



Tanium™ End-User Notifications User Guide

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End-User Notifications overview

End-User Notifications is a shared service that is used by other Tanium products, such as Tanium Deploy, Tanium™ Patch, and Tanium™ Enforce to notify users about system actions. It is also used by Deploy for self service capabilities.

End-User Notifications

When you use End-User Notifications with other solutions, you can create notification messages to notify the user of system actions or user requirements.

End-User Self Service

When you use End-User Notifications with Deploy, you can configure the Self Service Client application for Windows endpoints. With the Self Service Client application, you can publish software to endpoints so that users can install software on their own without the need for IT to install for them. For more information, see [Customizing the end-user interface on page 19](#).

Integration with other Tanium products

End-User Notifications integrates with other Tanium products to provide additional features.

Deploy

End-User Notifications is used by Deploy to notify users about deployments to Windows endpoints, and to configure End-User Self Service capabilities. You can create a notification message with your deployment to notify the user that the system is about to begin a deployment, has completed a deployment, and if postponements are enabled, to give the user the option to postpone the deployment or restart now. For more information, see [Tanium Deploy User Guide: Windows endpoint restarts](#) or [Tanium Deploy User Guide: Using the Self Service Client application](#).

Patch

End-User Notifications is used by Patch to notify users about deployments to Windows endpoints. You can create a notification message with your deployment to notify the user that the system is about to begin a deployment, has completed a deployment, and if postponements are enabled, to give the user the option to postpone the deployment or restart now. For more information, see [Tanium Patch User Guide: Endpoint restarts](#).

Enforce

End-User Notifications is used by Enforce to instruct users to enable encryption, and to notify users before a restart. You can create a notification message in the FileVault policy that displays either at log out or during the next log in. Users can dismiss the message multiple times if the FileVault policy allows it. For more information, see [Tanium Enforce](#)

[User Guide: Create a FileVault policy](#). You can also create a notification message that displays to the user after a BitLocker policy is enforced. The message notifies users before the computer is restarted to prepare their drives for encryption. For more information, see [Tanium Enforce User Guide: Create a BitLocker policy](#).

Getting started

Step 1: Install and configure Tanium End-User Notifications

Install and configure Tanium End-User Notifications.

For more information, see [Installing End-User Notifications on page 15](#).

Step 2: Configure endpoint restart notifications for Deploy or Patch deployments

Configure endpoint restart notifications for Deploy or Patch deployments.

For more information, see [Tanium Deploy User Guide: Deploying packages and bundles](#) or [Tanium Patch User Guide: Deploying patches](#).

Step 3: Configure notifications for Enforce FileVault or BitLocker policies

Configure notifications for Enforce FileVault or BitLocker policies.

For more information, see [Tanium Enforce User Guide: Create a FileVault policy](#) or [Tanium Enforce User Guide: Create a BitLocker policy](#).

Step 4: Customize the end-user interface to use with Deploy

Customize the end-user interface to use with Deploy.

For more information, see [Customizing the end-user interface on page 19](#).

End-User Notifications requirements

Review the requirements before you install and use End-User Notifications.

Tanium dependencies

In addition to a license for the End-User Notifications product module, make sure that your environment also meets the following requirements.

Component	Requirement
Tanium™ Core Platform	7.2 or later.
Tanium™ Client	<p>Any supported version of Tanium Client. For the Tanium Client versions supported for each OS, see Tanium Client Management User Guide: Client version and host system requirements.</p> <p>If you use a client version that is not listed, certain product features might not be available, or stability issues can occur that can only be resolved by upgrading to one of the listed client versions.</p>
Tanium products	<p>If you clicked the Tanium Recommended Installation button when you installed End-User Notifications, the Tanium Server automatically installed all your licensed modules at the same time. Otherwise, you must manually install the modules that End-User Notifications requires to function, as described under Tanium Console User Guide: Manage Tanium modules.</p> <p>Modules at the following minimum versions</p> <ul style="list-style-type: none">• Tanium Endpoint Configuration 1.2 or later (installed as part of Tanium Client Management 1.5 or later) <p>The following modules are optional, but End-User Notifications requires the specified minimum versions to work with them:</p> <ul style="list-style-type: none">• Tanium Deploy 1.3 or later for end-user notifications or end-user self service• Tanium Patch 2.1 or later for end-user notifications• Tanium Enforce 1.5 or later for end-user notifications for BitLocker or FileVault policies• Tanium Trends 3.6 or later
Computer groups	When you first sign in to the Tanium Console after installing the Tanium Server, the server automatically imports the computer groups that End-User Notifications requires: <code>All Computers</code> .

Tanium™ Module Server

End-User Notifications is installed and runs as a service on the Module Server host computer. The impact on the Module Server is minimal and depends on usage.

Endpoints

End-User Notifications supports the following client operating systems:

Operating System	Version	Notes
Windows Server	Windows Server 2008 R2 Service Pack 1 or later	Windows Server Core not supported.
Windows Workstation	<ul style="list-style-type: none">Windows 10Windows 8.1Windows 8Windows 7 Service Pack 1 or later	Windows 7 Service Pack 1 requires Microsoft KB2758857 .
macOS	<ul style="list-style-type: none">macOS 11.0 Big SurmacOS 10.15 CatalinamacOS 10.14.6 MojavemacOS 10.13.6 High Sierra	Supported for Enforce FileVault policy only.

Host and network security requirements

Specific ports and processes are needed to run End-User Notifications.

Ports

The following ports are required for End-User Notifications communication.

Source	Destination	Port	Protocol	Purpose
Module Server	Module Server (loopback)	17476	TCP	Internal purposes; not externally accessible



BEST PRACTICE

Configure firewall policies to open ports for Tanium traffic with TCP-based rules instead of application identity-based rules. For example, on a Palo Alto Networks firewall, configure the rules with service objects or service groups instead of application objects or application groups.

Security exclusions

If security software is in use in the environment to monitor and block unknown host system processes, your security administrator must create exclusions to allow the Tanium processes to run without interference. For a list of all security exclusions to define across Tanium, see [Tanium Core Platform Deployment Reference Guide: Host system security exclusions](#).

End-User Notifications security exclusions

Target Device	Notes	Exclusion Type	Exclusion
Module Server	Required when Endpoint Configuration is installed	Process	<Module Server>\interdependence-configuration-service\taniumEndpointConfigService.exe
		Process	<Module Server>\services\end-user-notifications-service\node.exe
		Process	<Module Server>\services\twsm-v1\twsm.exe
Windows endpoints	7.2.x clients	Process	<Tanium Client>\Python27\TPython.exe
	7.4.x clients	Process	<Tanium Client>\Python38\TPython.exe
		Process	<Tanium>\Tanium End User Notification Tools\UserSessionProxy.exe
		Process	<Tanium>\Tanium End User Notification Tools\bin\end-user-notifications.exe
	exclude from on-access or real-time scans	Folder	<Tanium>\Tanium End User Notification Tools
macOS endpoints	7.2.x clients	Process	<Tanium Client>/python27/bin/pybin
	7.4.x clients	Process	<Tanium Client>/python38/bin/pybin
		Process	/Library/Tanium/EndUserNotifications/bin/end-user-notifications.app
		Folder	/Library/Tanium/EndUserNotifications





User role requirements

The following tables list the role permissions required to use End-User Notifications. For more information about role permissions and associated content sets, see [Tanium Core Platform User Guide: Managing RBAC](#).

End-User Notifications user role permissions

Permission	End-User Notifications Administrator ^{1,2}	End-User Notifications Endpoint Configuration Approver ^{1,2}	End-User Notifications Operator ^{1,2}	End-User Notifications Read Only User ^{1,2}
<p>End-User Notifications Endpoint Configuration</p> <p>APPROVE: Approve End-User Notifications items for Endpoint Configuration</p> <p>REGISTER: Access to register with Endpoint Configuration</p>	<p>✓</p> <p>REGISTER</p>	<p>✓</p> <p>APPROVE</p>	<p>✗</p>	<p>✗</p>
<p>End-User Notifications Module</p> <p>Read and write access to the End-User Notifications shared service</p>	<p>✓</p> <p>READ WRITE</p>	<p>✓</p> <p>READ</p>	<p>✓</p> <p>READ</p>	<p>✓</p> <p>READ</p>
<p>End-User Notifications Operator Module</p> <p>Write access to a subset of the End-User Notifications shared service</p>	<p>✓</p> <p>WRITE</p>	<p>✗</p>	<p>✓</p> <p>WRITE</p>	<p>✗</p>
<p>End-User Notifications Use API</p> <p>Access to the End-User Notifications API</p>	<p>✓</p> <p>EXECUTE</p>	<p>✓</p> <p>EXECUTE</p>	<p>✓</p> <p>EXECUTE</p>	<p>✓</p> <p>EXECUTE</p>

End-User Notifications user role permissions (continued)

Permission	End-User Notifications Administrator ^{1,2}	End-User Notifications Endpoint Configuration Approver ^{1,2}	End-User Notifications Operator ^{1,2}	End-User Notifications Read Only User ^{1,2}
Endusertnotifications View the End-User Notifications shared service	 SHOW	 SHOW	 SHOW	 SHOW













¹ This role provides module permissions for Tanium Endpoint Configuration. You can view which Endpoint Configuration permissions are granted to this role in the Tanium Console. For more information, see [Tanium Endpoint Configuration User Guide: User role requirements](#).

² This role provides module permissions for Tanium Interact. You can view which Interact permissions are granted to this role in the Tanium Console. For more information, see [Tanium Interact User Guide: Tanium Data Service permissions](#).

Provided End-User Notifications administration and platform content permissions

Permission	Permission Type	End-User Notifications Administrator ¹	End-User Notifications Endpoint Configuration Approver ¹	End-User Notifications Operator ¹	End-User Notifications Read Only User ¹
Computer Group	Administration	 READ	 READ	 READ	 READ
User	Administration	 READ		 READ	
User Group	Administration	 READ	 READ	 READ	 READ
Action	Platform Content	 WRITE		 WRITE	
Approve Action	Platform Content	 SPECIAL		 SPECIAL	
Own Action	Platform Content	 READ		 READ	
Package	Platform Content	 READ WRITE		 READ WRITE	

Provided End-User Notifications administration and platform content permissions (continued)

Permission	Permission Type	End-User Notifications Administrator ¹	End-User Notifications Endpoint Configuration Approver ¹	End-User Notifications Operator ¹	End-User Notifications Read Only User ¹
Plugin	Platform Content	 READ EXECUTE	 READ EXECUTE	 READ EXECUTE	 READ EXECUTE
Saved Question	Platform Content	 READ WRITE		 READ WRITE	
Sensor	Platform Content	 READ	 READ	 READ	 READ

You can view which content sets are granted to any role in the Tanium Console.

¹ This role provides content set permissions for Tanium Endpoint Configuration. You can view which Endpoint Configuration content sets are granted to this role in the Tanium Console. For more information, see [Tanium Endpoint Configuration User Guide: User role requirements](#).

For more information and descriptions of content sets and permissions, see [Tanium Core Platform User Guide: Users and user groups](#).

Installing End-User Notifications

Use the **Solutions** page to install End-User Notifications and choose either automatic or manual configuration:

- **Automatic configuration with default settings** (Tanium Core Platform 7.4.2 or later only): End-User Notifications is installed with any required dependencies and other selected products. After installation, the Tanium Server automatically configures the recommended default settings. This option is the best practice for most deployments. For more information about the automatic configuration for End-User Notifications, see [Import and configure End-User Notifications with default settings on page 15](#).
- **Manual configuration with custom settings:** After installing End-User Notifications, you must manually configure required settings. Select this option only if End-User Notifications requires settings that differ from the recommended default settings. For more information, see [Import and configure End-User Notifications with custom settings on page 16](#).

Before you begin

- Read the [release notes](#).
- Review the [End-User Notifications requirements on page 9](#).
- If you are upgrading from a previous version, see [Upgrade End-User Notifications on page 16](#).

Import and configure End-User Notifications with default settings

When you import End-User Notifications with automatic configuration, the following default settings are configured:

- The End-User Notifications service account is set to the account that you used to import the module.
- The End-User Notifications action group is set to the computer group `All Computers`.
(Tanium Core Platform 7.4.5 or later only) You can set the module action group to target the **No Computers** filter group by enabling restricted targeting before importing the module. This option enables you to control tools deployment through scheduled actions that are created during the import and that target the module action group. For example, you might want to test tools on a subset of endpoints before deploying the tools to all endpoints. In this case, you can manually deploy the tools to an action group that you configured to target only the subset. To configure an action group, see [Tanium Console User Guide: Managing action groups](#). To enable or disable restricted targeting, see [Tanium Console User Guide: Dependencies, default settings, and tools deployment](#).
- The End-User Notifications tools are distributed to endpoints.
- A default End-User Notifications profile is created.

To import End-User Notifications and configure default settings, be sure to select the **Apply All Tanium recommended configurations** check box while performing the steps in [Tanium Console User Guide: Import all modules and services](#). After the import, verify that the correct version is installed. For more information, see [Verify End-User Notifications version on page 16](#).

Import and configure End-User Notifications with custom settings

To import End-User Notifications without automatically configuring default settings, be sure to clear the **Apply All Tanium recommended configurations** check box while performing the steps in [Tanium Console User Guide: Import, re-import, or update specific solutions](#). After the import, verify that the correct version is installed. For more information, see [Verify End-User Notifications version on page 16](#).

To configure the service account, see [Configure service account on page 17](#).

To configure the End-User Notifications action group, see [Configure End-User Notifications action group on page 17](#).


To customize notifications, see [Customize the End-User Self Service Client on page 17](#).

Upgrade End-User Notifications

For the steps to upgrade End-User Notifications, see [Tanium Console User Guide: Import all modules and services](#). After the upgrade, verify that the correct version is installed. For more information, see [Verify End-User Notifications version on page 16](#).

Verify End-User Notifications version

After you import or upgrade End-User Notifications, verify that the correct version is installed:

1. Refresh your browser.
2. From the Main menu, go to **Administration > Shared Services > End-User Notifications** to open the End-User Notifications **Overview** page.
3. To display version information, click Info .

Configuring End-User Notifications


If you did not install End-User Notifications with the **Apply All Tanium recommended configurations** option, you must enable and configure certain features.

Configure End-User Notifications

Configure service account

The service account is a user that runs background processes for End-User Notifications. This user requires the **Content Administrator** and **End-User Notifications Administrator** roles or the **Tanium Administrator** role.

For more information about End-User Notifications permissions, see [User role requirements on page 11](#).

1. On the End-User Notifications **Home** page, click Settings  and open the **Service Account** tab.
2. Update the service account settings and click **Submit**.

Configure End-User Notifications action group

The End-User Notifications action group controls what endpoints receive End-User Notification Tools. All targeted Windows and macOS endpoints receive tools.

1. From the Main menu, go to **Administration > Actions > Action Groups**.
2. In the list of action groups, click **Tanium End-User Notifications**.
3. Click **Edit**, select computer groups to include in the action group, and click **Save**.

(Tanium Core Platform 7.4.5 or later only) You can set the module action group to target the **No Computers** filter group by enabling restricted targeting before importing the module. This option enables you to control tools deployment through scheduled actions that are created during the import and that target the module action group. For example, you might want to test tools on a subset of endpoints before deploying the tools to all endpoints. In this case, you can manually deploy the tools to an action group that you configured to target only the subset. To configure an action group, see [Tanium Console User Guide: Managing action groups](#). To enable or disable restricted targeting, see [Tanium Console User Guide: Dependencies, default settings, and tools deployment](#).


Customize the End-User Self Service Client

Add a company logo and relevant information to personalize the End-User Self-Service experience.

You must create at least one End-User Notifications profile. For more information about creating a profile, see [Create a profile on page 19](#).

Initialize endpoints

End-User Notifications installs a set of tools on each endpoint that you have targeted. Initializing endpoints configures the End-User Notifications Tools to be installed on any compatible endpoint in the End-User Notifications action group. You must complete this procedure any time the action group is changed.

1. On the End-User Notifications **Overview** page, click Help , and then click **Support** if needed.
2. Click **Initialize Endpoints** and confirm your action.



After deploying the tools for the first time, endpoints can take up to four hours to display status.

NOTE

Customizing the end-user interface

To customize the End-User Self Service interface to use with Deploy, create additional End-User Notifications profiles. Each profile defines a set of configurations, rules, or parameters that applies to one or more computer groups.

Create a profile

1. From the End-User Notifications menu, click **Profiles** and then click **Create Profile**.
2. Provide a name and optional description.
3. Select target computers.



Only one profile can apply to an endpoint.

NOTE

4. Provide a title and upload a logo file.
5. (Optional) Select **Enable End-User Self Service**.
 - a. Provide a welcome message to display in the self-service dashboard on endpoints.
 - b. Select installation options.
6. (Optional) Select **Enable Additional Languages**.
 - a. Select a language and provide a translated title and welcome message.
 - b. (Optional) Click **Add Language** to add more languages.



By default, the Self Service Client application displays content in the system language on the endpoints. If you enable additional languages, the user can select other languages to display.

NOTE

7. Click **Submit**.

After you customize the End-User Self Service interface, you can create a self service profile in Deploy. For more information, see [Tanium Deploy User Guide: Using the Self Service Client application](#).

Prioritize profiles

If you have more than one profile, you can prioritize them.

1. From the End-User Notifications menu, click **Profiles** and then click **Prioritize**.
2. Drag and drop a profile to reprioritize it. End-User Notifications automatically adjusts the priority numbers for the other profiles and reorders the list by priority.
3. Click **Confirm**.

View, edit, or delete profiles

To view profiles, click **Profiles** from the End-User Notifications menu. You can also view them from the **Profiles** section of the End-User Notifications **Home** page.

To edit a profile, click the name of the profile.


To delete a profile, select a profile and click **Delete**.

Troubleshooting End-User Notifications

To collect and send information to Tanium for troubleshooting, collect logs and other relevant information.

Collect logs

The information is saved as a ZIP file that you can download with your browser.

1. From the End-User Notifications **Home** page, click Help , then the **Support** tab.
2. Click **Collect**.
3. When **Status** indicates that the package is collected, click **Download**.
4. Contact Tanium Support to determine the best option to send the ZIP file. For more information, see [Contact Tanium Support on page 21](#).


End-User Notifications maintains logging information in the log file in the `\Program Files\Tanium\Tanium Module Server\services\end-user-notifications-files\logs` directory.

Problem: End user notifications are not displayed

If end user notifications are not being displayed on the endpoints:

1. Verify that the Tanium End-User Notifications solution is installed. For more information, see [Installing End-User Notifications on page 15](#).
2. Verify that endpoints have the end user notification tools by asking the question `End-User Notifications - Has Tools`.
3. Verify that required security exclusions for End-User Notifications are configured in any security software. For more information, see [Security exclusions on page 10](#). For assistance in ensuring exclusions have taken effect, [Contact Tanium Support on page 21](#).

Uninstall End-User Notifications

1. From the Main menu, go to **Administration > Configuration > Solutions**.
2. In the **Content** section, select the **End-User Notifications** row.
3. Click Delete Selected  and then click **Uninstall** to complete the process.

Contact Tanium Support

To contact Tanium Support for help, sign in to <https://support.tanium.com>.