# User Guide

## Norman Enterprise Security

## Wake on LAN 8.0

NORMAN®

# Notices

### Version Information

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### Copyright Information

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## Trademark Information

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# Preface

## About This Document

This User Guide is a resource written for all users of Norman Enterprise Security: Wake on LAN 8.0. This document defines the concepts and procedures for installing, configuring, implementing, and using Norman Enterprise Security: Wake on LAN 8.0.

**Tip:** Norman documentation is updated on a regular basis. To acquire the latest version of this or any other published document, please refer to the *Norman User Manuals* page at *http://www.norman.com/support/user_manuals/*.

### Typographical Conventions

The following conventions are used throughout this documentation to help you identify various information types.

Table 1: Typographical Conventions

| Convention | Usage |
|---|---|
| **bold** | Buttons, menu items, window and screen objects. |
| ***bold italics*** | Wizard names, window names, and page names. |
| *italics* | New terms, options, and variables. |
| `MONOSPACE UPPERCASE` | Keyboard keys. |
| **`BOLD UPPERCASE`** | SQL Commands. |
| `monospace` | File names, path names, programs, executables, command syntax, and property names. |



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# Chapter 1

# Wake on LAN Overview

**In this chapter:**



Wake on LAN is a Norman Enterprise Security module you can use to power on endpoints within your network without physically turning them on. With this capability, daily management tasks are simplified, desktop and laptop energy consumption is reduced, and system management tasks that interfere with employee productivity are prevented.

Wake on LAN (WOL) is a module you can install within Norman Enterprise Security. Use this module to control the power status of endpoints within the network (*on* or *off*), thereby managing tasks that occur at a specific time each day.

Using WOL, you can ensure swift deployment of critical security patches and ensure that every endpoint within the network is powered on during scheduled patch assessment. These functions are especially beneficial to organizations with networks containing thousands of endpoints. Using WOL, you can perform maintenance tasks for multiple endpoints after regular business hours, thus minimizing employee productivity disruption.

**Note:** Although WOL can wake endpoints from an off state, most network cards include security features to prevent remote boots. Therefore, Norman recommends using WOL to wake endpoints in a sleeping or hibernating state.

## About Wake on LAN

Wake on LAN (WOL) is a Norman Enterprise Security module containing features you can use to power on network endpoints. To power on endpoints, Wake on LAN sends specific Wake on LAN network packets, called wake requests, to endpoints hosting the Norman ESEC Agent.

Most network interface cards support a listening mode, enabling them to receive network packets even when the endpoints that host them are powered off, hibernating, or sleeping. You can use Wake on LAN to power on endpoints by sending network packets (known as *wake requests*) to endpoints hosting the Norman ESEC Agent.



## About Wake Requests

*Wake Requests* are network packets that Wake on LAN sends to network endpoints. These packets contain code that wake recipient endpoints from a suspended, hibernating, or powered-off state.

Wake requests are sent from the Norman Enterprise Security to wakepoints. Wakepoints then relay the request to managed endpoints. For additional information about wakepoints, refer to *About Wakepoints* on page 41.

Wakepoints use *limited broadcast* to relay wake requests to agent-managed endpoints within their subnet. During limited broadcast, the wakepoint sends the wake request to the 255.255.255.255 IP address. By sending the wake request to this address, a wake request is sent to all endpoints within the subnet. When managed agents receive the wake request, their host endpoints are woken.

Wake requests send packets called *magic packets*. Magic packets include the broadcast address (255.255.255.255) and endpoint MAC addresses, which are discovered using the Norman ESEC Agent. When managed endpoints receive this request, they are powered on after recognizing the broadcast address and their unique MAC address.

## Major Features of Wake on LAN

Wake on LAN (WOL) features are beneficial to organizations of all sizes.

You can use WOL to power on endpoints for maintenance purposes. With WOL, you can maintain large networks containing thousands of endpoints or smaller networks where an administrator only manages a handful of endpoints.

WOL includes the following features:

- Wake Windows endpoints, regardless of operating system version.
- Schedule wake requests to power on endpoints.
- Immediately send wake requests using the *Wake Now* feature.

## Advantages of Using Wake on LAN

Wake on LAN contains features that benefit administrators of networks of all sizes. With Wake on LAN, you can power on endpoints at your convenience, and then complete various administration tasks.

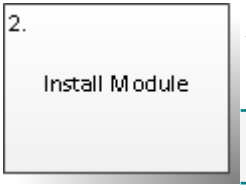
The following list itemizes the benefits of using Wake on LAN features:

- Enables administrators to complete administrative tasks following business hours using other Norman Enterprise Security modules.
- Because endpoint maintenance can be performed following business hours, employees can operate their endpoints without interruption during business hours.
- Because endpoints can be woken, employees can power off their endpoints following business hours, leading to reduced power consumption.
- Wake on LAN improves the likelihood that mobile network devices and hardware (devices with unpredictable use patterns) are scanned and updated more frequently, returning them to a state of security policy compliance.
- Wake on LAN automation features ensure administrators do not have to repetitively schedule wake times.
- Wake on LAN requires minimum maintenance.

## The Wake on LAN Process

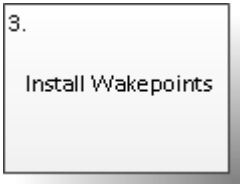
When getting started with Wake on LAN, you should perform Wake on LAN in a recommended sequence to use the product effectively.


Install Norman Enterprise Security on a server and Norman ESEC Agent on network endpoints. Installing these products creates the infrastructure to wake network endpoints without being physically present at the endpoints.




Install the Wake on LAN module (the Wake on LAN module server component) on the Norman Enterprise Security server. During this process, all components needed to send network endpoint wake requests are installed.

**Note:** By default, the Wake on LAN platform module is installed with Norman Enterprise Security. Therefore, installing the module manually is usually unnecessary.




Define wakepoints. During this step, the Wakepoint module (the Wake on LAN module endpoint component) is installed on network endpoints hosting agents. Wakepoints are agents that relay server wake requests to other agents in the wakepoint's network segment (VLAN). Each network segment should contain at least one wakepoint. However, Norman recommends installing several wakepoints in each network segment in the event that a router blocks a wake request.


Schedule wake times. During this step, you define how Wake on LAN schedules the time to send endpoint wake requests. You can schedule wake times using either agent policy set hours of operation or a custom wake time assigned to specific groups. After the wake time is scheduled, Wake on LAN broadcasts wake requests at the scheduled time, and network endpoints are woken.

**Note:** You can only schedule wake times using agent hours of operation if the Patch and Remediation module is installed.

# Chapter 2

# Installing Wake on LAN

**In this chapter:**



Successful installation of the Norman Enterprise Security Server and Agent components is vital to installing Wake on LAN.

Wake on LAN is a module within the Norman Enterprise Security (Norman ESEC). Prior to installing the Wake on LAN module, you must have a working Norman ESEC network setup in place.

For information on how to install the Norman ESEC Server, refer to the *Norman Enterprise Security Server Installation Guide* (*http://www.norman.com/support/user_manuals/*).

To install the Norman ESEC Agent on endpoints, refer to the *Norman Enterprise Security Agent Installation Guide* (*http://www.norman.com/support/user_manuals/*).

## Explaining Module Subcomponents

Norman Enterprise Security is a platform for *modules*, which are add-ons that protect your network using different methods. Each Norman Enterprise Security module is composed of two subcomponents: the server component and the endpoint component.

| | |
|---|---|
| **Server Component** | This subcomponent is installed on the Norman Enterprise Security server. The server component must be installed before the endpoint component. |
| **Endpoint Component** | This subcomponent is installed on endpoints hosting a Norman Enterprise Security Agent. Endpoint components can be installed after the server component and agents are installed. Each installed endpoint subcomponent consumes an agent license for the applicable modules |

**Note:** Ideally all endpoint agents should be the same version as the Norman ESEC server.

New releases of the server support all currently supported versions of the endpoint agent. Older agent versions, however, are constrained to the features available when the agent was released and may not support new server functionality.



### Minimum Hardware Requirements

To successfully install Wake on LAN on the Norman Enterprise Security server, your computer must meet or exceed the specified hardware requirements.

To install the Wake on LAN module, you must meet the following requirements:

- The server must meet all hardware and software requirements defined in the *Norman Enterprise Security Server Installation Guide* (*http://www.norman.com/support/user_manuals/*).
- The target endpoints must be Windows-based and have Wake on LAN enabled within BIOS.

### Supported Wakepoint Client Environments

The Wake on LAN module endpoint component, known as the wakepoint, can be installed on any Windows endpoint hosting the Norman Enterprise SecurityAgent.

A *wakepoint* is an endpoint that receives wake requests from Norman Enterprise Security and relays it to other endpoints using the User Datagram Protocol (UDP) broadcast.

Refer to *Defining Wakepoints* on page 19 for more information on configuring Windows endpoints to act as wakepoints.

**Note:**

- By default, Wake on LAN does not have any defined wakepoints. Wakepoints must be defined before you can begin using Wake on LAN features.
- By default, Windows 8 endpoints are not configured to accept wake requests. To enable Wake on LAN for Windows 8 endpoints, you must disable the **Turn on fast startup** option. For additional information, refer to *Disabling Fast Startup* on page 61.

## Logging In

Get started with Norman Enterprise Security by logging in to the Web console.

You can access the console from any endpoint within your network.

**Note:** When accessing the Norman ESEC console using a Web browser with high security settings enabled, the following message may display:

```
Scripting must be enabled to display this application properly.
```

In this event, Norman recommends adding the Norman ESEC Web address as a trusted site in your browser settings to view the Web console.

1. Open your Web browser.
2. In your browser's address bar, type the Norman ESEC URL (http[s]://*ServerURL*) and press ENTER.

   **Tip:** You can also use the server IP address.

   **Step Result:** A dialog prompting you for credentials opens.

3. Type your user name in the **User name** field.

   When logging in for the first time, type the user name of the Windows user account used to install Norman ESEC. You can use additional user names after adding new user profiles to Norman ESEC. If logging in using a domain account, type the name in the following format: `DOMAIN\Username`.

4. Type your password in the **Password** field.
5. Click **OK**.

## Installing the Wake on LAN Module Server Component

To begin using Wake on LAN (WOL), you must first install the module server component on your Norman Enterprise Security (Norman ESEC) server.

Install the Wake on LAN platform component using the Norman Installation Manager. For additional information on using the Norman Installation Manager, refer to the *Norman Enterprise Security User Guide* (*http://www.norman.com/support/user_manuals/*).

**Notice:** The Wake on LAN module is considered part of the Norman ESEC platform and is therefore listed as a platform component within Installation Manager.

1. Select **Tools** > **Launch Installation Manager**.

   **Step Result:** Installation Manager opens to the ***New/Update Components*** tab.

2. Select a **Suite Version** radio button.

   - If you are updating the entire suite, select the radio button for the latest **Suite Version**.
   - If you are only installing new modules, leave the current suite version selected.

   **Tip:** When you select a **Suite Version**, other suite versions their components are greyed out to prevent mixing.

3. Select the **Wake on LAN** check box for your version of Norman Enterprise Security.
4. Click **Install**.

   **Step Result:** The ***Database backup recommended*** dialog opens.

   **Note:** During the module install, the installer will update your existing database(s). In the event of hardware failure or data corruption a database backup can ensure you still have functional data in order to restore database files. Refer to *Database Backup* in the *Norman Enterprise Security User Guide* (*http://www.norman.com/support/user_manuals/*) for additional information.



5. Select **Next**.

   **Step Result:** The ***Ready to Install*** dialog opens.

   **Tip:** Click the **terms and conditions link** to view the company terms and conditions.

6. Click **Install**.

   The following table describes the steps for each dialog page.

| Dialog | Step(s) |
|---|---|
| If the ***Prerequisites*** page opens: | Your server does not meet the recommended system requirements to install the selected content.<br>• If you receive *failure(s)*, you must cancel the installation and resolve the failures before you can install the content.<br>• If you receive *warning(s)*, you may proceed by clicking **Next**. Norman recommends resolving the warning(s) before proceeding.<br>**Tip:** Click **Print** for a hard copy of prerequisite deficiencies. Click **Retry** to reassess the server. |
| If the ***Install/Update Components*** page opens: | Click **OK** to begin the component(s) installation.<br>**Tip:** When the **Don't show this again** check box is selected it collapses the ***Install/Update Components*** dialog and this dialog will no longer be shown. |
| If the ***Install Status*** page opens: | The installation of component(s) begins. |

   **Step Result:** The selected component(s) begin downloading and installing.

7. After installation completes, review the ***Confirmation*** page. Click **Finish** when you are done.

   **Tip:**
   - Click **View install log** to review the install log.
   - Clear the **Launch** checkbox to cancel relaunch of the Web console.

8. Click **Finish**.

   **Step Result:** The ***Confirmation*** page closes.

**Result:** The **WOL** platform component is installed. To begin using the platform component, reopen Norman Enterprise Security.

**After Completing This Task:**
Complete *Post Installation Tasks* on page 22.

## Uninstalling the Wake on LAN Module Server Component

The Wake on LAN module server component is listed as a platform component within Norman Installation Manager. Platform components cannot be uninstalled.

**Tip:** For additional information on using the Norman Installation Manager, refer to *Norman Enterprise Security User Guide* (*http://www.norman.com/support/user_manuals/*).

## Defining Wakepoints

Before you can begin waking managed endpoints, you must define an agent-managed endpoint as a wakepoint within each network segment (VLAN). Wakepoints relay wake requests from the Norman Enterprise Security to other network endpoints. You cannot use Wake on LAN (WOL) features within your network until you define wakepoints.

**Prerequisites:**

Ensure agents are installed on endpoints you want to define as wakepoints.

1. Select **Tools** > **Wake on LAN**.

   **Step Result:** The ***Wake on LAN*** page opens to the ***WOL Configuration*** tab.

2. From **Wake Times** section, select how you will wake managed endpoints.

   Select one or both of the following options.

| Option | Description |
|---|---|
| **Wake endpoints using start times in Agent Policy Sets - Hours of Operation (HOP)** | Wakes endpoints based on the hours of operation (HOP) setting defined in an agent policy set. Wake requests are sent when at the beginning of a HOP range.<br>**Note:** This option is only available when the Patch and Remediation module is installed. |

| Option | Description |
|---|---|
| **Wake endpoints using custom daily wake times defined for groups** | Wakes endpoints in selected Norman Enterprise Security groups at a user-defined time. |

**Step Result:** Wake on LAN is enabled.

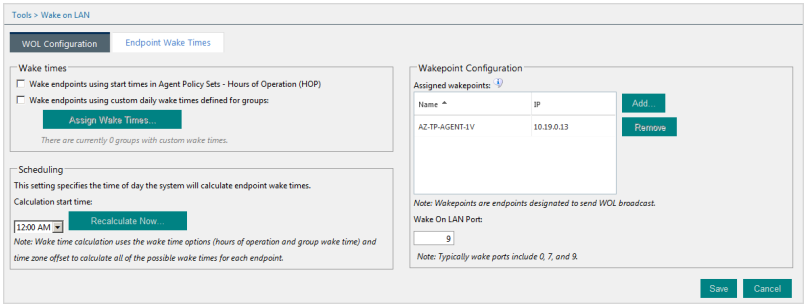



Figure 1: Wake on LAN Page

3. From the **Wakepoint Configuration** section, add wakepoint(s).

   Wakepoints are managed endpoints with the Wakepoint module installed. Wakepoints relay wake requests from Norman Enterprise Security to managed endpoints within your network.

   a) Under assigned wakepoints click **Add**.

   **Step Result:** The ***Add Wakepoints*** dialog opens.

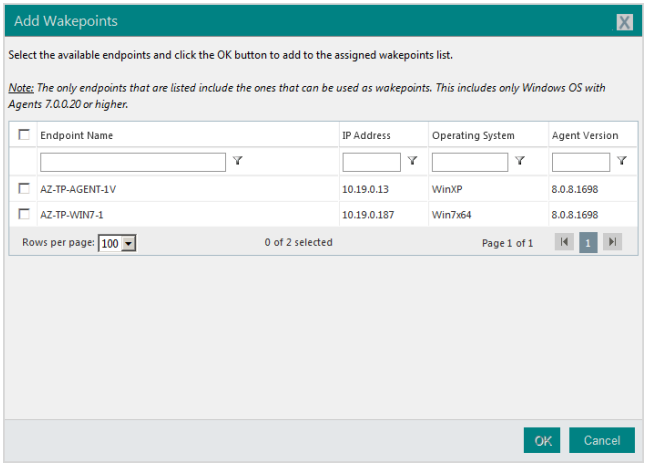



Figure 2: Add Wakepoints Dialog

   b) Select the endpoints you want to install the wakepoint module on.

c) Click **OK**.

**Step Result:** The ***Add Wakepoints*** dialog closes.

4. Click **Save**.

**Step Result:** The changes to your configuration are saved.

5. To replicate all license, system, and content changes since the last replication with the Global Subscription Service, perform the following substeps:

a) Select **Tools** > **Subscription Updates**.
b) Click **Update Now**.

**Note:** In network environments with the Norman AntiVirus module installed, the notification dialog contains selectable options (**System and License Replication** and **Virus Engine and Definition Update**). In this scenario, select the desired options before proceeding to the next step.

**Step Result:** Your subscription information is updated. This process may take several minutes.

6. Define the **Agent Versions** option.

Ensure Norman Enterprise Security is configured to offer Wake on LAN compatible agents for wakepoints.

a) Select **Tools** > **Options**.
b) Select the **Agents** tab.
c) From the **Agent Versions** section, locate the **Windows XP and newer agent version** field.
d) From the **Windows XP agent version** list, select **7.0.0.20** or higher.

7. Define the agent version for each wakepoint by completing the following substeps.

Ensure each wakepoint is configured to use Wake on LAN compatible agents.

a) From the navigation menu, select **Manage** > **Endpoints**.
b) Select the endpoints defined as wakepoints.
c) Click **Agent Versions**.

**Step Result:** The ***Manage Agent Versions*** dialog opens.

d) From the **Agent Version** list, select **7.1.0.4** or higher for each agent.
e) Click **OK**.

**Result:** Norman Enterprise Security installs the new agent version (if necessary) and the wakepoint on the selected endpoints.



## Post Installation Tasks

Following installation of the Wake on LAN module server component and the defining wakepoints, you must perform select tasks before you can use Wake on LAN features.

- Endpoints to be woken must have an agent installed, must successfully register with the Norman Enterprise Security server, and must successfully complete a Discover Applicable Updates (DAU) task. IP address and MAC address information collected during the DAU task are required by Wake on LAN.
- Endpoints to be woken must have functional Norman Enterprise Security Server-to-Agent communication.
- Endpoints to be woken must have been booted at least once. Endpoints that have never been powered on cannot be woken using Wake on LAN.
- Endpoints to be woken must currently be in a sleeping or hibernating state. Many NIC cards do not support waking endpoints from an off state for security reasons.
- Endpoints to be woken must have power still connected to the NIC card. Endpoints cannot be woken without a powered NIC card.

**Important:** Though the server components of Wake on LAN can run on a virtual server, the endpoints to be woken must be physical endpoints. Virtual machines do not respond to Wake on LAN requests.

## Updating the Wake on LAN Module

Periodically, Norman releases updates for Wake on LAN. Install the latest release to keep Wake on LAN up to date.

Norman recommends installing updates immediately. Update Wake on LAN using the Norman Installation Manager.

1. Select **Tools** > **Launch Installation Manager**.

   **Step Result:** Norman Installation Manager opens to the ***New/Update Components*** tab.

2. Select a **Suite Version** radio button.

   - If you are updating the entire suite, select the radio button for the latest **Suite Version**.
   - If you are only installing new modules, leave the current suite version selected.

   **Tip:** When you select a **Suite Version**, other suite versions their components are greyed out to prevent mixing.

3. Select the **Wake on LAN** check box for your version of Norman Enterprise Security.

   **Note:** This check box is only available if there is an update for the module.

4. Click **Install**.

   **Step Result:** The ***Database backup recommended*** dialog opens.

   **Note:** During the module install, the installer will update your existing database(s). In the event of hardware failure or data corruption a database backup can ensure you still have functional data in order to restore database files. Refer to *Database Backup* in the *Norman Enterprise Security User Guide* (*http://www.norman.com/support/user_manuals/*) for additional information.

5. Select **Next**.

   **Step Result:** The ***Ready to Install*** dialog opens.

   **Tip:** Click the **terms and conditions link** to view the company terms and conditions.

6. Click **Install**.

   The following table describes the steps for each dialog page.

| Dialog | Step(s) |
|---|---|
| If the ***Prerequisites*** page opens: | Your server does not meet the recommended system requirements to install the selected content.<br>• If you receive *failure(s)*, you must cancel the installation and resolve the failures before you can install the content.<br>• If you receive *warning(s)*, you may proceed by clicking **Next**. Norman recommends resolving the warning(s) before proceeding.<br>**Tip:** Click **Print** for a hard copy of prerequisite deficiencies. Click **Retry** to reassess the server. |
| If the ***Install/Update Components*** page opens: | Click **OK** to begin the component(s) installation.<br>**Tip:** When the **Don't show this again** check box is selected it collapses the ***Install/Update Components*** dialog and this dialog will no longer be shown. |
| If the ***Install Status*** page opens: | The installation of component(s) begins. |

   **Step Result:** The selected component(s) begin downloading and installing.

7. After installation completes, review the ***Confirmation*** page. Click **Finish** when you are done.

   **Tip:**

   - Click **View install log** to review the install log.
   - Clear the **Launch** checkbox to cancel relaunch of the Web console.



8. Click **Finish**.

   **Step Result:** The ***Confirmation*** page closes.

**Result:** The module is upgraded.

# Chapter 3

# Using the Web Console

**In this chapter:**

- Common Functions
- The Home Page

Within the Norman Enterprise Security Web console, you can use a number of common functions to navigate and operate the system. After you log in, Norman Enterprise Security opens to the ***Home*** page.

## Common Functions

Norman Enterprise Security uses standard Web browser conventions and unique conventions. Familiarize yourself with these conventions to facilitate efficient product use.

From the **Navigation Menu** and system pages, you can access all features and functions you are authorized for.

### Common Conventions

The Web console supports user interface conventions common to most Web applications.

Table 2: Common User Interface Conventions

| Screen Feature | Function |
|---|---|
| **Entry Fields** | Depending on text, type data into these fields to either:<br>• Retrieve matching criteria<br>• Enter new information |
| **Drop-Down Menus** | Display a list of selectable values when clicked. |
| **Command Buttons** | Perform specific actions when clicked. |
| **Check Boxes** | A check box is selected or cleared to:<br>• Enable or disable a feature<br>• Initiate functions for list items<br>Some lists include a **Select All** check box for selecting all items, including overflow items. |
| **Radio Buttons** | Select the button to select an item. |



| Screen Feature | Function |
|---|---|
| **Sort** | Data presented in tables can be sorted by clicking column headers. Columns can be sort in the following orders:<br>• Ascending (default)<br>• Descending |
| **Mouseovers** | Move your mouse over an item to display a text description. |
| **Auto Refresh** | Some pages feature an **Auto Refresh** check box. Select the check box to automatically refresh the page every 15 seconds. |
| **Scrollbars** | Drag scrollbars to see additional data. |
| **Tabs** | Select different tabs to display hidden information. |
| **Bread Crumb** | Displays the path to the page you are viewing. The breadcrumb lists:<br>• The page you are viewing<br>• Its parent page (if applicable)<br>• The **Navigation Menu** item used to open the page<br>If the breadcrumb contains a link, you can click it to retrace your steps. |

**Tip:** Most pages support right-click.

## The Navigation Menu

This menu appears on all Norman Enterprise Security pages. Use this menu to navigate through the console.

This menu organizes product features based on functionality. When you select a menu item, a new page, dialog, wizard, or window opens. You can access all system features from this menu (that your access rights authorize).

**Note:** The menu items available change based on modules you install.


Figure 3: Navigation Menu

Table 3: Navigation Menus

| Menu | Description |
|---|---|
| **Home** | Opens the ***Home*** page. This link contains no menu items. |
| **Discover** | Contains menu items related to running discovery scan jobs. |
| **Review** | Contains menu items related to reviewing security content and discovery scan jobs. |
| **Manage** | Contains menu items related to managing system features. |
| **Reports** | Contains menu items related to creating reports. |

| Menu | Description |
|---|---|
| **Tools** | Contains menu items related to system administration. |
| **Help** | Contains menu items related to help systems. |

The following table lists each menu item in the **Tools** menu and the actions that occur when they are selected.

Table 4: Tools Menu Items

| Menu Item | Description |
|---|---|
| **Wake on LAN** | Opens the ***Wake on LAN*** page. |

**Note:** Any unavailable or absent menus, menu items, or sub-menu items are due to restricted access rights or unavailable modules. Contact your network administrator if you require access to unavailable features.

## The Page Banner

A page banner displays when the page is added for a new module. Use this banner to identify the module that the page belongs to.


Figure 4: Page Banner

For example, pages for Norman Patch and Remediation display a Patch and Remediation page banner. Page banners are color-coded by module.

## List Pages

Most pages feature lists of selectable items. These items represent different product features that can be edited using menus and buttons.


Figure 5: List Page

To select a single list item:

- Select a check box.
- Click a list row.

To select multiple list items:

- Select the **Select All** check box.
- Select multiple, non-concurrent items by using `CTRL+Click` over list rows.
- Select multiple, concurrent items by using `SHIFT+Click` and mousing over list rows.

## Toolbars

**Toolbars** appear on most Web console pages. They contain menus and buttons you can use to initiate page features.

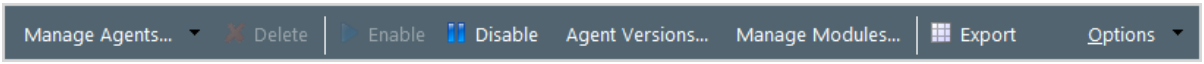



Figure 6: Toolbar

- The menus and buttons displayed vary according to page.
- Click the available menus and buttons to use them.
- User roles determine which buttons are available.

## The Options Menu

Toolbars feature an **Options** menu. You can use these options to change how the page displays information.

Table 5: Options Menu Items

| Option | Description |
|---|---|
| **Show results on page load** | Toggles automatic page results on and off.<br>• When enabled, the page list automatically populates with results.<br>• When disabled, you must define page filters and click **Update View** before results populate. For more information, see *Filters* on page 29. |
| **Save as default view** | Saves the current page settings as the default view. |
| **Clear default view** | Resets the saved view to the system default. |
| **Show Filter Row**[1] | Toggles the **Filter Row** on and off. For additional information, refer to *Using Filter Rows* on page 31 |
| **Show Group By Row**[2] | Toggles the **Show Group By Row** on and off. For additional information, refer to *Group By* on page 33. |
| **Enable Copy to Clipboard**[3] | Toggles the ability to select text for clipboard copy. |

| Option | Description |
|---|---|
| 1. This option title changes to **Hide Filter Row** when toggled.<br>2. This option title changes to **Hide Group By Row** when toggled.<br>3. Selecting this option disables other features, such as right-click context menus and list item dragging. | |

## Filters

**Filters** appear on most list pages. You can use them to search pages for specific data.

Depending on which page you are viewing, you can filter pages using one of the following features. Only one feature appears per page.

- Filters
- Filter Row

### Filters

Filters appear above page lists. They feature different fields, lists, and check boxes used for filtering. Filters vary according to page.

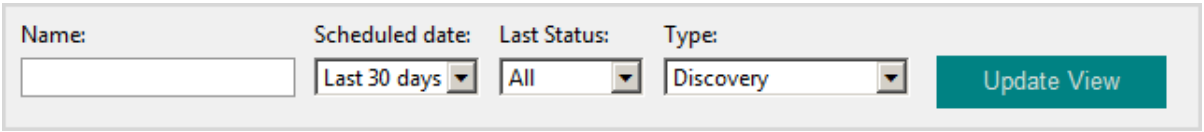



Figure 7: Filters

You can save frequently used filter settings as your default view. To save your settings, select **Options** > **Save as default view** from the toolbar. The toolbar **Options** menu contains the following options for filtering.

Table 6: Filter Options

| Option | Function |
|---|---|
| **Show results on page load** | Automatically retrieves and displays results when selected. |
| **Save as default view** | Saves the active filter and sort criteria as the default view for the page.<br>• The default view displays each time the page is accessed, including the following events:<br>  • Browsing to a different page.<br>  • Logging out of the Web console.<br>• The default view is saved until you save a new one or you clear it. |
| **Clear default view** | Resets a saved default view to the system default view. |

### Filter Rows

Filter rows appear in the lists themselves. Rows feature a field for each column.


Figure 8: Filter Row

- Filters are not case sensitive.
- Columns can be filtered using a variety of data types. For example, you can use a **Contains** filter or a **StartsWith** filter.
- Date columns filter at the lowest level of granularity. Higher levels of granularity return no filter results.

## Supported Wildcards

When searching for or filtering vulnerabilities, you can use wildcards to make search results more specific and efficient.

Wildcards can be used anywhere within the search string. The following table lists the supported operators and wildcards in Norman Enterprise Security. Type any wildcards that you intend to use in the **Name of CVE-ID** field.

Table 7: Supported Wildcards

| Wildcard | Description | Example |
|---|---|---|
| % | Any string. The string can be empty or contain any number of characters. | Typing `Microsoft%Server` in the **Name or CVE-ID** field returns any vulnerability with the words *Microsoft* and *Server* in any part of the name, such as:<br>• MS12-043 Security Update for **Microsoft** Office SharePoint **Server** 2007 32-Bit Edition (KB2687497)<br>• The 2007 **Microsoft** Office **Server**s Service Pack 3 (SP3), 32-bit Edition (KB2526299) |
| _ (underscore) | Wildcard placeholder for any single character. | Typing `_itrix` or `Citri_` in the **Name or CVE-ID** field returns any vulnerabilities with *Citrix* in the name. |
| [ ] | Any single character within a range ([a-f]) or set ([abcdef]). | Typing `[m]ic` in the **Name or CVE-ID** field returns vulnerabilities with the string *mic* within the name (*Microsoft* and *Dynamic*).<br>Typing `200[78]` in the **Name or CVE-ID** field returns vulnerabilities with 2007 or 2008 within the name. |
| [^] | Any single character **not** within a range ([^a-f]) or set ([^abcdef]). | Typing `M[^i]cro` in the **Name or CVE-ID** field returns any vulnerability that **does not** have *Micro* in its name. |

## Using Filters

When list pages are overpopulated with items, use filters to search for specific list items. Use this feature to filter list pages by criteria specific to the page.

Filters are available on most list pages.

1. Select a list page. For additional information, refer to *List Pages* on page 27.
2. Ensure filters are displayed.

   If filters are not displayed, click **Show Filters**.
3. Define filter criteria.

   **Note:** Available filters differ by page.

   - In filter fields, type the desired criteria.
   - From filter lists, select the desired list item.
4. If applicable, select the **Include sub-groups** check box.

   **Note:** This check box only appears on list pages related to groups.
5. Click **Update View**.

   **Step Result:** The list is filtered according to the filter criteria.
6. [Optional] Save the filter criteria by selecting **Options** > **Save as default view** from the toolbar.

## Using Filter Rows

Some list pages use filter rows rather than filters. Use these rows, which are the first row of applicable lists, to filter column results. Filter column results to search for specific list items.

These rows appear on several list pages.

1. Select a page featuring the filter row.
2. Ensure the filter row is displayed.

   a) If the filter row is not displayed, select **Options** > **Show Filter Row** from the toolbar.
3. Type criteria in a filter row field.
4. Apply a filter type.

   a) Click the **Filter** icon.

   **Step Result:** A menu opens.



b) Select a filter type.

The following table describes each filter type.

Table 8: Data Filtering Types

| Type | Description |
|---|---|
| **NoFilter** | Removes previously applied filtering. |
| **Contains** | Returns results that contain the value applied to the filter. |
| **DoesNotContain** | Returns results that do not contain the value applied to the filter. |
| **StartsWith** | Returns results that start with the value applied to the filter. |
| **EndsWith** | Returns results that end with the value applied to the filter |
| **EqualTo** | Returns results equal to the value applied to the filter. |
| **NotEqualTo** | Returns results that are not equal to the value applied to the filter. |
| **Greater Than** | Returns results that are greater than the value applied to the filter. |
| **Less Than** | Returns results that are less than the value applied to the filter. |
| **GreaterThanOrEqualTo** | Returns results that are greater than or equal to the value applied to the filter. |
| **LessThanOrEqualTo** | Returns results that are less than or equal to the value applied to the filter. |
| **Between** | Returns results that are between two values. Place a space between the two values. |
| **NotBetween** | Returns results that are not between two values. Place a space between the values. |
| **IsEmpty** | Returns results that are empty. |
| **NotIsEmpty** | Returns results that are not empty. |
| **IsNull** | Returns results that have no value. |

| Type | Description |
|---|---|
| **NotIsNull** | Returns results that have a value. |

**Note:**

- Filters are not case sensitive.
- Date columns filter at the lowest level of granularity. Higher levels of granularity return no filter results.
- The availability of filtering options depends on the type of data displayed in the column. For example, filtering options that can only apply to numeric data are available in columns that contain text data.

**Result:** The list column is filtered according to the criteria. If desired, repeat the process to filter additional columns.

## Group By

The **Group By** row lets you sort list items into groups based on column headers. Use this feature to see which list items share similarities.

To use the **Group By** row, ensure **Options** > **Show Group By Row** is selected from the toolbar, and then drag a column header into the row. You may drag multiple columns to the row, but you may only drag one column into the row at a time.

To ungroup the list, right-click on the row and select **Cancel All Groupings**. To hide the **Group By** row, select **Options** > **Hide Group By Row**.

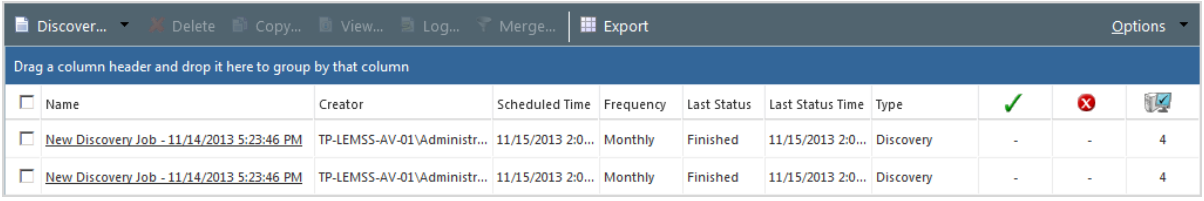



Figure 9: Group By Row

## Expanding and Collapsing Structures

Certain structures in the Web console are expandable and collapsible. Expand structures to view additional information or options. Collapse them to conserve screen space.

Click available **Plus** icons (+), **Minus** icons (-), and **Rotating Chevron** icons (>) to expand or collapse a structure.

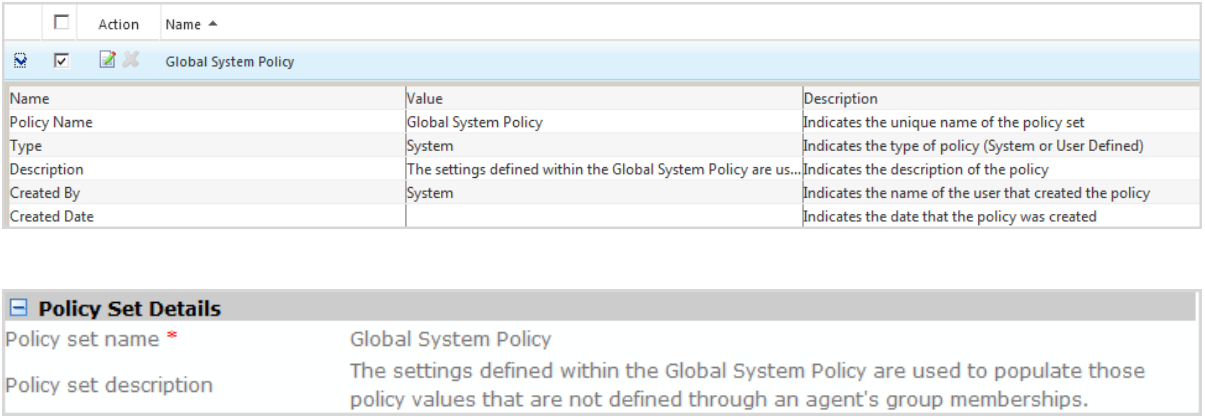



Figure 10: Expandable Structure Examples

## Advancing Through Pages

When a list page contains an overflow of items, pagination links are created to manage the overflow. Click these links to advance through list items.

The number of list items and the page you are viewing determines the number of pagination links.

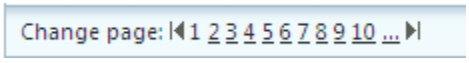



Figure 11: Pagination Feature

Table 9: Pagination Feature Functions

| Icon or Link | Title | Function |
|---|---|---|
| ⏭ | **Final Page Link** | Advances to the final page of list items. |
| ⏮ | **First Page Link** | Returns to the first page of list items. |
| ... | **Next Ten/Previous Ten Pages Link** | Displays the next ten or previous ten page links available. Fewer page links will display if the remaining list items cannot populate ten pages. |
| 1 2 3 | **Pagination Links** | Advances or returns to the selected pagination link. |

Each page also features a **Rows Per Page Drop-Down List**. This list modifies the number of list items displayed on a single page (25, 50, 100, 200, 500).

## Help

Norman Enterprise Security contains context-sensitive HTML help that includes feature explanations, step-by-step procedures, and reference materials.

Accessing Help differs according to context.

- From a page, select **Help** > **Help Topics**.
- From a dialog, click the **Question Mark** icon (**?**).

Use the following features to navigate through Help:

- From the ***Contents*** tab, expand the bookmarks and click links to display Help topics.
- From the ***Search*** tab, type criteria in the **Search** field and click **Go** to display Help topics related to your search.

## Exporting Data

On many system pages, you can export the listed data to a comma-separated value file (`.csv`) available for use outside of the Web console. Use this exported data for management purposes (reporting, noting trends, and so on).

You can export data from a variety of pages.

**Important:** The Enhanced Security Configuration feature for Internet Explorer suppresses export functionality and must be disabled to export data successfully. Pop-up blockers in Internet Explorer or other supported browsers may also suppress export functionality and should be disabled.

1. Open a system page or dialog that you can export information from.
2. [Optional] Use the page filters to refine the items listed.
3. Click **Export**.

   **Step Result:** The ***File Download*** dialog opens.

4. Use the browser controls to complete the data export.

**Result:** The data is exported. All data results export, including data on overflow pages.



# The Home Page

The entry point to Norman Enterprise Security is the ***Home*** page. From this page you can view the dashboard, which features draggable widgets that display information about Norman Enterprise Security and agent-managed endpoints.

Some widgets display general information about the system, others provide links to documentation, and still others summarize activity for Norman Enterprise Security modules you are licensed for.

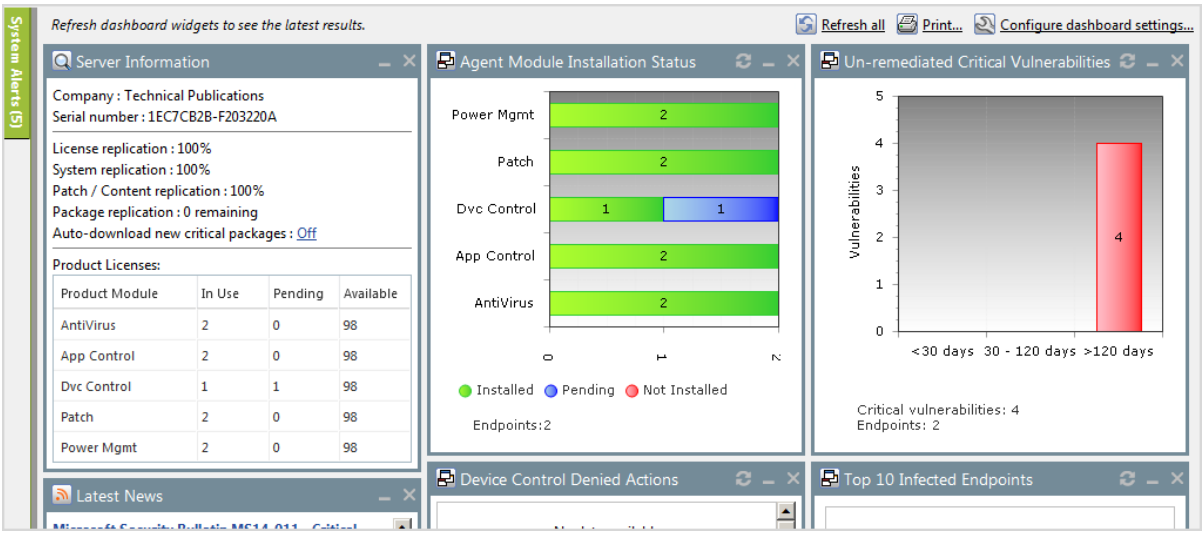



Figure 12: The Home Page

## The Dashboard

The **dashboard** displays widgets depicting the activity on your protected network. Located on the ***Home*** page, the dashboard provides convenient information you can use to ensure your network protection is up to standard. Additionally, you can customize the dashboard to display the widgets most applicable to your network environment.

Widget graphs are generated based on the latest data and statistics available from endpoints, groups, module-specific data, and so on.

### The Server Information Widget

This widget lists your serial number, number of licenses available, number of licenses in use, and information about current license usage and availability.

Table 10: Server Information Widget Fields

| Field Name | Description |
|---|---|
| **Company** | The company your server is registered to as defined during installation. |

| Field Name | Description |
|---|---|
| **Serial Number** | The license number (serial number) assigned to your server. |
| **License Replication** | The subscription status between your server and the Global Subscription Service (GSS). |
| **System Replication** | The system replication status between your server and the GSS. |

Table 11: Product Licenses Table Columns

| Column | Description |
|---|---|
| **Product Module** | The module for which you purchased licenses. |
| **In Use** | The number of module licenses in use. |
| **Pending** | The number of licenses pending use or pending removal. Licenses pending removal become available upon removal completion. |
| **Available** | The number of licenses available. |

**Note:** A license expiration notice displays if all available licenses are expired.

## Dashboard Setting and Behavior Icons

Setting and behavior icons are UI controls used to manage the dashboard. Click these icons to maximize, minimize, hide, and refresh the dashboard and widgets.

The following table describes each icon action.

Table 12: Widget Setting and Behavior Icons

| Icon | Action |
|---|---|
|  | Opens the ***Dashboard Settings*** dialog. |
|  | Opens the dashboard in print preview mode. |
|  | Collapses the associated widget. |
|  | Expands the associated collapsed widget. |
|  | Hides the associated widget. |
|  | Refreshes the associated widget (or the entire dashboard). |

**Note:** Not all widgets contain **Refresh** icons.

## Previewing and Printing the Dashboard

When viewing the dashboard, you can reformat it for printing. This reformat omits the Web site header and footer, reorganizing the dashboard to display only the selected widgets, making it ideal for printing.

View the print preview from the ***Home*** page.

1. Select **Home** from the navigation menu.
2. Click .

   **Step Result:** The dashboard print preview opens in a new Web browser window.

3. [Optional] Use your Web browser controls to print the dashboard.

## Editing the Dashboard

You can customize how widgets are arranged and prioritized. Edit the dashboard to display only the widgets useful in your environment.

Edit the dashboard from the ***Dashboard Settings*** dialog.

1. From the navigation menu, select **Home**.
2. Click .

   **Step Result:** The ***Dashboard Settings*** dialog opens.

3. Choose which widgets you want to display on the dashboard.
   - Select widget check boxes to display them.
   - Clear widget check boxes to hide them.
4. Prioritize the widgets in the desired order.
   - Click  to increase a widget priority.
   - Click  to decrease a widget priority.

   Highly prioritized widgets are more prominently placed.
5. Display or hide widget descriptions.
   - Click  to display descriptions.
   - Click  to hide descriptions.
6. Choose a widget layout.
   - Click  to display widgets in two columns.
   - Click  to display widgets in three columns.

7. Click **OK**.

**Result:** Your dashboard settings are saved. The ***Home*** page displays the selected widgets in the priority you defined.

## The System Alert Pane

The ***System Alert*** pane displays information about changing conditions in your environment. This pane alerts you to required actions and links to related help topics.

The **System Alert** pane displays in the dashboard and shows the number of alerts that require your attention.

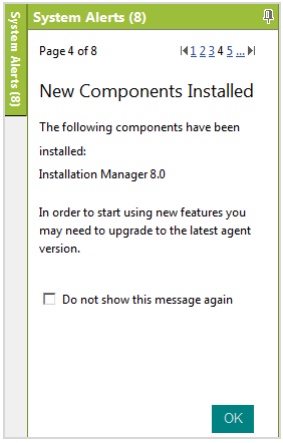



Figure 13: The System Alert Pane

The following functions can be found in the ***System Alert*** pane.

Table 13: Options Menu Items

| Option | Description |
|---|---|
| **Pin** (icon) | Docks the ***System Alert*** pane. Clicking this icon again collapses it. |
| **Pagination Links** | Allows you to navigate between alerts. For more information, see *Advancing Through Pages* on page 34. |
| **Action Link** | Opens the appropriate application page, external Web page, or context-sensitive help topic, depending on the action specified in the alert. |
| **Don't show this again** (check box) | Collapses the ***System Alert*** pane. The alert shown in the ***System Alert*** pane when this check box is selected will no longer be shown. |

| Option | Description |
|---|---|
| **OK** (button) | Collapses the ***System Alert*** pane. |

**Note:**

- Dismissing a notification only dismisses the notification for logged in user. The notification still displays for others.
- The system automatically dismisses alerts as you complete their related actions, regardless of whether you dismiss the alerts.

## License Expiration

When licensing for a module expires, the module behavior changes. All functionality is restored when the licensing is renewed.

**Note:** When a subscription expires, the module history and configuration is retained. No work is lost when the module is renewed.

To reactivate your licenses following renewal, open the ***Subscription Updates*** page and click **Update Now**. Your server replicates updated subscription information. The page refreshes when the update completes, and all previous module functionality is restored.

**Note:** For more information about renewing or adding licenses, contact *Norman Sales* (*http://www.norman.com/about_norman/contact/*).

# Chapter 4

# Managing Wakepoints

**In this chapter:**



Wake on LAN uses *wakepoints* to send wake requests to network endpoints. Before you can begin waking endpoints, you must define wakepoints.

## About Wakepoints

To power-on network endpoints, Wake on LAN requires you to designate wakepoints. Wakepoints are endpoints that relay server wake requests to other network endpoints, thus waking them without a physical presence.

Wake on LAN sends wake requests to wakepoints using the user datagram protocol (UDP). Wakepoints then relay the request to agent-managed endpoints.

Wakepoints disperse relayed wake requests through routers and firewalls. This avoids direct broadcast and multicast, which can cause excessive network bandwidth consumption. Additionally, routers may block UDP packets sent by other subnets. Successful wake request outcomes are contingent upon firewall and router settings.

Each segment of your network (VLAN) requires at least one wakepoint. However, Norman recommends assigning multiple wakepoints to each network segment. This practice ensures there are multiple distribution points within a network segment, therefore ensuring endpoints receive wake requests in the event that a router blocks a wake request.

## Configuring Wakepoints

You should select wakepoints based on a managed endpoint's online status, installed agent version, and operating system.

Wakepoints must meet the following requirements:

- Wakepoints must be Windows-based.
- Wakepoints must have Norman ESEC Agent 7.1.0.4 or later installed.

Additionally, Norman recommends that endpoints designated as wakepoints should always be powered on.

**Important:** You must select at least one Wakepoint within a network segment (VLAN).



# Working with Wakepoints

Manage wakepoints from the ***Wake on LAN*** page ***WOL Configuration*** tab.

You can perform the following tasks related to wakepoint management:



## Adding a Wakepoint

The ***Assigned Wakepoints*** list itemizes the currently selected wakepoints and provides you with options to add additional ones.

1. Select **Tools** > **Wake on LAN**.

   **Step Result:** The page opens to the ***WOL Configuration*** tab.

2. From the **Wakepoint Configuration** section, add wakepoint(s).

   Wakepoints are managed endpoints with the Wakepoint module installed. Wakepoints relay wake requests from Norman Enterprise Security to managed endpoints within your network.

   a) Under assigned wakepoints click **Add**.

   **Step Result:** The ***Add Wakepoints*** dialog opens.

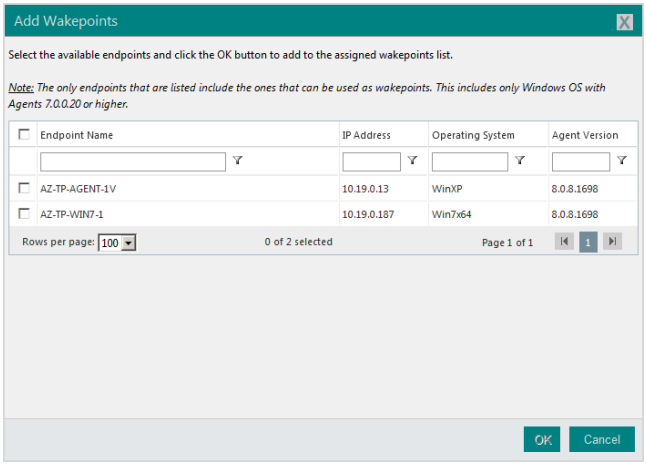



Figure 14: Add Wakepoints Dialog

   b) Select the endpoints you want to function as wakepoints.

   c) Click **OK**.

   **Step Result:** The ***Add Wakepoints*** dialog closes and the selected endpoints are added to the ***Assigned Wakepoints*** list.

3. From the **Wakepoint Configuration** section, edit the **Wake on LAN Port** (0-65535) if applicable.

   This port is the port wakepoints use to relay wake requests to endpoints. When defining the **Wake on LAN Port**, remember the following:

   - Under most network conditions, this field does not require editing.
   - Wake on LAN uses **9** by default.
   - Norman recommends using **0**, **7**, or **9**.

4. Click **Save**.

   **Step Result:** The changes to your configuration are saved.

**Result:** The defined wakepoint(s) and port number are saved. The saved settings will be used during the next schedule wake request broadcast.

## Removing a Wakepoint

The ***Assigned Wakepoints*** list itemizes the currently selected wakepoints and provides options to remove wakepoints you no longer need.

1. Select **Tools** > **Wake on LAN**.

   **Step Result:** The page opens to the ***WOL Configuration*** tab.

2. Within the **Wakepoint Configuration** section, remove the wakepoint(s) you no longer need.

   a) Select the desired wakepoint(s) in the ***Assigned wakepoints*** list.
   b) Click **Remove**.

      **Step Result:** A confirmation dialog displays.

   c) Click **OK**.

3. Click **Save**.

   **Step Result:** The changes to your configuration are saved.

**Result:** The selected endpoint(s) are no longer wakepoint(s).

> **Note:** Removing a wakepoint only prevents an endpoint from continuing to function as a wakepoint. It does not remove the Norman Enterprise Security agent from the selected endpoint.

# Chapter 5

# Waking Endpoints

**In this chapter:**



After installing Wake on LAN (WOL) and wakepoints, you can power on any managed endpoint using the Norman Enterprise Security Web console. You can manage endpoint wake times, configurations, and logging functions.

**Important:**

- You can only wake agent-managed endpoints.
- Due to changes made by Microsoft, Windows 8 endpoints do not respond to Wake on LAN wake requests if their last shutdown was initiated using the Windows 8 GUI. Shutting down Windows 8 using this method closes sockets used by Wake on LAN to initiate wake requests.

Use the WOL module to boot agent-managed endpoints using network communication. Send wake requests to a managed endpoint, thus booting the endpoint. Using this module in conjunction with other Norman Enterprise Security modules facilitates security administration after business hours.

**Note:** WOL is a send-only model. Therefore, managed endpoints do not indicate wake request outcomes. To determine the outcome of wake requests, view an agent's status in Norman ESEC from the ***Endpoints*** page (`online` or `offline`).



## Wake on LAN Scheduling Methods

When using Wake on LAN, you can send endpoint wake requests using different scheduling methods: hours of operation (HOP), custom daily wake times, and wake now.

Wake on LAN includes the following methods to schedule wake requests:

| | |
|---|---|
| **Wake during Hours of Operation** | This method schedules wake requests based on endpoint HOP settings, which are defined in agent policy set(s). HOP settings define the days and times an endpoint's agent is operational. Within Norman Enterprise Security, you can create many agent policy sets. Therefore, the agent policy set applied to a given group governs its agents' behavior. When multiple agent policy sets are applied to a group, HOP are an accumulation of all applicable agent policy sets' defined HOP. For additional information about agent policy sets and HOP, refer to the *Norman Enterprise Security User Guide* (*http://www.norman.com/support/user_manuals/*).<br>**Remember:** Agent hours of operation are based on the host endpoint's local time.<br>**Note:** **Wake during Hours of Operation** wake request are only available in Norman Enterprise Security environments with the Patch and Remediation module installed. |
| **Group Wakeup Times** | This method schedules wake requests based on a time you assign to an endpoint group. Wake requests are sent based on the server local time. |
| **Wake Now** | This method schedules a wake request for a selected endpoint immediately. |

**Note:** You can use multiple schedule methods to wake endpoints. Methods can operate in conjunction without conflict because Wake on LAN uses the combined information from HOP and group wakeup times.

## The Wake on LAN Page

Use this page to define wakepoints and wake times for managed endpoints.

The ***Wake on LAN*** page is added to the Web console following installation of the Wake on LAN module.

View this page by selecting **Tools** > **Wake on LAN** from the Navigation Menu.

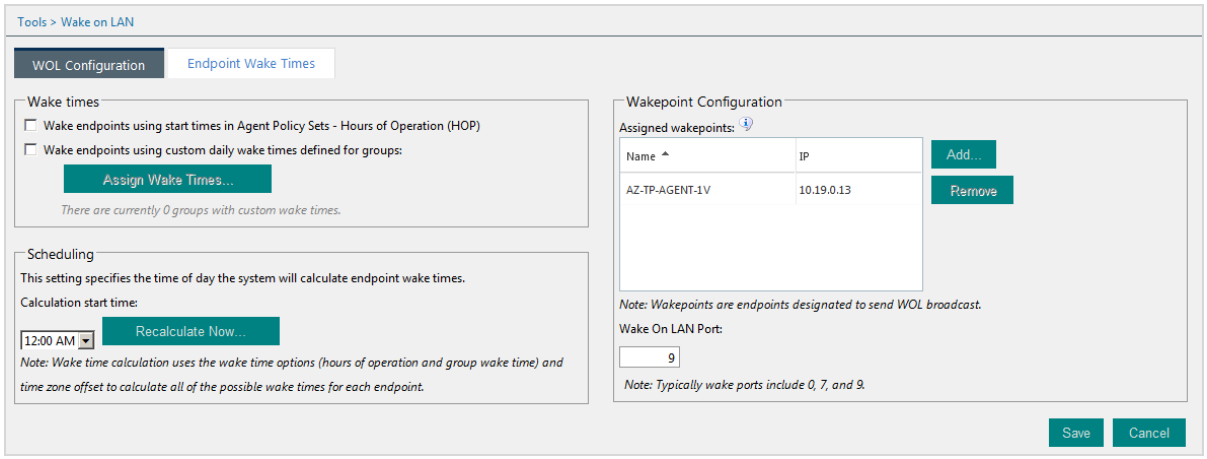



Figure 15: Wake on LAN

The ***Wake on LAN*** page contains the following tabs:

- *The WOL Configuration Tab* on page 47
- *The Endpoint Wake Times Tab* on page 50

## The WOL Configuration Tab

The ***WOL Configuration*** tab contains controls for configuring wake requests or wakepoints.

When you open the Norman Enterprise Security Web console and select the ***Wake on LAN*** page, the ***WOL Configuration*** tab displays.

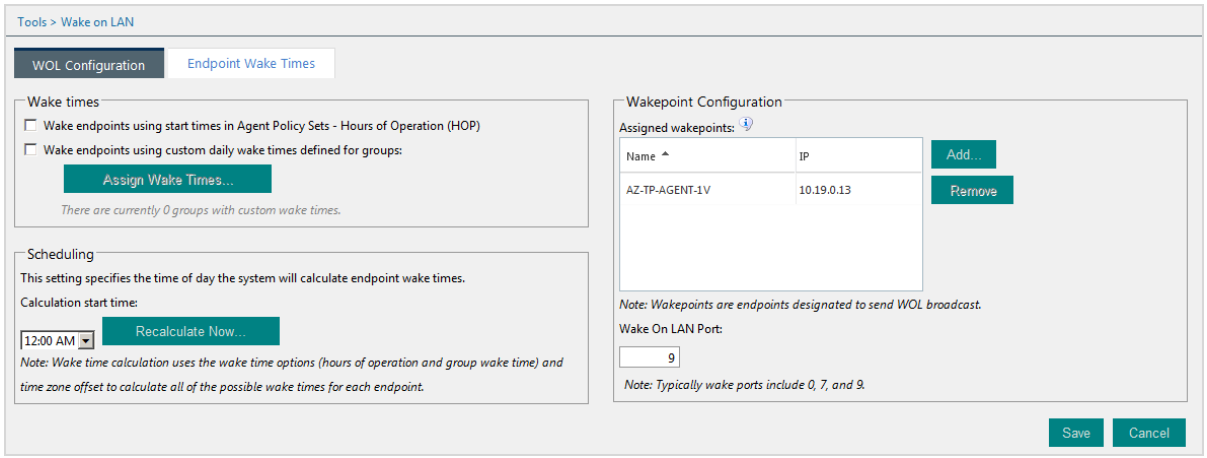



Figure 16: The WOL Configuration Tab

## Wake Times

These options define the scheduling methods used to determine wake times.

The following table describes the **Wake times** options.

Table 14: Wake Times

| Option | Description |
|---|---|
| **Wake endpoints using start times in Agent Policy Sets - Hours of Operation (HOP)** (check box) | Enables the wake time calculation to use hours of operation (HOP) to calculate possible wake times for endpoints that have HOP defined.<br>**Note:** **Wake during Hours of Operation** wake request are only available in Norman Enterprise Security environments with the Patch and Remediation module installed. |
| **Wake endpoints using custom daily wake times defined for groups** (check box) | Enables the wake time calculation to use the custom wake times for groups to calculate possible wake times. |
| **Assign Wake Times** (button) | Opens the ***Define Daily Wake Times*** dialog. For additional information, refer to *Scheduling Wake Requests by Custom Daily Times* on page 56. |

## Scheduling

Use these options to define the time that Wake on LAN calculates endpoint wake times.

The following table describes the **Scheduling** options.

Table 15: Scheduling

| Option | Description |
|---|---|
| **Calculation start time** (list) | Defines the time used to calculate endpoint wake times. Times are available in 30 minute increments. |
| **Recalculate Now...** (button) | Calculates endpoint wake times immediately. For additional information, refer to *Calculating Endpoint Wake Times* on page 55.<br>**Note:** The default time is **12:00 am** server time. |

For additional information about scheduling options, refer to *Wake on LAN Scheduling Methods* on page 46.

## Wakepoint Configuration

Use these controls to define wakepoints, which are the endpoints Wake on LAN uses to relay wake requests to network endpoints.

The following table describes the **Assigned Wakepoints** list, which displays in **Wakepoint Configuration** options. This list itemizes defined wakepoints.

Table 16: Assigned Wakepoints

| Column | Description |
|---|---|
| **Name** | The name of the assigned wakepoint. |
| **IP** | The IP address of the assigned wakepoint. |

**Note:** The **Information** icon provides a detailed explanation of **Wakepoint** functionality.

The following table describes the buttons used to edit the **Assigned Wakepoints** list.

Table 17: Assigned Wakepoint Buttons

| Button | Description |
|---|---|
| **Add** | Adds a wakepoint to the **Assigned Wakepoints** list. For additional information, refer to *Adding a Wakepoint* on page 42. |
| **Remove** | Removes a selected wakepoint from the **Assigned Wakepoints**. For additional information, refer to *Removing a Wakepoint* on page 43. |

The following table describes the remaining **Wakepoint Configuration** option.

| Option | Description |
|---|---|
| **Wake on LAN Port** (field) | Defines the port that wakepoints use to communicate with Wake on LAN. For additional information, refer to *Adding a Wakepoint* on page 42. |



# The Endpoint Wake Times Tab

The ***Endpoint Wake Times*** tab lists endpoints for which wake times have been defined. From this tab, you can also wake endpoints immediately.

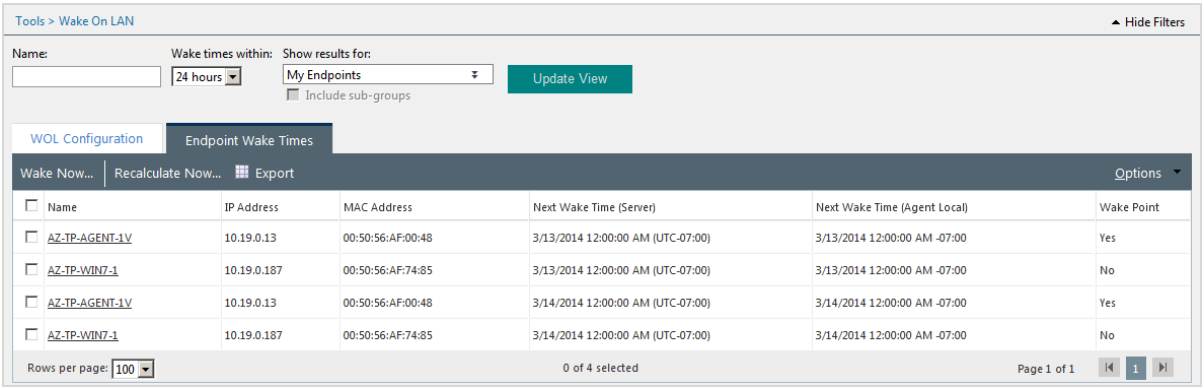



Figure 17: Endpoint Wake Times Tab

## The Endpoint Wake Times Tab Toolbar

This toolbar contains buttons used to initiate Wake on LAN features.

The following table describes each toolbar button's function.

Table 18: Endpoint Wake Times Tab Toolbar

| Button | Description |
|---|---|
| **Wake Now...** | Wakes the endpoints selected from the ***Endpoint Wake Times*** tab list. For additional information, refer to *Wake Endpoints from the Endpoint Wake Times Tab* on page 57. |
| **Recalculate Now...** | Recalculates the wake times for the endpoints selected from the ***Endpoint Wake Times*** tab list. For additional information, refer to *Calculating Endpoint Wake Times* on page 55. |
| **Export** | Exports the page data to a comma separated value (`.csv`) file. For additional information, refer to *Exporting Data* on page 35.<br>**Important:** The Enhanced Security Configuration feature for Internet Explorer suppresses export functionality and must be disabled to export data successfully. Pop-up blockers in Internet Explorer or other supported browsers may also suppress export functionality and should be disabled. |
| **Options** (menu) | Opens the **Options** menu. For additional information, refer to *The Options Menu* on page 28. |

### The Endpoint Wake Times Tab List

This list itemizes all network endpoints scheduled to receive wake requests. This list also features additional information about endpoints and their next wake time.

The following table describes each list column.

Table 19: Endpoint Wake Times Tab List

| Column | Description |
|---|---|
| **Name** | Indicates the endpoint name. |
| **IP Address** | Indicates the endpoint IP Address. |
| **MAC Address** | Indicates the endpoint MAC address. |
| **Next Wake Time (Server)** | Indicates the next time the endpoint will be woken based on server settings. |
| **Next Wake Time (Agent Local)** | Indicates the next time the endpoint will be woken based on endpoint settings. |
| **Wake Point** | Indicates if the endpoint is a wakepoint. |

## Working with Wake on LAN

After defining wakepoints, you can begin waking endpoints remotely.

You can perform the following tasks related to waking endpoints.


- *Scheduling Wake Requests by Hours of Operation* on page 52
- *Defining Hours of Operation for Endpoints* on page 53
- *How Endpoint Wake Times are Calculated* on page 54
- *Calculating Endpoint Wake Times* on page 55
- *Scheduling Wake Requests by Custom Daily Times* on page 56
- *Wake Endpoints from the Endpoint Wake Times Tab* on page 57
- *Wake Endpoints from the Manage Endpoints Page* on page 58




## Scheduling Wake Requests by Hours of Operation

You can schedule wake request broadcasts for endpoints using hours of operation settings, which are defined within agent policy sets.

**Prerequisites:**

Ensure hours of operation for the applicable agent policy sets are defined. For additional information, refer to *Defining Hours of Operation for Endpoints* on page 53.

**Note:** **Wake during Hours of Operation** wake request are only available in Norman Enterprise Security environments with the Patch and Remediation module installed.

1. Select **Tools** > **Wake on LAN**.

   **Step Result:** The page opens to the ***WOL Configuration*** tab.

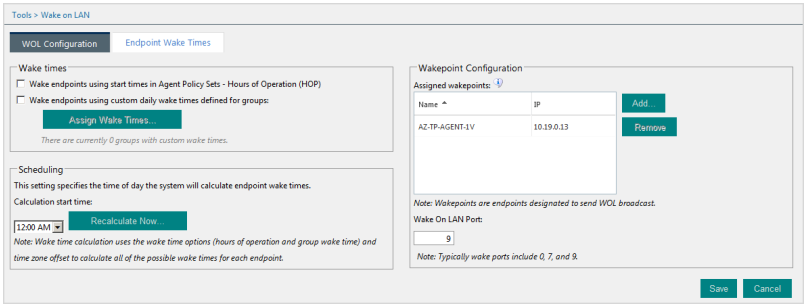



   Figure 18: Wake on LAN Configuration Tab

2. Select the **Wake endpoints using start times in Agent Policy Sets - Hours of Operation (HOP)** check box.
3. Click **Save**.

**Result:** The endpoints are configured to wake up according to the assigned hours of operation.

**Note:** Successful wake request outcomes are contingent upon firewall and router settings. Firewall and routers must be configured to permit packet broadcasts. Refer to your router's user manual for more information on how to configure firewall settings.

**After Completing This Task:**

Complete *Calculating Endpoint Wake Times* on page 55.

## Defining Hours of Operation for Endpoints

When scheduling wake times based on agent hours of operation (HOP), you must define these hours within agent policy sets prior to using Wake on LAN. HOP determines when an agent is active on its host endpoint. When used in conjunction with Wake on LAN, HOP also determines when the host endpoint is powered on.

Edit agent hours of operation when creating or editing an agent policy set.

**Note:** **Wake during Hours of Operation** wake request are only available in Norman Enterprise Security environments with the Patch and Remediation module installed.

1. Select **Manage** > **Agent Policy Sets**.
2. Perform one of the following procedures based on your context.

| Context | Procedure |
|---|---|
| **If you are creating an agent policy set:** | Click **Create**. |
| **If you are editing an agent policy set:** | Click the edit icon associated with the policy set containing the logging level setting you want to edit. |

**Step Result:** Either the ***Create Agent Policy Set*** or the ***Edit a Policy Set*** dialog opens.

3. Perform one of the following procedures based on your context.

| Context | Procedure |
|---|---|
| **If you are creating an agent policy set:** | Click the **Define** button beside the **Hours of Operation** field. |



| Context | Procedure |
|---|---|
| **If you are editing an agent policy set:** | Click the **Modify** button beside the **Hours of Operation** field. |

**Step Result:** The ***Edit Agent Hours of Operation*** dialog opens.

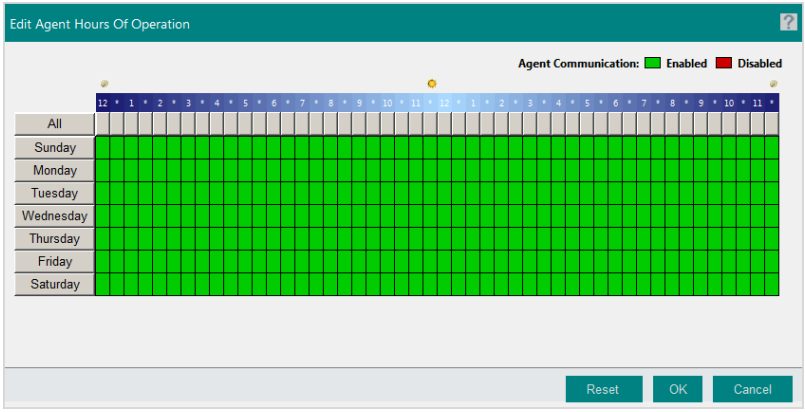



Figure 19: Edit Agent Hours of Operation Dialog

4. Click time units to define agent hours of operation.

   Green units indicate days and times of enablement, while red units indicate days and times of disablement.

   - Click **All** to toggle all ***Time*** units on or off.
   - Click a ***Day*** button to toggle time units for a day on or off.
   - Click ***Time*** units to toggle individual units on or off.

5. Click **OK**.
6. Finish any desired edits in the dialog and click **Save**.

**Note:** Changes made to the **Hours of Operation** schedule will not be saved until you have clicked **Save** in the ***Agent Policy Set*** dialog.

**Result:** Your edits are saved. These edits take effect the next time Norman Enterprise Security and the applicable agents communicate.

## How Endpoint Wake Times are Calculated

Wake on LAN boots endpoints remotely after calculating wake times on a daily basis. You can select the daily time when this calculation occurs. This calculation checks for edits to agent hours of operation or custom daily wake time changes.

Using respective settings on the ***WOL Configuration*** tab, wake times calculation are based upon (hours of operation and group wake times) and the time zone offset to calculate the actual wake times for each endpoint.

**Note:** The default value of the **Calculation Start Time** option is 12:00 am server time.

## Calculating Endpoint Wake Times

Following any edits you make to hours of operation edits, you should immediately recalculate wake times. This recalculation ensures that endpoints are woken at their scheduled times.

**Note:** Wake times calculation may become CPU intensive with increasing numbers of endpoints. Recalculating immediately offers the ability to choose the recalculation time so that you can select the ideal time when the server is not busy.

1. Select **Tools** > **Wake on LAN**.

   **Step Result:** The page opens to the ***WOL Configuration*** tab.

2. Select one of the following tabs to access the **Recalculate Now** button.

| Tab | Description |
|---|---|
| **WOL Configuration** | Contains controls for configuring wake requests or wakepoints. |
| **Endpoint Wake Times** | Contains controls and a list of endpoints for which times have need defined. |

3. Click **Recalculate Now**.

   **Step Result:** The ***Recalculate Now*** dialog opens.

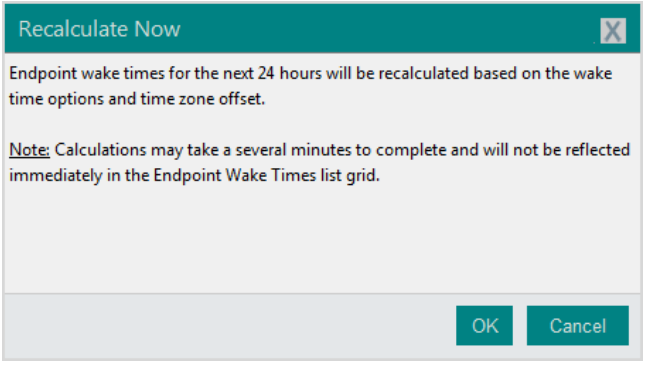



Figure 20: Recalculate Now Dialog

4. Click **OK** to confirm the calculation action.

**Result:** Wake on LAN recalculates endpoint wake times.

## Scheduling Wake Requests by Custom Daily Times

You can configure Wake on LAN (WOL) to wake endpoint groups at a specific time each day.

1. Select **Tools** > **Wake on LAN**.

   **Step Result:** The page opens to the ***WOL Configuration*** tab.

2. Ensure the **Wake endpoints using custom daily wake times defined for groups** check box is selected.

   **Step Result:** The **Assign Wake Times** button becomes available.

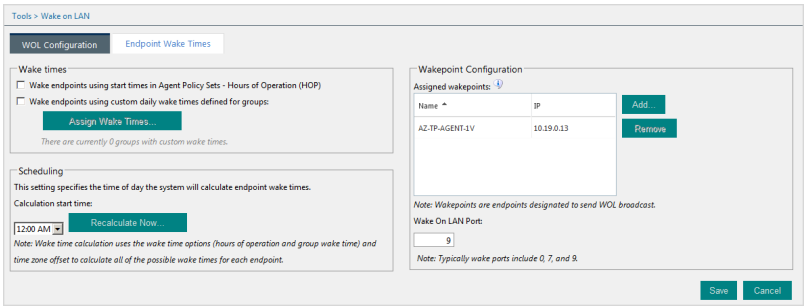



Figure 21: Wake on LAN Configuration Tab

3. Click **Assign Wake Times**.

   **Step Result:** The ***Assign Daily Group Wake Times*** dialog opens.

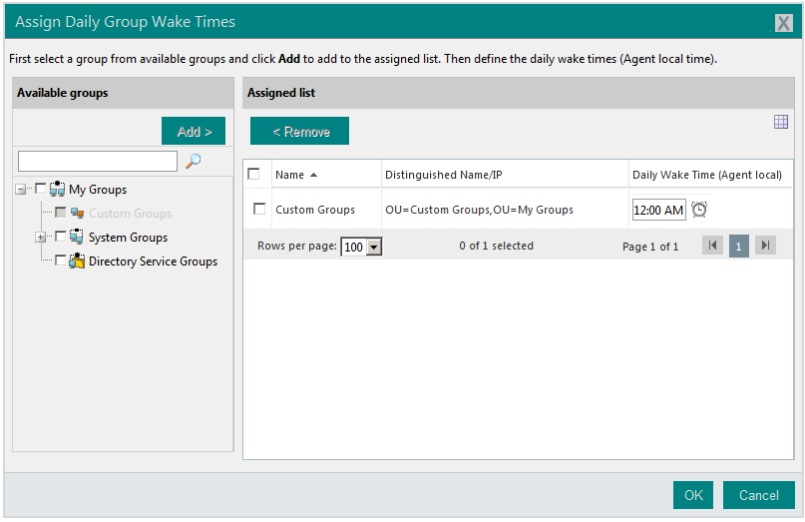



Figure 22: The Assign Daily Group Wake Times Dialog

4. Select the groups from the ***Available groups*** list to add to the **Assigned** list.

   **Tip:** You can use the **Available groups** field to search for groups.

5. Click **Add**.

   **Step Result:** The selected groups are added to the ***Assigned list***.

6. Set the **Daily Wake Time** for each group.

   a) Type a time in all empty **Daily Wake Time** fields (`hh:mm`). You can type time in 12-hour or 24-hour formats.

   **Tip:** Click the **Clock** icon to select a time from a menu. Times are available for every 30 minute interval.

7. Click **Apply** after edits are completed.

   **Step Result:** Your changes are applied (dialog remains open).

8. Click **OK**.

   **Step Result:** Your changes are applied and the ***Assign Daily Group Wake Times*** dialog closes.

9. Click **Save**.

**Result:** The endpoints are configured to be woken at the defined wake times.

**Note:** For more information on creating and managing groups, refer to the *Norman Enterprise Security User Guide* (*http://www.norman.com/support/user_manuals/*).

**After Completing This Task:**
Complete *Calculating Endpoint Wake Times* on page 55.

## Wake Endpoints from the Endpoint Wake Times Tab

You can wake managed endpoints at any time.

Perform this task from the ***Endpoint Wake Times*** tab.

1. Select **Tools** > **Wake on LAN**.

   **Step Result:** The page opens to the ***WOL Configuration*** tab.



2. Select the ***Endpoint Wake Times*** tab.

   **Step Result:** The ***Endpoint Wake Times*** tab opens.

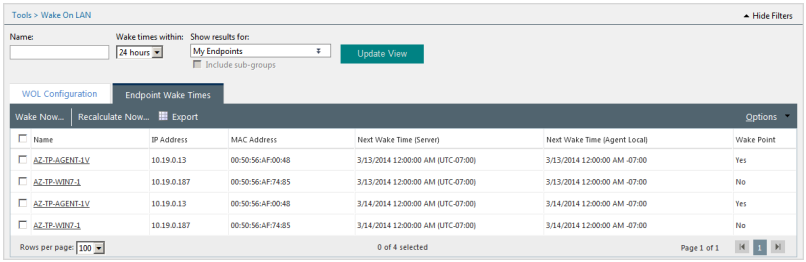



Figure 23: Endpoint Wake Times Tab

3. Select the check box(es) associated with the endpoint(s) you want to wake.
4. Click **Wake Now**.

   **Step Result:** The ***Wake Now*** dialog appears.

5. Click **OK** to confirm the wake action.

**Result:** The selected endpoint(s) are woken within five minutes.

## Wake Endpoints from the Manage Endpoints Page

After installing Wake on LAN, you can wake managed endpoints immediately from the ***Endpoints*** page.

Wake endpoints immediately from the ***Endpoints*** page ***All*** tab.

1. Select **Manage** > **Endpoints**.

   **Step Result:** The ***Endpoints Page*** opens to the ***All*** tab.

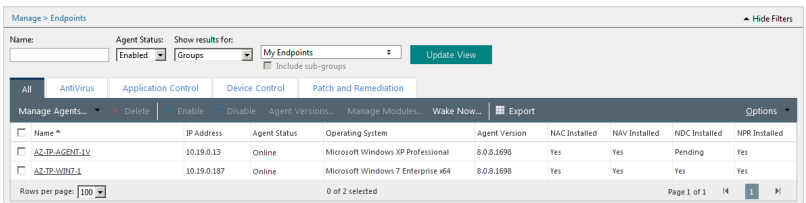



Figure 24: Endpoints Page

2. Select the check box(es) associated with the endpoint(s) you want to wake.

3. Click **Wake Now**.

   **Step Result:** The ***Wake Now*** dialog appears.

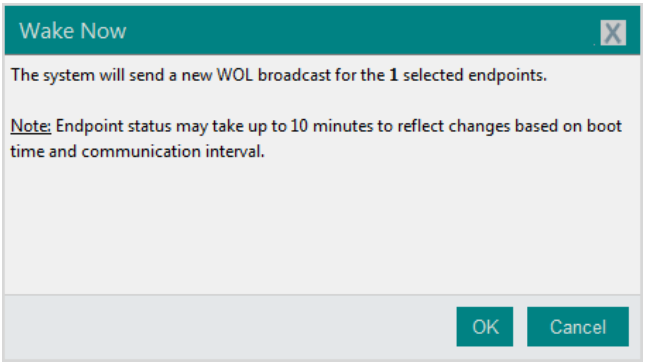



Figure 25: Wake Now Dialog

4. Click **OK** to confirm the wake action.

**Result:** The wake signal is broadcast. Selected endpoints will boot within ten minutes.

## Waking Endpoints (Groups Page)

After installing Wake on LAN, you can wake managed endpoints immediately from the ***Groups*** page ***Endpoint Membership*** view.

Wake endpoints from the ***Groups*** page ***Endpoint Membership*** view.

1. Select **Manage** > **Groups**.

   **Step Result:** The ***Groups*** page opens.

2. From the **View List**, select **Endpoint Membership**.

   **Step Result:** The ***Endpoint Membership*** view opens.

3. Ensure the **All** tab is selected.
4. From the directory tree, select the group containing endpoints you want to reboot.
5. Select the check box(es) associated with the endpoint(s) you want to wake.

6. Click **Wake Now**.

   **Step Result:** The ***Wake Now*** dialog appears.

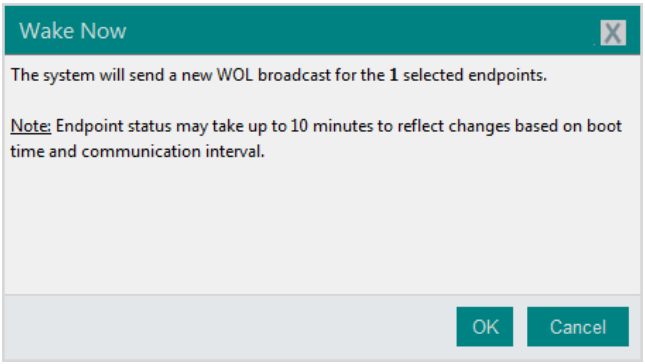



Figure 26: Wake Now Dialog

7. Click **OK** to confirm the wake action.

**Result:** The wake signal is broadcast. Selected endpoints will wake within ten minutes.

# Appendix
# A

# Configuring Windows 8 Endpoints for Wake on LAN

**In this appendix:**



By default, Windows 8 endpoints power settings are not configured to accept wake requests. Before using Wake on LAN with you Windows 8 endpoints, you must reconfigure their power settings.

## Disabling Fast Startup

A new Windows 8 feature, Fast Startup, disables Wake on LAN functionality. Disable Fast Startup to use Wake on LAN for your Windows 8 endpoints.

Disable Fast Startup for Windows 8 endpoint within the Power Settings.

1. Press the **Windows Logo** key.
2. Type **Control Panel** and press ENTER.

   **Step Result:** ***Windows Control Panel*** opens.
3. From the **View by** list, ensure **Category** is selected.
4. Click **Hardware and Sound**.

   **Step Result:** The **Hardware and Sounds** options display.
5. Click **Power Options**.

   **Step Result:** The **Power Options** display.
6. Click the **Choose what the power buttons do** link.
7. Within **Shutdown settings**, ensure the **Turn on fast startup** option checkbox is cleared and click **Save changes**.

**Result:** The **Turn on fast startup** option is disabled. The Windows 8 endpoint will accept wake requests after it is shut down.