Tanium™ End-User Notifications User Guide

Version 1.11.46

August 02, 2022

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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 Self Service interface on page 18.

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 and macOS endpoints, and to configure End-User Self Service capabilities 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 Deploy User Guide: Windows and macOS 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 14](#).

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 Self Service interface on page 18](#).

End-User Notifications requirements

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

Core platform dependencies

Make sure that your environment meets the following requirements:

- Tanium license that includes End-User Notifications

- **Tanium™ Core Platform servers:** 7.2 or later

- **Tanium™ Client:** 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](#).
  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.

Computer group dependencies

When you first sign in to the Tanium Console after a fresh installation of Tanium Server 7.4.2 or later, the server automatically imports the `All Computers` computer group, which End-User Notifications requires.

For earlier versions of the Tanium Server, or after upgrading from an earlier version, you must manually create the computer groups. See [Tanium Console User Guide: Create a computer group](#).

Solution dependencies

Other Tanium solutions are required for End-User Notifications to function (required dependencies) or for specific End-User Notifications features to work (feature-specific dependencies). The installation method that you select determines if the Tanium Server automatically imports dependencies or if you must manually import them.

> **NOTE** Some End-User Notifications dependencies have their own dependencies, which you can see by clicking the links in the lists of [Required dependencies on page 8](#) and [Feature-specific dependencies on page 8](#). Note that the links open the user guides for the latest version of each solution, not necessarily the minimum version that End-User Notifications requires.

Tanium recommended installation

If you select **Tanium Recommended Installation** when you import End-User Notifications, the Tanium Server automatically imports all your licensed solutions at the same time. See [Tanium Console User Guide: Import all modules and services](#).

Import specific solutions

If you select only End-User Notifications to import, you must manually import dependencies. See Tanium Console User Guide: Import, re-import, or update specific solutions.

Required dependencies

End-User Notifications has the following required dependencies at the specified minimum versions:

- Tanium Endpoint Configuration 1.2 or later (installed as part of Tanium Client Management 1.5 or later)

Feature-specific dependencies

End-User Notifications has the following feature-specific dependencies at the specified minimum versions:

- Tanium Deploy 2.11 or later for end-user notifications or end-user self service

- (Windows) Tanium Patch 2.1 or later for end-user notifications

- (macOS) Tanium Patch 3.6 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

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 for End-User Notifications functionality. • Windows Server 2008 R2 Service Pack 1 requires Microsoft KB2758857. • Windows Server 2012 R2 requires Microsoft KB2919394 or KB2919355 for End-User Self Service functionality.
Windows Workstation	Windows 7 Service Pack 1 or later	• Windows 7 Service Pack 1 requires Microsoft KB2758857. • Windows 8.1 requires Microsoft KB2919394 or KB2919355 for End-User Self Service functionality.

Operating System	Version	Notes
macOS	• macOS 12.0 Monterey • macOS 11.0 Big Sur • macOS 10.15 Catalina • macOS 10.14.6 Mojave • macOS 10.13.6 High Sierra	

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, Tanium recommends that a security administrator create exclusions to allow the Tanium processes to run without interference. The configuration of these exclusions varies depending on AV software. 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>\temp\endpoint-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`
	64-bit OS versions	Process	`%programfiles(x86)%\Tanium\Tanium End User Notification Tools\UserSessionProxy.exe`
	32-bit OS versions	Process	`%programfiles%\Tanium\Tanium End User Notification Tools\UserSessionProxy.exe`
	64-bit OS versions	Process	`%programfiles(x86)%\Tanium\Tanium End User Notification Tools\bin\end-user-notifications.exe`
	32-bit OS versions	Process	`%programfiles%\Tanium\Tanium End User Notification Tools\bin\end-user-notifications.exe`
	exclude from on-access or real-time scans (64-bit OS versions)	Folder	`%programfiles(x86)%\Tanium\Tanium End User Notification Tools`
	exclude from on-access or real-time scans (32-bit OS versions)	Folder	`%programfiles%\Tanium\Tanium End User Notification Tools`
		Folder	`%programdata%\Tanium`

End-User Notifications security exclusions (continued)

Target Device	Notes	Exclusion Type	Exclusion
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. To review a summary of the predefined roles, see Set up End-User Notifications users on page 17.

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]
End-User Notifications Endpoint Configuration APPROVE: Approve End-User Notifications items for Endpoint Configuration REGISTER: Access to register with Endpoint Configuration	✅ REGISTER	✅ APPROVE	❌	❌
End-User Notifications Module Read and write access to the End-User Notifications shared service	✅ READ WRITE	✅ READ	✅ READ	✅ READ

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]
End-User Notifications Operator Module Write access to a subset of the End-User Notifications shared service	✅ WRITE	❌	✅ WRITE	❌
End-User Notifications Use API Access to the End-User Notifications API	✅ EXECUTE	✅ EXECUTE	✅ EXECUTE	✅ EXECUTE
Endusernotifications 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	❌

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]
Approve Action	Platform Content	✅ SPECIAL	❌	✅ SPECIAL	❌
Own Action	Platform Content	✅ READ	❌	✅ READ	❌
Package	Platform Content	✅ READ WRITE	❌	✅ READ WRITE	❌
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 End-User Notifications with default settings on page 14.

- **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 End-User Notifications with custom settings on page 15.

Before you begin

- Read the release notes.

- Review the End-User Notifications requirements on page 7.

- If you are upgrading from a previous version, see Upgrade End-User Notifications on page 15.

Import End-User Notifications with default settings

(Tanium Core Platform 7.4.5 or later only) You can set the End-User Notifications action group to target the **No Computers** filter group by enabling restricted targeting before importing End-User Notifications. This option enables you to control tools deployment through scheduled actions that are created during the import and that target the Tanium End-User Notifications 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.

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

Setting	Default value
Action group	- Restricted targeting disabled (default): `All Computers` computer group - Restricted targeting enabled: `No Computers` computer group
Service account	The service account is set to the account that you used to import the module. Configuring a unique service account for each Tanium solution is an extra security measure to consider in consultation with the security team of your organization. See Configure service account on page 16.
End-User Notifications configurations	- A default End-User Notifications configuration is created. - The End-User Notifications tools are distributed to endpoints.

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 15.

Import 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 15.

To configure the service account, see Configure service account on page 16.

To configure the End-User Notifications action group, see Configure the End-User Notifications action group on page 16.

To customize notifications, see Customize the End-User Self Service Client on page 16.

Manage solution dependencies

When you start the End-User Notifications workbench for the first time, the Tanium Server checks whether all the Tanium modules and shared services (solutions) that are required for End-User Notifications are installed at the required versions. The End-User Notifications workbench cannot load unless all required dependencies are installed. If you selected **Tanium Recommended Installation** when you imported End-User Notifications, the Tanium Server automatically imported all your licensed solutions at the same time. Otherwise, if you manually imported End-User Notifications and did not import all its dependencies, the Tanium Console displays a banner that lists the dependencies and the required versions. See Solution dependencies.

1. Install the dependencies as described in Tanium Console User Guide: Import, re-import, or update specific solutions.

2. From the Main menu, go to **Administration > Shared Services > End-User Notifications** to open the End-User Notifications **Overview** page and verify that the Console no longer displays a banner to list missing dependencies.

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 15.

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](#).

> **NOTE** If you imported End-User Notifications with default settings, the service account is set to the account that you used to perform the import. Configuring a unique service account for each Tanium solution is an extra security measure to consider in consultation with the security team of your organization.

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 the End-User Notifications action group

Importing the End-User Notifications module automatically creates an action group to target specific endpoints. If you did not use automatic configuration or you enabled restricted targeting when you imported End-User Notifications, the action group targets **No Computers**.

If you used automatic configuration and restricted targeting was disabled when you imported End-User Notifications, configuring the End-User Notifications action group is optional.

Select the computer groups to include in the End-User Notifications action group.

> **BEST PRACTICE** Clear the selection for **No Computers** and make sure that all operating systems that are supported by End-User Notifications are included in the End-User Notifications action group.

1. From the Main menu, go to **Administration > Actions > Action Groups**.

2. Click **Tanium End-User Notifications**.

3. Select the computer groups that you want to include in the action group and click **Save**.
   If you select multiple computer groups, choose an operator (AND or OR) to combine the groups.

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 configuration. For more information about creating a configuration, see Create a configuration on page 18.

Set up End-User Notifications users

You can use the following set of predefined user roles to set up End-User Notifications users.

To review specific permissions for each role, see User role requirements on page 11.

For more information about assigning user roles, see Tanium Core Platform User Guide: Manage role assignments for a user.

End-User Notifications Administrator

Assign the **End-User Notifications Administrator** role to users who manage the configuration and deployment of End-User Notifications functionality to endpoints.

End-User Notifications Endpoint Configuration Approver

Assign the **End-User Notifications Endpoint Configuration Approver** role to a user who approves or rejects End-User Notifications configuration items in Tanium Endpoint Configuration. This role can approve, reject, or dismiss End-User Notifications configuration changes.

End-User Notifications Endpoint Configuration Operator

Assign the **End-User Notifications Operator** role to users who manage most configurations and deployment of End-User Notifications functionality to endpoints.

End-User Notifications Endpoint Configuration Read Only User

Assign the **End-User Notifications Read Only User** role to users who need visibility into End-User Notifications settings but do not need rights to update them.

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.

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

Customizing the End-User Self Service interface

To customize the End-User Self Service interface to use with Deploy, create additional End-User Notifications configurations. Each configuration defines settings, rules, or parameters that apply to one or more computer groups.

Create a configuration

1. From the End-User Notifications menu, click **Configurations** and then click **Create Configuration**.

2. Provide a name and optional description.

3. Select targeting options.

   > **NOTE** Only one configuration can apply to an endpoint.

4. Configure the application details.

   a. Specify a name for the application shortcut on endpoints.

   b. Specify a URL or email address where users can find support.

   c. Upload a logo file to display in the self-service dashboard on endpoints.

   d. Upload an icon file that will be used for the application shortcut on endpoints.

5. (Optional) Select **Enable End-User Self Service**.

   a. Provide a header title and 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 application name, header title, and welcome message.

   b. (Optional) Click **Add Language** to add more languages.

   > **NOTE** 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.

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 configurations

If you have more than one configuration, you can prioritize them. Endpoints targeted with more than one configuration use the settings from the highest priority configuration.

1. From the End-User Notifications menu, click **Configurations** and then click **Prioritize**.

2. Drag and drop a configuration to reprioritize it. End-User Notifications automatically adjusts the priority numbers for the other configurations and reorders the list by priority.

3. Click **Confirm**.

View, edit, or delete configurations

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

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

To delete a configuration, select a configuration 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 20.

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 14.

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 9. For assistance in ensuring exclusions have taken effect, Contact Tanium Support on page 20.

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.