



Tanium™ Deploy User Guide

Version 1.0.1

July 10, 2018

The information in this document is subject to change without notice. Further, the information provided in this document is provided “as is” and is believed to be accurate, but is presented without any warranty of any kind, express or implied, except as provided in Tanium’s customer sales terms and conditions. Unless so otherwise provided, Tanium assumes no liability whatsoever, and in no event shall Tanium or its suppliers be liable for any indirect, special, consequential, or incidental damages, including without limitation, lost profits or loss or damage to data arising out of the use or inability to use this document, even if Tanium Inc. has been advised of the possibility of such damages.

Any IP addresses used in this document are not intended to be actual addresses. Any examples, command display output, network topology diagrams, and other figures included in this document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

Please visit <https://docs.tanium.com> for the most current Tanium product documentation.

Tanium is a trademark of Tanium, Inc. in the U.S. and other countries. Third-party trademarks mentioned are the property of their respective owners.

© 2018 Tanium Inc. All rights reserved.

Table of contents

- Deploy overview 6**
- Deployment packages 6
- Deployment bundles 7
- Applicability scans 7
- Deployments 8
- Maintenance windows 8
- Getting started 9**
- Requirements 10**
- Tanium dependencies 10
- Tanium Server and Module Server 10
- Endpoints 10
 - System environment variables 11
- Host and network security requirements 11
 - Security exclusions 11
- User role requirements 12
 - Tanium 7.0 12
 - Tanium 7.1 12
- Installing Deploy 14**
- Before you begin 14
- Import Deploy 14
- Set the service account 14
- Install the Tanium End-User Notifications solution 15
- Organize computer groups 15

Add computer groups to Deploy action group	16
Initialize endpoints	16
Upgrade Deploy	16
Managing packages and bundles	18
Before you begin	18
Create a software package	18
Export a software package	19
Import a software package	19
Create a software bundle	19
Edit a software package or bundle	20
Delete a software package or bundle	20
Deploying packages and bundles	21
Overview	21
Before you begin	21
Create a software package deployment	21
Endpoint restarts	23
Create a software bundle deployment	25
Reissue a deployment	27
Stop a deployment	27
Managing maintenance windows	28
Maintenance window options	28
Create a maintenance window	29
Delete a maintenance window	29
Troubleshooting Deploy	30
Collect a troubleshooting package	30

End user notifications are not displayed	30
No applicability information for software packages	30
Uninstall Deploy	31

Deploy overview

Deploy is a software management module that you can use to rapidly install, update, and remove software across large organizations with minimal infrastructure requirements. You can create deployments to run during a maintenance window that is convenient for your IT operations.

With Deploy, you can accomplish the following tasks:

- Deploy applications or a group of applications to a flexible set of targets, including computer groups, user groups, departments, locations, individual computers, and individual users.
- Update existing software installation to the latest available versions.
- Create custom packages to install, update, and remove applications.

Deployment packages

A Tanium Deploy *software package* is a combination of source files, metadata, detection logic, and actions that are used to detect, install, update, and remove software from Tanium managed devices.

Each software package contains the following elements:

Package Files (install/source files)

The files needed to silently install an application on a managed device. This includes, but not limited to, msi/exe installer, resource files/folders, configuration files, custom scripts, custom registry files, license keys.

General Information

The vendor, name, and version of the software package. This information is derived automatically from source files when available.

System Requirements

The minimum requirements for this software package to run on the endpoint: minimum operating system and version, minimum disk space, and minimum RAM for the system.

Required Software (prerequisites)

The list of detection rules that are associated with prerequisite software packages. Each prerequisite software package has one or more rules associated with it.

Update Detection

The list of detection rules that are associated with previous versions of this software package. This list determines what previous software installations can be updated by this package.

Operation Type

Each software package has a number of supported operations. Each package has an installation and uninstallation operation type, and has the ability to add named custom operations to the software package.

Install Verification

The list of detection rules to determine if the package installation was complete/successful.

Deployment bundles

A Tanium Deploy *software bundle* is a list of Deploy software packages that can be deployed and executed in an ordered sequence. Software bundles are used to deploy a list of packages that are used by specific departments or user types.

For more information, see [Managing packages and bundles on page 18](#).

Applicability scans

You can configure how often applicability scans run for the software packages that are in the Deploy catalog, and how frequently the applicability status cache is updated.

Applicability scans evaluate endpoints against the required operating system, minimum disk space, memory, and required software. Each software package is evaluated on a routine basis to determine if a Tanium managed device is eligible to install, is eligible for update, installed, or has failed requirements.

Install Eligible

The count of systems where the software is not installed and system requirements are met.

Update Eligible

The count of systems where one or more of the previous versions of the application are detected, and the software package can update those systems.

Installed

The count of systems where the software package is already installed.

Update Ineligible

The count of systems where one or more of the previous versions of the application are detected, but the system requirements are not met.

Not Applicable

The count of systems where the system requirements or prerequisites are not met.

Deployments

A deployment is a one-time or recurring action to install, update, or remove applications on targeted endpoints. For more information, see [Deploying packages and bundles on page 21](#).

Maintenance windows

Maintenance windows designate the permitted times that the targeted computer groups are open for deployments to run. You can have multiple maintenance windows, even with overlapping times. Maintenance windows do not interfere with each other. For a deployment to take effect, the deployment and maintenance window times must be met. For more information, see [Managing maintenance windows on page 28](#).

This documentation may provide access to or information about content, products (including hardware and software), and services provided by third parties ("Third Party Items"). With respect to such Third Party Items, Tanium Inc. and its affiliates (i) are not responsible for such items, and expressly disclaim all warranties and liability of any kind related to such Third Party Items and (ii) will not be responsible for any loss, costs, or damages incurred due to your access to or use of such Third Party Items unless expressly set forth otherwise in an applicable agreement between you and Tanium.

Further, this documentation does not require or contemplate the use of or combination with Tanium products with any particular Third Party Items and neither Tanium nor its affiliates shall have any responsibility for any infringement of intellectual property rights caused by any such combination. You, and not Tanium, are responsible for determining that any combination of Third Party Items with Tanium products is appropriate and will not cause infringement of any third party intellectual property rights.

Getting started

1. Install Deploy. For more information, see [Installing Deploy on page 14](#).
2. Create a software package. For more information, see [Managing packages and bundles on page 18](#).
3. Create a deployment. For more information, see [Deploying packages and bundles on page 21](#).
4. Create a maintenance window. For more information, see [Managing maintenance windows on page 28](#).

Requirements

Review the requirements before you install and use Deploy.

Tanium dependencies

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

Component	Requirement
Platform	7.0.314.6319 or later. Enhanced functionality is available with version 7.0.314.6573 and later. Installing Tanium™ Interact is also suggested. For role-based access control (RBAC), you must have Tanium Platform 7.1.314.3214 or later. 7.2.314.3019 or later.
Tanium Client	6.0.314.1540 or later (Windows 7 Service Pack 1 or later, and Windows Server 2008 or later). 7.2.314.2962 or later (Windows 7 Service Pack 1 or later, and Windows Server 2008 or later).
Tanium End-User Notifications	1.3.0.0001 or later.

Tanium Server and Module Server

Deploy is installed and runs as a service on the Module Server host computer. The impact on Module Server is minimal and depends on usage.

For more information about Tanium Server and Module Server sizing guidelines, see [Tanium Core Platform Installation Guide: Host system sizing guidelines](#).

Endpoints

Contact your Technical Account Manager (TAM) for customized tuning to your environment. For more information, see [Tanium Platform User Guide: Managing Global Settings](#).

System environment variables

The use of environment variables when you refer to file paths in Deploy is recommended over the use of explicit file paths. This method provides independence from differing paths based on operating system language or architecture, and allows the construction of a dynamic path at the time of execution.

Process Architecture	System Environment Variable	Path
32-bit process on 32-bit Windows	%PROGRAMFILES%	C:\Program Files
	%COMMONPROGRAMFILES%	C:\Program Files\Common Files
32-bit process on 64-bit Windows	%PROGRAMFILES%	C:\Program Files (x86)
	%PROGRAMFILESX86%	C:\Program Files (x86)
	%COMMONPROGRAMFILES%	C:\Program Files (x86)\Common Files
	%COMMONPROGRAMFILES (X86) %	C:\Program Files (x86)\Common Files
	%COMMONPROGRAMW6432%	C:\Program Files\Common Files
	%PROGRAMW6432%	C:\Program Files

Note: Additional environment variables that are available to the System account, such as %SystemDrive%, %SystemRoot%, %WinDir%, are also supported.

Host and network security requirements

Specific processes and URLs are needed to run Deploy.

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.

Target device	Process
Module Server	<pre>node.exe</pre> <p>or</p> <pre>"<Tanium Module Server directory>\services\deploy\node.exe" service.js</pre>
Endpoint computers	<pre>\Tanium\Tanium End User Notification Tools\bin\client- ui.exe</pre> <pre>\Tanium\Tanium Client\python27\TPython.exe</pre> <pre>\Tanium\Tanium Client\Tools\Deploy\deploy\tools\active- user-sessions.exe</pre> <p>Exclude the following directories from on-access or real-time scans:</p> <ul style="list-style-type: none"> • \Tanium\Tanium End User Notification Tools • \Tanium\Tanium Client

User role requirements

Tanium 7.0

The following user roles are supported in Deploy:

Administrator

Can install Deploy; can create, modify, or delete packages and bundles; can create, modify, delete, or run deployments

Content Administrator

Can create, modify, or delete packages and bundles; can create, modify, delete, or run deployments

Tanium 7.1

For Tanium Platform version 7.1.314.3214 or later, Deploy uses RBAC permissions that control access to the Deploy workbench. The three predefined roles are Deploy Admin, Deploy User, and Deploy Read Only User.

Table 1: Tanium 7.1 Deploy User Role Privileges

Privilege	Deploy Administrator	Deploy User	Deploy Read Only User
Deploy Module Read Read access to the Deploy module	✓	✓	✓
Deploy Module Write Write access to the Deploy module	✓	✓	✗
Deploy Settings Write Write access to global settings in the Deploy module	✓	✗	✗

Installing Deploy

You can install Deploy from the **Tanium Solutions** page.

Before you begin

- Read the [release notes](#).
- Review the [Requirements on page 10](#).
- If you are upgrading from a previous version, see [Upgrade Deploy on page 16](#).

Import Deploy

Import Deploy from the **Tanium Solutions** page.

Note: For environments that are configured with an Active/Active Tanium Server configuration, this process must be performed on both Tanium Servers.

1. From the main menu, click **Tanium Solutions**.
2. Under **Tanium Deploy**, click **Import**.

Note: Tanium Deploy is a licensed solution. If Tanium Deploy is not enabled for import on the **Tanium Solutions** page, contact your TAM.

3. In the **Content Import Preview** window, you can expand the package to review the Tanium content that is being installed. Click **Proceed with Import**.
4. After the installation process completes, click **Close**.
5. To confirm the installation, return to the **Tanium Solutions** page and check the **Installed: X.X.X.XX** version for Deploy.

Tip: If you do not see the Deploy module in the console, refresh your browser.

Set the service account

For recurring maintenance activities, specify a Tanium user with administrator or content administrator permissions. Specifying these credentials is a one-time configuration. No other credentials need to be added.

1. From the Deploy home page, in the **Configure Deploy** section, click the **Configure Service Account** step and click **Configure Service Account**.

Note: If the **Configure Deploy** section is not visible in the Deploy home page, click **Manage Home Page**, select **Configure Deploy**, and click **Save**.

2. Enter the Tanium credentials and click **Set Credentials**.

Install the Tanium End-User Notifications solution

By installing the Tanium End-User Notifications solution, 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.

1. From the Deploy home page, in the **Configure Deploy** section, click the **Import End-User Notifications** step and click **Import End-User Notifications**.

Note: If the **Configure Deploy** section is not visible in the Deploy home page, click **Manage Home Page**, select **Configure Deploy**, and click **Save**.

2. Review the list of packages and sensors and click **Proceed with Import**.
3. To distribute the end user notification tools to endpoints, [Add computer groups to Deploy action group on page 16](#) and [Initialize endpoints on page 16](#).
4. To check if your endpoints have the end user notification tools, ask the question: `Get Has End User Notification Tools from all machines with Is Windows = "true"`

Organize computer groups

One way to deploy packages or bundles is by computer group. Create relevant computer groups to organize your endpoints. Some options include:

- Endpoint type, such as servers or employee workstations
- Endpoint location, such as by country or time zone
- Endpoint priority, such as business-critical machines

For more information, see [Tanium Core Platform User Guide: Managing computer groups](#).

Add computer groups to Deploy action group

Importing the Deploy module automatically creates an action group to target specific endpoints. Select the computer groups to include in the Deploy action group. By default, Deploy targets No Computers.

1. From the Deploy home page, in the **Configure Deploy** section, click the **Select Computer Groups** step and click **Configure Action Group**.

Note: If the **Configure Deploy** section is not visible in the Deploy home page, click **Manage Home Page**, select **Configure Deploy**, and click **Save**.

2. Select the computer groups that you want to include in the action group. If you select multiple computer groups, choose an operand (AND or OR) to combine the groups.
3. (Optional) In the **All machines currently included in this action group** section, review the included endpoints.

Note: These results might take a few moments to populate.

4. Click **Save**.

Initialize endpoints

Deploy installs a set of tools on each endpoint that you have targeted. Initializing the endpoints starts the Deploy service and starts the Deploy process on every endpoint where it is not running.

This action is reissued on an hourly basis.

1. From the Deploy home page, in the **Configure Deploy** section, click the **Initialize Endpoints** step and click **Initialize Endpoints**.

Note: If the **Configure Deploy** section is not visible in the Deploy home page, click **Manage Home Page**, select **Configure Deploy**, and click **Save**.

2. Enter your password and click **Confirm**.

Upgrade Deploy

You can upgrade Deploy by importing it in the Tanium Console.

Note: For environments that are configured with an Active/Active Tanium Server configuration, this process must be performed on both Tanium Servers.

1. From the main menu, select **Tanium Solutions**.
2. Locate Deploy and click **Upgrade to <version>**.
A progress bar is displayed as the installation package is downloaded.
3. Click **Continue**.
The **Import Solution** page opens with a list of all changes and import options.
4. Click **Proceed with Import**.
5. Enter your password and click **OK**.
6. When the upgrade is complete, click **Close**.
7. To confirm the upgrade, return to the **Tanium Solutions** page and check the **Installed** version for Deploy.

Tip: If the **Deploy** version has not updated in the console, refresh your browser.

Managing packages and bundles

Use software packages to install, update, or remove software on a set of target computers. Use software bundles to specify a sequenced list of software packages to deploy.

Before you begin

For applicability checks and command line operations, make sure that all endpoints have the required system environment variables defined. For more information, see [System environment variables on page 11](#).

Create a software package

1. From the Deploy Menu, click **Software** and then click **New Software Package**.
2. Provide package options.
 - a. Click **Add** to add a local file, remote file, or remote folder.

These are the files that are needed to silently install an application on a managed device. They include, but are not limited to, msi or exe installers, resource files or folders, configuration files, custom scripts, custom registry files, or license keys.
 - b. Provide the general information and select the OS platform.

Tip: If the package files include one or more Windows Installer packages (MSI file format), you can click **Inspect** to extract the general information from the `.msi` file and verify the pre-populated information. Clicking **Inspect** does not overwrite any information that you previously entered manually.

- c. Choose Deploy operations.
- d. Provide the minimum system requirements for the package to run on the endpoint.
- e. Add a list of detection rules for prerequisite software.
- f. (Optional) If the Update operation is selected, add a list of detection rules for previous versions.
- g. Add conditional commands for any of the Deploy operations that you enabled for this package.
- h. Add a list of detection rules for installation verification.

3. Click **Create Package**.
4. Provide your password and click **Confirm**.

Export a software package

You can export a software package so that you can later import the package on a different server or recreate a deleted package.

1. From the Deploy Menu, click **Software**.
2. Click the name of your package and then click Export .

The ZIP file is available in your downloads folder.

Import a software package

You can import a previously exported software package on a different server or recreate a deleted package.

1. From the Deploy Menu, click **Software** and then click **Import Package**.
2. Browse to the previously exported ZIP file and click **Import**.
3. Click **Upload File** for any required files.
4. Click **Import** or **Import Duplicate** if you are importing a duplicate package.
5. Provide your password and click **Confirm**.

Create a software bundle

1. From the Deploy Menu, click **Software** and then click **Software Bundles**.
2. Click **New Software Bundle**.
3. Provide package options.
 - a. In the **Software Bundle Details** section, specify the bundle name and description and select the OS platform.
 - b. In the **Add Software** section, select which software packages you want to add to the bundle, the deploy action, and whether you want the bundle to continue or exit if the package fails.

Note: You can change the order of the packages by dragging the package, or by clicking the arrows next to the package number.

4. Click **Create Bundle**.

Edit a software package or bundle

To edit a package or bundle, click the name of your package or bundle and then click **Edit**.

When a software package or bundle is edited and saved, the version number of the package or bundle is incremented. All existing deployments continue to use the version that is specified at the time of deployment until the updated package catalog is distributed.

Delete a software package or bundle

To delete a package or bundle, click the name of your package or bundle and then click Delete .

Note: You can only delete a software package or bundle if it is not being referenced in an active deployment.

Deploying packages and bundles

Overview

Use deployments to install, update, or uninstall software on a set of target computers. Deployments can run once or be ongoing to meet requirements such as:

- Maintain operational hygiene and system baselines.
- Manage systems which may be online for short periods.
- Rerun packages which become applicable as system states change.

IMPORTANT: Deployments do not run outside of a maintenance window. You must create at least one maintenance window for deployments to run. For more information about creating a maintenance window, see [Managing maintenance windows on page 28](#).

Before you begin

- Create a software package or bundle. See [Managing packages and bundles on page 18](#).
- If you want to notify the end users of your endpoints about the start of deployments or restarts that occur after deployments, install the Tanium End-User Notification solution. See [Install the Tanium End-User Notifications solution on page 15](#) and [Endpoint restarts on page 23](#).

Create a software package deployment

To deploy a software package, click the name of your package and then click **Deploy**.

1. Provide the deployment details.
2. Select the software package operation.
3. Choose at least one target for the deployment.
4. Select deployment options.
 - a. Designate the deployment time.

You can choose from your browser time or local time on the endpoint.

- b. Specify a deployment type. You can either do a single deployment with a specific start and end time, or an ongoing deployment that does not have an end time.
- c. If you want the endpoints to download the deployment content before the installation time, select **Download immediately**.
- d. You can enable end user notifications about the deployments. Select **Notify User** in the **Pre-Notify User** section. You can then configure settings that allow the user to postpone the start of the deployment. You also must configure the **Message Content** that informs the user about the deployment. To preview the window that displays the message and postponement options, click **Show Preview**.

The screenshot shows the 'Pre-Notify User' configuration panel. On the left, the 'Pre-Notify User' section is active. On the right, the 'Notify User' checkbox is checked. Below it, the 'Allow User to Postpone' checkbox is also checked. There are three rows of dropdown menus: 'Duration of Postponement' (1 Days), 'User Postponement Options' (1, 2, 4 Hours), and 'Countdown to deadline' (10 Minutes). The 'Message Content' section has a 'Show Preview' link on the right. It contains a 'Title' field with 'Deployment Starting', a 'Title Icon' field with a 'Choose File' button and 'Suggested size: 32x32px', a 'Filename' field with '--', a 'Body' text area with 'IT is going to start a deployment to install software.', and a 'Body Image' field with a 'Choose File' button and 'Suggested size: 120x120px'.

- e. To reduce the network load, select **Distribute over time** and indicate the time.
- f. Select whether to restart the endpoint. For more information, see [Endpoint restarts on page 23](#).
- g. You can enable end user notifications about the completion of a deployment with or without a restart. Select **Notify User** in the **Post-Notify User** section. If you enabled endpoint restarts, you can then configure settings that allow the user to postpone the restart. You also must configure the **Message Content** that informs the user about the restart. To preview the window that displays the message and postponement options, click **Show Preview**.

Restart

Yes
 No

Post-Notify User

Notify User

Allow User to Postpone ?

Duration of Postponement: 1 Days

User Postponement Options:

1 Hours ?

2 Hours

4 Hours

Countdown to deadline: 10 Minutes

Message Content Show Preview

Title: Reboot Required

Title Icon: Suggested size: 32x32px ?
Filename: --

Body: IT needs to reboot your system to deploy software.

Body Image: Suggested size: 120x120px ?
Filename: --

5. Click **Create Deployment**.

Endpoint restarts

Deploy can trigger a restart of any system after updates have been installed. You can choose between the following options for the restart:

- Restart silently and immediately after deployment. This option is typically used for servers and production machines in conjunction with maintenance windows and change control processes.
- Notify the system user about the pending restart and give the system user the option to defer the restart for a specified amount of time. Configure the following options:

Duration of Postponement

Specify the amount of time in minutes, hours, or days before the endpoint must be restarted. The deadline is calculated by adding this value to the time the deployment completed for each endpoint.

Countdown to deadline

Specify the amount of time in minutes, hours, or days to show the final notification before restarting the endpoint.

Allow User to Postpone

If you want to give the user an option to defer the restart for a specified amount of time, select this option. A user cannot postpone beyond the deadline.

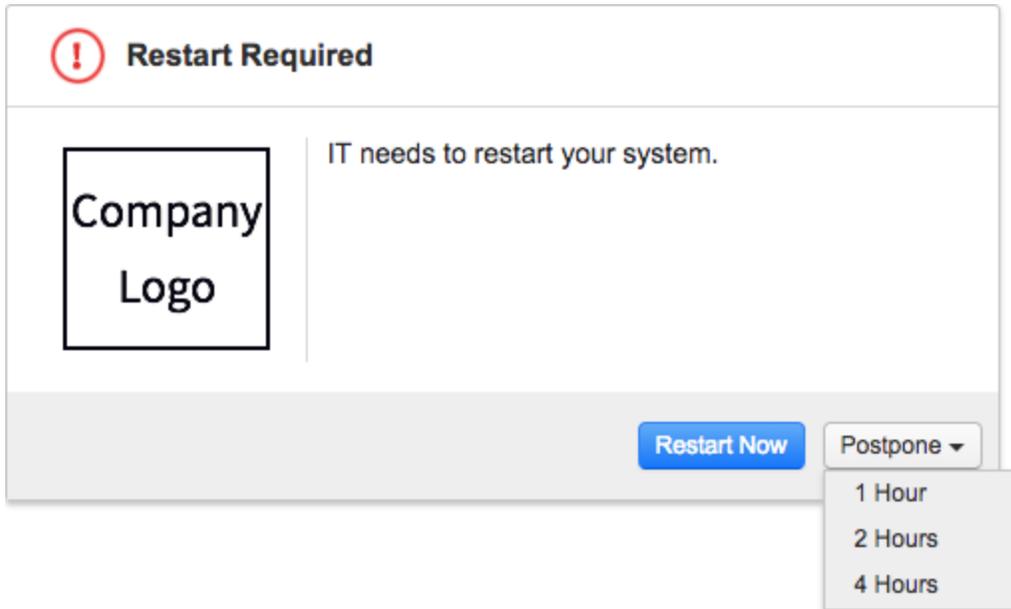
User Postponement Options

Specify the amount of time in minutes, hours, or days that a user can postpone the restart.

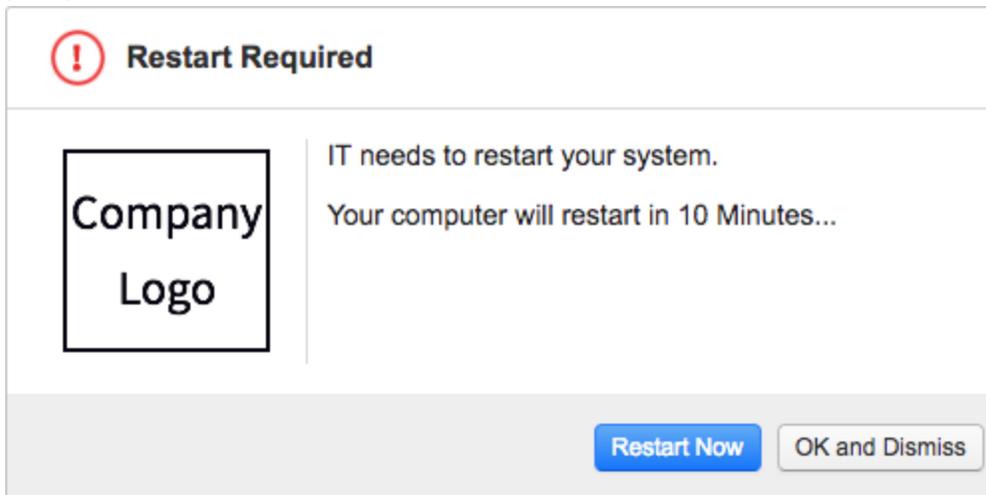
Message Content

Specify the title and body of the notification message. Upload optional icon and body images for branding to avoid confusing users and limiting support calls. Click **Show Preview** to preview the notifications.

This message is configurable, and might look like the following example:



After the deadline for restart passes, the user gets a message that they cannot postpone:



IMPORTANT: If no user is logged into an endpoint, the endpoint will restart immediately after a deployment completion even if the deployment is configured for a notification.

Note: End user notifications can be added to existing deployments by stopping, reconfiguring, and reissuing the deployment.

Create a software bundle deployment

A software bundle is platform-specific and each software package evaluates and installs independently, but is available only for the specified OS platform. If an individual package fails to install during a bundle deployment, you can decide if the bundle should continue and install the remaining packages, or you can choose to stop on failure and report the failure.

To deploy a software bundle, click the name of your bundle and then click **Deploy**.

1. Provide the deployment details.
2. Verify the software bundle details.
3. Choose at least one target for the deployment.
4. Select deployment options.
 - a. Designate the deployment time.

You can choose from your browser time or local time on the endpoint.
 - b. Specify a deployment type. You can either do a single deployment with a specific start and end time, or an ongoing deployment that does not have an end time.
 - c. You can enable end user notifications about the deployments. Select **Notify User** in the **Pre-Notify User** section. You can then configure settings that allow the user to postpone the start of the deployment. You also must configure the **Message Content** that informs the user about the deployment. To preview the window that displays the message and postponement options, click **Show Preview**.

- d. Select whether to restart the endpoint. For more information, see [Endpoint restarts on page 23](#).
- e. You can enable end user notifications about the completion of a deployment with or without a restart. Select **Notify User** in the **Post-Notify User** section. If you enabled endpoint restarts, you can then configure settings that allow the user to postpone the restart. You also must configure the **Message Content** that informs the user about the restart. To preview the window that displays the message and postponement options, click **Show Preview**.

5. Click **Create Deployment**.

Reissue a deployment

You can restart a stopped deployment or reissue a one-time deployment. Reissuing a deployment creates a new deployment with the same configuration and targets.

1. From the Deploy Menu, click **Deployments**.
2. On the **Inactive** tab, click the deployment name.
3. Click **Reissue**.
4. Make changes if necessary.
5. Preview the changes.
6. Click **Create Deployment**.

Stop a deployment

You can stop a package or bundle deployment, but it does not remove packages that have already completed installation.

1. In the Deploy Menu, click **Deployments**.
2. On the **Active** tab, click the deployment name.
3. Click **Stop**.
4. Go to the **Inactive** tab and click the deployment name to verify the status.

Managing maintenance windows

Maintenance windows control when deployments can run on a computer group. A maintenance window is separate from the deployment start and end time. To run a deployment, a maintenance window must be open during the configured deployment time.

Deployments do not run outside of a maintenance window. You must create at least one maintenance window for deployments to run.

Maintenance window options

You can configure maintenance windows for the times that are best for your environment. Apply maintenance windows by enforcing them against computer groups. Multiple maintenance windows can affect a computer group, creating several times that deployment activity is permitted.

If you want . . .	After the date and time, select . . .
A one-time window	Does Not Repeat
A window that repeats every few days	Daily and the number of days between windows
A window that repeats on the same days of the week	Weekly , the number of weeks between windows, and which days of the week it opens on
A window that repeats on the same date each month	Monthly , the number of months between windows, and Day of the Month
A window that repeats on the same day each month	Monthly , the number of months between windows, and Day of the Week
A window that repeats on the same day of the year	Yearly and the number of years between windows

IMPORTANT: If a maintenance window does not repeat and it is the only one enforced against a computer group, deployments cannot run after the window closes.

Create a maintenance window

You can open multiple maintenance windows to customize when deployments are run on your endpoints. For example, you can create windows that allow deployments during periods of low network activity or outside of core working hours.

1. In the Deploy Menu, click **Maintenance Windows**.
2. Click **Create Window**.
3. Name the window.
4. Choose from your browser time or local time on the endpoint.
5. Configure the window repetition.
 - a. Select the repetition time frame.
 - b. Set additional options, such as day of the week, day of the month, and how often the window repeats.
6. Use the date and time pickers to set the start and end time of the window.

Note: If a maintenance window repeats, it does not have an end date. You must remove the enforcement against the target computer groups to stop the maintenance window.

7. Click **Create**.
8. Add one or more target computer groups.

Delete a maintenance window

After the enforcements have been removed, you can delete a maintenance window.

1. In the Deploy Menu, click **Maintenance Windows**.
2. Select a window.
3. If the window is enforced against computer groups, remove all groups.
4. In the upper right, click **Delete**.
5. Confirm the deletion.

Troubleshooting Deploy

If Deploy is not performing as expected, you might need to do some troubleshooting or change settings. You can also contact your TAM for assistance.

Collect a troubleshooting package

For your own review or to assist support, you can compile Deploy logs and files that are relevant for troubleshooting.

1. Get the Deploy log.
 - a. On the Deploy home page, click Help .
 - b. Click **Collect Troubleshooting Package**.

The log zip file might take a few moments to download. The files have a timestamp with a `Deploy-YYYY-MM-DDTHH-MM-SS.mmmZ` format.

2. (Optional) On the endpoint, copy the `Tanium\Tanium Client\Tools\Deploy` folder.

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 [Install the Tanium End-User Notifications solution on page 15](#).
2. Ask the question: `Get Has End User Notification Tools from all machines with Is Windows = "true"` to check if your endpoints have the end user notification tools.
3. Verify that any security software exclusions include the `\Tanium\Tanium End User Notification Tools` directory. For more information, see [Security exclusions on page 11](#).

No applicability information for software packages

Software package applicability is calculated on the endpoints by using the applicability rules in the package definition, which is stored in the package catalog and distributed to the endpoints.

If the applicability information for software packages is not available:

1. Ensure the Deploy process is running on the target endpoint by:
 - asking the question: `Get Deploy - Is Process Running from all machines`
 - checking locally for the `\Tanium\Tanium Client\python27\TPython.exe` on the endpoint
2. Ensure that the `\Tanium\Tanium Client\Tools\Deploy\software-package-catalog.json` file is present and updated.
3. Ensure that the `\Tanium\Tanium Client\Tools\Deploy\settings.json` file is present and updated.
4. Review the `\Tanium\Tanium Client\Tools\Deploy\software-package-applicability.json` file to verify the package id, applicability, and `updatedAt` values. If the package id is not present, a new scan may not have occurred or the catalog may be out of date. When a new package catalog file is received, the scan should happen within a few minutes.
5. Load the saved question: **Deploy - Software Packages Applicability 0** to display the package id and the applicability state of the first 200 packages. This saved question runs on a scheduled that is defined by the Deploy service. Review Deploy settings to adjust these settings as needed. To load the saved question:
 1. From the main menu, click **Authoring > Saved Questions**.
 2. Select the **Deploy - Software Packages Applicability 0** row and click **Load**.

Uninstall Deploy

If you need to uninstall Deploy, first clean up the Deploy artifacts on the endpoint and then uninstall Deploy from the server.

1. Clean up deployment artifacts from the endpoints.
 - a. Use Interact to target endpoints. To get a list of endpoints that have Deploy, you can ask the `Get Deploy - Is Process Running from all machines` question.
 - b. Click **Deploy Action**. Choose the **Clean Deploy Tools Folder** package.
 - c. Check the status of the action on the **Actions > Action History** page.
2. Remove the Deploy solution from the Tanium Module Server. From the main menu, click **Tanium Solutions**.
 - a. In the Deploy section, click **Uninstall** and follow the process.
 - b. Click **Proceed with Uninstall**.
 - c. The uninstaller disables any actions and reissues saved questions.

- d. Return to the Tanium Solutions page and verify that the **Import** button is available for Deploy.
If the Deploy module has not updated in the console, refresh your browser.