Remote Support
ServiceNow CSM Integration Installation
# Table of Contents

Integrate BeyondTrust with ServiceNow CSM .................................................. 4
Integration Requirements ................................................................................. 5
  Base Integration Requirements ................................................................. 5
  Test Firewall .............................................................................................. 5
Configure BeyondTrust Remote Support ....................................................... 7
  Verify that the API is Enabled ................................................................... 7
  Create a ServiceNow OAuth API Account ............................................... 7
  Add Outbound Events .................................................................................. 8
  Set up the Custom Link ............................................................................... 8
  Create Custom Fields .................................................................................. 9
Configure ServiceNow for Integration with BeyondTrust ............................ 10
  Install Remote Support Integration via App Store .................................... 10
  Set Up ServiceNow Integration with Remote Support ............................... 10
  Assign Users Appropriate Roles .............................................................. 11
  Configure Case States ................................................................................ 11
  Configure Chat Now Form in Service Portal .............................................. 12
  ServiceNow MID Server Option ............................................................... 13
Configure Other ServiceNow Environments ................................................. 14
  Configure Production Outbound Event ..................................................... 14
  Configure Custom Link .............................................................................. 14
Test the Setup of the Remote Support and ServiceNow Integration ............. 15
  Test Session Key Generation ..................................................................... 15
  Test Remote Support Session Import ...................................................... 15
Use Cases for the ServiceNow CSM Integration with BeyondTrust Remote Support ................................................................. 16
  Generate Session Key .............................................................................. 16
  Import Remote Support Session Data into a ServiceNow Record ............... 16
  Customer Initiated Chat from Service Portal ........................................... 17
  Access ServiceNow Records from the Representative Console ................ 17
  Associate Sessions with ServiceNow Records Manually ............................ 17
  Automatic or Manual Case Creation ......................................................... 18
Troubleshooting ............................................................................................ 19
Support Sessions Are Not Being Written to ServiceNow ........................................... 19
Session Key Button is not Showing on the Case Form ........................................... 19
Session Key Button Gives an "Unknown Host" Message ........................................ 20
"Invalid Custom Field Code Name" Message ....................................................... 20
"Error Validating Parameter 'snow_case_id': The Session Attribute is Invalid" Message .... 20

ServiceNow and BeyondTrust Integration Network Diagrams .................................. 21
ServiceNow-Remote Support Integration Network Diagram ................................... 21
ServiceNow-Remote Support Integration Mid Server Network Diagram .................... 22
Integrate BeyondTrust with ServiceNow CSM

Customer service organizations using ServiceNow and the ServiceNow Customer Service Management (CSM) application can integrate with BeyondTrust Remote Support to improve service levels, centralize support processes, and strengthen compliance. Features of the Remote Support Remote Support and ServiceNow CSM integration are summarized below.

- **Outbound Support Sessions**: Technicians can launch Remote Support sessions from within ServiceNow Case records using the Generate Session Key button.
- **Session Updates**: Remote Support session data is written back to ServiceNow Cases. This includes chat transcripts and basic Remote Support session information, which is written to the Case's work notes.
- **Automatic Case Creation**: Cases can be automatically or manually created or associated with an ongoing Remote Support session, and linked to the session for session updates at the conclusion of the session.
Integration Requirements

Outlined below are requirements for the BeyondTrust Remote Support and ServiceNow CSM integration. If any of the integration requirements are not yet met, they must be in place prior to starting the integration setup process, unless the associated features of the integration are not required.

**Base Integration Requirements**

1. **ServiceNow instance with:**
   - Version Madrid or later
   - A working Customer Service Management application
   - A working email configuration

2. **BeyondTrust Remote Support**
   - Version 17.x or later
   - At least one usable representative console that can generate session keys
   - A working Remote Support site through which users can connect to representatives

3. **Network firewall rules to allow:**
   - TCP 443 traffic from the B Series Appliance to reach the appropriate ServiceNow instance
   - TCP 443 traffic from the appropriate ServiceNow instance to reach the B Series Appliance
   - Optionally, ServiceNow MID Servers can be used for this integration

For more information on MID Servers, please see MID Server Configuration at https://docs.servicenow.com/bundle/quebec-servicenow-platform/page/product/mid-server/concept/mid-server-landing.html.

**Test Firewall**

It is important to test all requirements of the integration prior to beginning setup. Most of these can be tested by the Remote Support and ServiceNow administrators within their respective systems, but to test the network firewall, we recommend that the BeyondTrust admin take the following steps to confirm that the necessary rules are in place:

1. Log in to a machine either external to the BeyondTrust Remote Support network or on the same VPN as the ServiceNow instance, depending on how ServiceNow connects to the B Series Appliance's network.
2. Log in to the B Series Appliance /appliance interface.
3. Browse to **Support > Utilities :: TCP Connection Test**.
4. Enter the host name of the ServiceNow instance, enter port number 443, and click **Test**. If all connectivity requirements have been met, the result is a **Connected** status message.

**Note:** Do not enter the protocol of the ServiceNow instance (https://servicenow.example.com, for example). Instead, use the fully qualified domain name only (servicenow.example.com). In most environments, BeyondTrust Remote Support resides in a DMZ network and has a public DNS address which ServiceNow contacts over the public internet. In some environments, Remote Support is not publicly accessible. In these cases, you should contact ServiceNow about implementing a VPN connection to your internal network for ServiceNow.
For more information on how to setup a VPN, please see Virtual Private Network at
Configure BeyondTrust Remote Support

All of the steps in this section take place in the Remote Support /login administrative interface. Access your Remote Support interface by going to the host name of your Remote Support instance followed by /login (https://support.example.com/login, for example).

Verify that the API is Enabled

The Remote Support and ServiceNow Integration requires the Remote Support XML API to be enabled. This feature is used from within ServiceNow to communicate with the Remote Support APIs.

Go to /login > Management > API Configuration and verify that the Enable XML API box is checked.

Create a ServiceNow OAuth API Account

The ServiceNow API account is used from within ServiceNow to make Remote Support Command API calls.

1. Go to /login > Management > API Configuration.
2. Click Add to create a new API account and name it ServiceNow or something similar.
3. Under Reporting API, check all options.
4. Under Reporting API, check:
   - Allow Access to Support Session Reports and Recordings.
   - Allow Access to Presentation Session Reports and Recordings.
5. The OAuth Client ID and OAuth Client Secret are used during the OAuth configuration step in ServiceNow. Make note of these and store them in a secure location.
6. Click Save.
Add Outbound Events

Outbound events are used to notify ServiceNow that a Remote Support Session has finished and is ready to be imported into ServiceNow.

1. Go to /login > Management > Outbound Events.
2. Click Add and name the new HTTP recipient ServiceNow Integration or something similar, depending on your ServiceNow instance.
3. Set the URL to https://support.example.com/api/x_bmgr_crm/outbound_event/session_end, where support.example.com is the ServiceNow instance name.
4. Scroll to Events to Send and check the Support Session End box.
5. At the top of the page, click Save.

Set up the Custom Link

Remote Support custom links can be configured to allow representatives to quickly access the ServiceNow Case that is associated with the session.

2. Click Add to create a new custom link.
3. Enter a name for the link, and then set the URL to https://support.example.com/nav_to.do?uri=sn_customerservice_case.do?sys_id=%SESSION.CUSTOM.SNOW_CASE_ID%, where support.example.com is the ServiceNow instance name. If needed, you can use any of the available macros to customize the link according to your specifications.

Note: If the customer is using External Key to store the case sys_id, then use the macro %SESSION.CUSTOM.EXTERNAL_KEY% instead.

4. Click Save to save the new link.
Create Custom Fields

BeyondTrust custom fields are used to map ServiceNow Tasks (tasks, change requests, problem records, and service catalog requests), call records, and configuration items to BeyondTrust sessions.

1. Browse to Configuration > Custom Fields.
2. Click Add to create a new custom field.
3. Enter the following values:
   - Display Name: ServiceNow Case ID
   - Code Name: snow_case_id
   - Show in Rep Console: checked
4. Click Save to save the new field.
Configure ServiceNow for Integration with BeyondTrust

Unless otherwise noted, all of the steps in this section take place in the ServiceNow interface. Use development or test instances of ServiceNow so that the integration can be thoroughly tested before installation in the production instance.

Install Remote Support Integration via App Store

Please see ServiceNow's FAQ regarding app installation via the ServiceNow App Store.

- ServiceNow Store: https://store.servicenow.com
- ServiceNow Store FAQ: https://store.servicenow.com/appStoreAttachments.do?doc_type=store_faq&inline=true

Set Up ServiceNow Integration with Remote Support

Follow these steps in ServiceNow to connect ServiceNow to Remote Support.

1. Browse to BeyondTrust CSM Appliances.
2. Click New to add a new Remote Support appliance record and enter the following values:
   - **Name**: Must be Default.
   - **Hostname**: Host name of the Remote Support deployment.
   - **OAuth Client ID**: The OAuth client ID that is used to authenticate to the Remote Support deployment. This is obtained in a previous step, "Configure BeyondTrust Remote Support" on page 7.
   - **OAuth Client Secret**: The OAuth client secret that is used to authenticate to the Remote Support deployment. This is obtained in a previous step, "Configure BeyondTrust Remote Support" on page 7.
   - **Integration Enabled**: Check this box to enable the integration.
   - **Outbound Event Token**: The token that is used as an added security measure to confirm outbound events are coming from the Remote Support deployment that is sending the same token. If left blank, this outbound event token process is ignored. If a value is provided, however, the same value must be sent from all outbound events coming from BeyondTrust as a parameter named
outbound_event_token.

- Accepted IP Addresses: A comma-separated list of IP addresses from which this integration accepts outbound events.

### Assign Users Appropriate Roles

Give the `x_bmgr_support_ent.itil` role to ITIL users who provide technical support using this integration.

**Note:** You must elevate the admin’s role in order to make the following change.

1. Browse to User Administration > Users.
2. Select a user.
3. Click the Roles tab, and then click the Edit button.
4. Add the `x_bmgr_support_ent.itil` role from the Collection list to the Roles list.
5. Click Save.

### Configure Case States

Case states are used in the Remote Support Integration, (specifically UI Actions like Session Key) to control when the button shows up on case forms.

1. Browse to Case and click Open to see a list of open cases.
2. Click Case Number to select a case.
3. Right-click on the label for the State field or any other field which uses a dropdown or choice list, and click Show Choice List.
4. Filter the list by `Table=sn_customerservice_case` and `Element=state`.
5. Take note of the different `sn_customerservice_case` choices, specifically the value of cases with a label of Resolved or Closed, and any custom case states for which the Remote Support Session Key button should not appear.
6. Go back to the case, right-click on the Session Key button located in the Case title bar, and select Configure > UI Actions.
7. In the UI Actions list, click Remote Support Session Key, select the Condition field, and ensure current.state is configured to include the IDs of the case states for which the session key button should not appear.

The following code in the UI Action condition field controls which states the Session Key button displays for. By default, the Session Key button displays for cases whose states are set to New, Open, or Pending Info, for example, cases with states set to 1, 10, or 18 respectively.

```
x_bmgr_crm.BomgarUtil.showSessionKeyOnCaseForm('Default', current.getUniqueValue(), [1,10,18])
```

For example, if you had a custom state of 27, which represented a Pending Case, and you wanted the Session Key button to also display for that state, you would modify the code above to the following:

```
x_bmgr_crm.BomgarUtil.showSessionKeyOnCaseForm('Default', current.getUniqueValue(), [1,10,18,27])
```
Configure Chat Now Form in Service Portal

1. Browse to Service Portal and click **Service Portal Configuration** to open the configuration landing page.
2. Click **Designer** to launch the Service Portal Designer.

   ![](service_portal_designer.png)

3. Scroll down the list of pages and click the Service Portal index page (or whichever page is marked with the home icon).

4. In the **Widgets** menu on the left, find the **Bomgar Chat** widget. Drag it onto the page, and place it where you’d like it to display.
ServiceNow MID Server Option

It is possible to avoid direct connection between ServiceNow and Remote Support by using an MID server for internal Remote Support deployments.

For more information on MID servers, please see MID Server at https://docs.servicenow.com/bundle/quebec-servicenow-platform/page/administer/general/reference/r_ServiceNowPlatform.html.
Configure Other ServiceNow Environments

The steps below are typically used after the integration has been installed and configured in a test or development instance of ServiceNow, and is being transferred to a QA or production instance.

**Configure Production Outbound Event**

1. Go to /login > Management > Outbound Events.
2. Click Add and name the new HTTP recipient ServiceNow Integration or something similar, depending on your ServiceNow instance.
3. In the URL field, paste and replace the name of the original ServiceNow instance with that of the new one, such that /api/x_bmgr_crm/outbound_event/session_end is preserved at the end. The result should be similar to https://support.example.com/api/x_bmgr_crm/outbound_event/session_end, as opposed to https://dev.example.com/api/x_bmgr_crm/outbound_event/session_end.
4. Scroll to Events to Send and check Support Session End.
5. In the URL field, paste and replace the name of the original ServiceNow instance with that of the new one, such that /api/x_bmgr_crm/outbound_event/session_end is preserved at the end. The result should be similar to https://support.example.com/api/x_bmgr_crm/outbound_event/session_end, as opposed to https://dev.example.com/api/x_bmgr_crm/outbound_event/session_end.
6. Locate the outbound event created during testing and click Edit. Check the Disabled box and save.

**Configure Custom Link**

1. Go to /login > Management > Options.
2. Browse to Rep Console > Custom Links.
3. Click Add to create a new custom link.
4. Enter a name for the link, and then set the URL to https://support.example.com/nav_to.do?uri=sn_customerservice_case.do?sys_id=%SESSION.CUSTOM.SNOW_CASE_ID%, where support.example.com is the ServiceNow instance name. If needed, you can use any of the available macros to customize the link according to your specifications.
5. Test the integration setup in its new location following the same steps used to test the original instance.

For more information, please see “Test the Setup of the Remote Support and ServiceNow Integration” on page 15.
Test the Setup of the Remote Support and ServiceNow Integration

Test Session Key Generation

The following steps take place in ServiceNow and Remote Support and are provided to ensure that the integration is working properly. Troubleshooting suggestions are provided with each step in case of failure.

1. Log in to the Remote Support representative console, and then log in to ServiceNow with the same account.
2. Open an active case in ServiceNow. Confirm the State field matches one of the values for which the Session Key button should appear, and make sure the button appears as expected. Remember that the case must be saved for the button to appear.
3. Click the Session Key button. This launches the Remote Support representative console, subsequently opening the Session Key Dialog box.

Test Remote Support Session Import

1. Log in to ServiceNow as a customer service agent or an admin. Use the Session Key button as described above to start a Remote Support session.
2. End the session from the representative console.
3. Refresh the ServiceNow case from which the session key was generated, scroll to work notes section of the form, and check that an entry for the completed session is shown. Basic session details should be shown, as well as any chat dialogue. If not, make sure the following items are true:
   - The API User Connection test works correctly as described above.
   - There are no Remote Support errors reported for your ServiceNow instance in the Remote Support Outbound Events list. Your Remote Support admin can check this in Remote Support from the /login web interface under Management > Outbound Events.
   - The IP address is set up correctly, following the steps below:
     - Log in to ServiceNow as an admin.
     - Browse to System Logs > Transactions, remove all existing filters, and add a URL filter of /x_bmgr_support_ent_bomgar_post.do.
     - Click one of the results and make sure the originating IP address of the transaction is included in the IP Address field of the integration appliance configuration record settings under BeyondTrust CSM > Appliances > Default.
Use Cases for the ServiceNow CSM Integration with BeyondTrust Remote Support

Customer support organizations using ServiceNow Customer Service Management (CSM) can integrate with BeyondTrust Remote Support to improve service levels, centralize support processes, and strengthen compliance. Use cases that are addressed by the BeyondTrust Remote Support and ServiceNow CSM integration are listed below.

Generate Session Key

Technicians can generate a session key from within a case and give the customer the key to initiate a support session.

The integration provides support for case records.

Once the session ends, basic session data, along with the chat dialogue from the session, are imported into ServiceNow and written to the work notes of the case record from which the session key was generated.

Import Remote Support Session Data into a ServiceNow Record

Once the Remote Support session ends, the associated case record in ServiceNow is automatically updated with information gathered during the session, including:

- Chat transcript
- Basic session information
Customer Initiated Chat from Service Portal

Customers can request a support session with a representative from a ServiceNow Service Portal where the Remote Support Get Support Now widget has been added. This includes any context within a case, like the case form, or any context outside the scope of a case, like the CSM homepage.

This functionality allows customers an expedient path to resolution, while also providing the technician with the necessary context to effectively assist the customer.

Sessions initiated using Remote Support’s click-to-chat functionality can be elevated to full support sessions if the technician deems it necessary.

Access ServiceNow Records from the Representative Console

Using Remote Support’s custom links ability, a representative can access the associated ServiceNow case record directly from within the representative console. This saves time searching for the case record in ServiceNow and provides the representative with any available issue details, history, or other context to help quickly resolve the issue.

Associate Sessions with ServiceNow Records Manually

Whether a representative has just created a case for the current session or has found that one already exists, even sessions originating outside the scope of a ServiceNow record can be manually associated with the appropriate item, allowing session details to be automatically added to the case when the session ends.

To make this association, the representative enters the numeric ID of the case record into the External Key field while in session.

Technicians can use the human readable record number from ServiceNow to easily make this association.
Automatic or Manual Case Creation

For customers who have applicable processes, the integration can be configured to automatically create a ServiceNow case based on Remote Support sessions, either when the representative joins the session or manually via a Remote Support representative console custom link. This process can simplify workflows and reduce the number of clicks necessary for support representatives.
Troubleshooting

This section is designed to assist members of implementation and support teams who are either installing or supporting the ServiceNow integration with Remote Support. The items listed here cover potential issues one may encounter when working with the integration, along with steps to take to investigate and alleviate those issues.

Throughout this section you'll see a reference to ServiceNow application logs. This refers to the application logs in ServiceNow, which can be found in System Logs > System Log > Application Logs.

ServiceNow has other logs which are also helpful. Those include:

1. Transaction Logs, found at System Logs > Transactions
2. All Logs, found at System Logs > System Log > All
3. Warning Logs, found at System Logs > System Log > Warnings
4. Error Logs, found at System Logs > System Log > Errors

Note: This troubleshooting guide assumes the audience has a basic knowledge of both ServiceNow and Remote Support.

Support Sessions Are Not Being Written to ServiceNow

If support sessions aren't being written in ServiceNow, there could be a communication issue. First check to ensure communication is open from Remote Support to ServiceNow.

1. Log in to the Remote Support /login interface and ensure Support Session End is checked on the HTTP Recipient for the Outbound Event. If Support Session End is not checked, check the box, save the HTTP Recipient, then run another support session and see if the record is written to ServiceNow.
2. If the Outbound Event looks good, log in to the /appliance interface and run a TCP test to the hostname of the customer's ServiceNow instance on port 443. If the TCP test yields a non-200 response, it is advisable to involve your network team to determine if there is a network block in place, such as a firewall or network rule.
3. If the TCP test yields a 200 response, then start another session from ServiceNow, end the session, then open the ServiceNow transaction logs and filter by records that are Created on Today (or Last 15 minutes for fewer results) AND URL starts with /api/v2/bmgr_support_ent/outbound_event/session_end. If you don't see a record for the session you just ran, then there is a communication issue from Remote Support to ServiceNow and you should recommend the customer involve their network team to determine if there is a network block in place such as a firewall or network rule.
4. If you see the transaction record in the Transaction Logs, then double-check and reset the OAuth Client ID and OAuth Client Secret fields on the appliance configuration record in ServiceNow. It's very common that this OAuth Client Secret value is copied to the clipboard, but the API Account record is never saved in Remote Support /login. We recommend that you copy the value and immediately save the API Account, then paste the value in the appliance configuration record in ServiceNow. Run another support session. If the Support Session record still does not show up in ServiceNow, check the ServiceNow application log to see if there are any errors that may explain why the record isn't being written.

Session Key Button is not Showing on the Case Form

If the Session Key button is not showing on the case form, there are few things that can be checked.

1. Check to see if there were any adjustments or customizations made to any of the integration's UI Actions. Because these UI Actions render the buttons, We recommend that these not be edited.
2. If no customizations to the UI Actions were made, ensure the appliance configuration record is named Default, with matching case and no whitespace. Any name other than Default causes the Session Key button to be hidden.
3. If the name of the appliance configuration record is **Default**, view the customer’s case states and ensure that the **Condition** field in the UI Action displays the button for the proper case states.

   ![For more information, please see “Configure Case States” on page 11.]

**Session Key Button Gives an "Unknown Host" Message**

If you get an *Unknown host* error, this is essentially a communication issue from ServiceNow to the Remote Support deployment, unless the hostname is set incorrectly on the appliance configuration record.

Double-check the hostname on the appliance configuration record in ServiceNow. If it looks correct, contact your network team to determine if there is a network block in place, such as a firewall or network rule.

**"Invalid Custom Field Code Name" Message**

An *invalid custom field code name* error can occur when there is an attempt to generate a session key, but a custom attribute with that code name doesn't exist in the system. This can happen if a step is missed in the initial integration configuration.

Create the missing custom field and try to start another support session from ServiceNow.

**"Error Validating Parameter 'snow_case_id': The Session Attribute is Invalid" Message**

An *error validating parameter 'snow_case_id': The session attribute is invalid* message can occur when there is an attempt to generate a session key, but a custom attribute with that code name doesn't exist in the system. This can happen if a step is missed in the initial integration configuration.

Create the missing custom field and try to start another support session from ServiceNow.
ServiceNow and BeyondTrust Integration Network Diagrams

ServiceNow-Remote Support Integration Network Diagram

Support Representative

ServiceNow CSM

BeyondTrust Enterprise Remote Support

BeyondTrust CSM Application

HTTPS over 443

APIs

Outbound Events

HTTPS over 443
ServiceNow-Remote Support Integration Mid Server Network Diagram