computer, just as if it were physically present on the system being supported.

The smart card dropdown menu displays the name(s) of the available smart card readers and smart cards, along with an icon indicating the availability of each card reader or presence of each card:

- **Black icon** - Card not present
- **Blue icon** - Card present
- **Gray icon** - Reader and card not available

Once you have shared a reader, it remains selected and available for use throughout the session, as long as you do not log out the current user. If you do log out the current user on the remote computer, the shared reader is deselected and must be reselected if you need it later in the session.

When screen sharing, use a virtual smart card to perform administrative actions. You can run programs in another user context, or even log in as a different user.

Also, if the virtual smart card feature is available in a session which is not elevated and a smart card reader has been shared into the session, then certificates stored on the inserted smart card can be selected and used for elevation.

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1If the smart card button does not appear in the screen sharing tool bar, make sure the representative smart card service is running on your local computer. If the smart card button is present but disabled, make sure the customer smart card service is running on the remote computer.
**Note:** Elevation performed using this feature takes slightly longer due to the extra transactions required to the virtual smart card reader.

**Note:** A smart card reader can be attached to only one active session at a time. From the **Smart Card** dropdown, you can deselect a virtualized reader to free it for use in another session.
Use Case 1:
Log Into the Remote Computer Using Smart Card Credentials

After Jumping to a remote computer, you may find that the computer is locked. Alternatively, you may need to perform administrative functions not permitted in the current user context.

Go to the remote login screen, logging out the current user if necessary. Click the Smart Card button and select a smart card reader to virtualize on the remote system. The smart card will now appear as a user login option.

Click the smart card user, enter the PIN, and log in.
Use Case 2: Run As the Smart Card User

While supporting a remote computer, you may need to run a specific application with privileges not available in the current user context. Within a screen sharing session, click the Smart Card button and select a smart card reader to virtualize on the remote system. Right click the desired application and choose Run As. From the UAC prompt that appears, select the smart card and enter the PIN to run the application in the smart card user context.

**Note:** Smart card credentials cannot be used to run elevated tasks from the Special Actions menu.