



CHAPTER 4

Managing and Viewing Devices

- [Understanding Device Management, page 4-1](#)
 - [Configuring Devices for Cisco EnergyWise, page 4-2](#)
 - [Devices, Policies, and Power Level Settings, page 4-2](#)
 - [Device Connections and Check-Ins, page 4-2](#)
 - [Devices Checking In, page 4-3](#)
 - [Devices and Groups, page 4-5](#)
 - [Viewing Device Information, page 4-5](#)
 - [Device Properties and EnergyWise Attributes, page 4-6](#)
 - [Power States and Activity, page 4-6](#)
 - [Device Charts, page 4-7](#)
 - [Device Attributes and Properties, page 4-7](#)
- [Displaying Device Information, page 4-14](#)
- [Managing Devices, page 4-16](#)

Understanding Device Management

A device in Orchestrator can be a PC or an EnergyWise-enabled router, switch, IP phone, or wireless access point (WAP).

Orchestrator collects data on all connected devices for reporting purposes. You can see how much energy is used by each device, why, and at what times of day users are most active.

Orchestrator begins collecting data for all devices as each device connects to the system. The data updates each time a device checks in.



Note

The frequency for device check-in and how Orchestrator staggers check-ins is set in Server Configuration under Device check-in internal (Server menu).

On the Manage Devices page in the Administrator Console, you can:

- Display devices according to broad or specific search and filtering criteria.
- Control device power states and levels directly outside of a policy.

- Assign policies to devices.
- Assign devices to groups.
- Edit PC properties and EnergyWise device attributes.
- Manage Wake on WAN proxies.
- Run policy or group assignment rules.
- See reports on device activity and type, policy assignment, and group membership.

Configuring Devices for Cisco EnergyWise

Orchestrator recognizes EnergyWise devices based on the domains that you specify in the EnergyWise provisioning server configuration file.

For details on enabling EnergyWise devices in Orchestrator, see the “Configuring Orchestrator for EnergyWise devices” chapter in the *Cisco EnergyWise Orchestrator Installation Guide*.

Devices, Policies, and Power Level Settings

Each device can have only one assigned policy, but each policy can contain multiple schemes and power state changes, each with its own schedule.



Note

Scheduled power schemes cannot overlap.

You can assign a policy to a device, either manually from the Assign Policies menu on the Manage Devices page or through assignment rules that you create (**Devices > Configure Policy Assignment Rules**).



Note

All power settings in policies apply to PCs. For other types of devices, only scheduled power level changes apply. Orchestrator collects data for all device types for reporting purposes.

Outside of a policy, you can apply power state changes to any device and change EnergyWise device attributes or PC device properties either individually or as a set.

Device Connections and Check-Ins

When a device connects to the Orchestrator server for the first time, or whenever a device reestablishes contact with the server after being out of contact for a specified period of time, the server and client PC exchange a series of queries and responses referred to as a *handshake*. During a handshake, the server:

- Sends a query for the device GUID, netBIOS, MAC address, and policy version.
- Evaluates PCs as Wake on WAN proxies.
- Evaluates group and policy assignment rules.
- Compares its policy version with the policy version reported by the device.

PCs and EnergyWise devices (via the proxy server) send a message to the server the first time they connect to the Orchestrator server, or any time they attempt to reestablish contact with the server after being out of contact with the server for a period of time.

A PC will send this message when it: starts up, reboots, transitions out of sleep or a low power state to on, reestablishes network connectivity after being disconnected from the network (i.e., when the PC is out of contact with the server for any reason, for a period of time, and then reestablishes network connectivity).

Devices Checking In

PC devices check in with the Orchestrator server based on the *Device check-in interval* setting on the Configure Server Settings page. Each time the client checks in, the server records the time.

If a device misses two consecutive check-in times, the Orchestrator server marks the device as *Not checking in*. When the device checks in again, the Orchestrator server sets the device status to *Checking in*.



Note

Whether a device is checking in or not is not related to its power state or whether the device is on or off. It is an indication that the device is communicating with the server.

In the case of EnergyWise devices, a device can be checking in even when it is at power level 0 (Off) because the device is still present in the EnergyWise domain.

When the EnergyWise proxy server is managing devices, a device is considered *Not checking in* if the proxy server is stopped, or if the proxy server polls a domain and the device is no longer present in the domain.

Table 4-1 describes the communication that takes place between Orchestrator and PC clients and EnergyWise devices when devices connect to, and check in, with Orchestrator.

Table 4-1 Check-In Actions

Action	Description
Connections (New and Reestablished)	<ul style="list-style-type: none"> • Device asks Orchestrator server what pieces of information it should send. • Orchestrator server asks the device to send the device GUID, netBIOS, MAC address, and policy version. <p>Server receives the device GUID, NetBIOS, and MAC address values from the device and registers the device.</p> <p>For PCs, the server uses these values to determine if a PC is new, existing, or an imaged machine that has been replicated.</p> <ul style="list-style-type: none"> • Server tells the device the check-in interval based on the interval setting in the Configure Server Settings page. <p>Note There are three check-in interval settings: device check in, Wake on WAN proxy check-in, and EnergyWise proxy server check-in. Only the device check-in interval can be set on the Configure Server Settings page. The other settings are set in an Orchestrator configuration file.</p> <ul style="list-style-type: none"> • Server assigns a new PC to a broadcast domain based on its new IP address. • Server evaluates a PC as a candidate for Wake on WAN proxy. • Server evaluates group and policy assignment rules. <p>If the rule is set for <i>New connections only</i>, the server evaluates the rule only on first connection. If the rule is set for <i>All connections</i>, the server evaluates the rule every time the device reestablishes a connection with the server.</p> <ul style="list-style-type: none"> • Server compares its policy version with the policy version reported by the device. If the device policy is out of date, the server sends an updated policy to the device.

Table 4-1 Check-In Actions (continued)

Action	Description
Check-ins (subsequent)	<ul style="list-style-type: none"> • Server tells the device its check-in interval. • Server records the check-in time and flags the device status as <i>Checking in</i> if it was previously <i>Not checking in</i>. • Devices with updated information, such as attribute changes, or power usage data, send this data to the server. • Server evaluates group and policy assignment rules if the rule is set for <i>All connections</i>. • Server evaluates PC clients as a candidates for Wake on WAN proxy. <p>Note When a PC client that is a Wake on WAN proxy is flagged by the server as <i>Not checking in</i>, Orchestrator deselects that PC client from being a proxy and searches for a new Wake on WAN proxy.</p> <ul style="list-style-type: none"> • Server compares its policy version with the policy version reported by the device. If the versions do not match and the device is checking in regularly, the server will send the latest policy information to the device. <p>If a PC agent or device is not actively checking in, the server sends the latest policy information the next time the PC or device restarts or changes from a low power state and reconnects to the server.</p>
Policy changes	Whenever a policy is modified, the server finds all devices that are assigned with that policy that are actively checking in. It then puts a policy change message into the server message queue for these devices the next time they check in or reconnect with the server (restarting or changing from a low power state).

Devices and Groups

You can assign devices to groups, either manually or through assignment rules that you create (**Devices > Configure Group Assignment Rules**). A device can only be assigned to one group at a time.

Viewing Device Information

All device attributes and information can be accessed on the Manage Devices page in the Administrator Console. You can display and search for any device, by group, by policy, by device family, or by PC subnet. All devices that meet the filter or search criteria appear in the device list.



Note

By default, the device list displays the first 2000 devices that meet the search and filter criteria. If you need to see a larger set of devices, in the Server menu, click **Configure Server Settings**, and increase the *Max items per search result* value. The maximum value allowed is 20,000. Setting this value to a higher number can result in longer display times for search results.

- Click the **Customize View** button on the Manage Devices page to add columns or remove columns from the view.
- Change the order of columns by dragging a column to a new position in the list.

- Click the Charts tab to see a high-level picture of device activity and membership.

The chart data is based on the current result set of devices being viewed in the device list (2000 by default). For a representative sample of devices in the charts, you might need to increase the *Max items per search result* value on the Configure Server Settings page.

Click the **Reports** menu to display details on operational state, user activity, and event log information for devices.

Device Properties and EnergyWise Attributes

The Orchestrator server stores device properties and EnergyWise attributes for each device that connects to the server. (Some fields might not be populated for devices in some device families.) Some device attributes are created by the server, and some are reported by the device.

- The Orchestrator agent software reports attributes for PCs.
- The Orchestrator Proxy Server reports attributes for EnergyWise-enabled devices (switches, routers, IP phones, and wireless access points).

For a complete list of device properties and attributes, see the [“Device Properties and EnergyWise Attributes” section on page 4-6](#).

For information on customizing the device list to show certain attributes and properties, see the [“Viewing Devices and Attributes” section on page 4-14](#).

For details on changing device attributes or properties in Orchestrator, see the [“Setting Device Properties and Attributes” section on page 4-18](#).

Power States and Activity

Orchestrator tracks different power states for PCs compared to other devices.

PCs:

- On
- Idle
- Sleep
- Hibernate
- Off

Monitors:

- Low power
- On
- Off

Orchestrator tracks user activity, including mouse clicks, keyboard touches, and any hard disk or processor activity.

Orchestrator tracks and enforces power state changes on PCs:

- Wake
- Sleep
- Hibernate

- Shut down
- Restart
- EnergyWise power levels that map to wake, sleep, hibernate, and shut down (if configured for EnergyWise support).



Note PC clients always respond to EnergyWise power levels set through the Administrator console.

Orchestrator tracks and manages power levels for EnergyWise-enabled devices (including PCs):

- Levels 3 to 10—Wake or On
- Level 2—Sleep
- Level 1—Hibernate
- Level 0—Shut down or Off



Note The default power level is 10. A Cisco switch does not support level 0. You cannot turn off the power to a switch.

Device Charts

The Charts tab on the Manage Devices page provides charts with high-level pictures of device activity and membership based on the current result set of devices.



Note

The chart data is based on the devices being viewed in the device list (2000 by default). For a representative sample of devices in the charts, you might need to increase the *Max items per search result* value on the Configure Server Settings page.

See the [“Displaying Device Information”](#) section on page 4-14.

Device Attributes and Properties

The Orchestrator server stores device properties and EnergyWise attributes for each device that connects to the server. (Some fields might not be populated for devices in some device families.) You can see device properties and attributes in the Orchestrator Administrator console on the Manage Devices page (**Devices** menu > **Filtered Search**). Some device attributes are created by the server, and some are reported by the device. The Orchestrator agent software reports attributes for PCs. The Orchestrator Proxy Server reports attributes for non-PC devices (switches, routers, IP phones, and wireless access points).

For a complete list of device properties and attributes, see the [“Device Properties and EnergyWise Attributes”](#) section on page 4-6.

For information on customizing the device list to show certain attributes and properties, see the [“Viewing Devices and Attributes”](#) section on page 4-14.

For details on changing device attributes or properties in Orchestrator, see the [“Setting Device Properties and Attributes”](#) section on page 4-18.

Attribute and Property Descriptions

- [Table 4-2: Default Attributes and Properties](#)
- [Table 4-3: EnergyWise Attributes and Properties](#)
- [Table 4-4: Advanced Attributes and Properties](#)
- [Table 4-5: Troubleshooting Attributes and Properties](#)

Table 4-2 **Default Attributes and Properties**

Name	Description
Assigned group	Name of the Orchestrator group assigned to the device.
Assigned policy	Name of the Orchestrator policy assigned to the device.
Device family	Used for reporting. Possible values: PC, IP Phone, wireless access point (WAP), Switch, Router, Unknown, Interface, and Service (EnergyWise proxy service). Unknown means that the device family is not supported.
Device name	For PC devices, this is the NetBIOS name. For EnergyWise devices, the name varies based on the device family. <ul style="list-style-type: none"> • Phone—Host name of the phone. For example, SEP*, where * is the MAC address of the phone. • Switch—Hostname of the switch. Default hostname is Switch. • Router—Hostname of the switch. Default hostname is Switch. • WAP—Hostname of the access point. Default hostname is ap. • Empty interface—Short name of the interface. For example, Gix.y.z.
Device status	Shows whether the device is checking in regularly. Devices check in with the Orchestrator server based on the <i>Device check-in</i> interval setting on the Configure Server Settings page. Each time the client checks in, the server records the check-in time. If a device misses two consecutive check-in times, the Orchestrator server marks the device as <i>Not checking in</i> . When the device begins checking in again, the Orchestrator server will set the device status to <i>Checking in again</i> . Note Whether a device is checking in or not checking in is not related to its power state, or whether the device is on or off. It simply is an indication of whether the device is communicating with the server.
Group assignment	<i>Rule</i> means that the group is assigned automatically through assignment rules. <i>Manual</i> means that the group was manually assigned. Note When you manually assign a group to a device, it is flagged as a manually assignment. To clear the manually assigned flag, select the device from the device list on the Manage Devices page. On the Move To Groups menu, click Use Policy Assignment Rules .

Table 4-2 *Default Attributes and Properties (continued)*

Name	Description
IP address	<p>For a PC client, switch, or service (EnergyWise proxy server), this is the IP address most recently used for communication with the Orchestrator server. This address is the only port that Orchestrator uses to attempt Wake on LAN.</p> <p>Assignment rules are applied to the collection of all network adapters.</p>
Licensed	<p>Shows whether the device has a valid Orchestrator license.</p> <ul style="list-style-type: none"> • Green check mark means yes. • Red X means no.
NetBIOS name	NetBIOS name of the PC device.
OS version	Name and version of the operating system, for example, Windows XP Professional SP 3.
Policy assignment	<p><i>Rule</i> means that the policy is automatically assigned through assignment rules.</p> <p>Manual means that the policy is manually assigned.</p> <p>When you manually assign a policy to a device, it is automatically flagged as manually assigned. To clear the manually assigned flag, select the device from the device list on the Manage Devices page. On the Assign Policies menu, click Use Policy Assignment Rules.</p>
Policy status	<p>Specifies whether a named policy has been retrieved from the Orchestrator server and the proxy server or device has acknowledged receipt of the most current policy.</p> <p>Values are <i>Delivered</i> or <i>Pending</i>.</p> <ul style="list-style-type: none"> • <i>Delivered</i> means the PC agent or EnergyWise proxy server has retrieved the current policy from the Orchestrator server. • <i>Pending</i> means the PC agent or EnergyWise proxy server has not yet retrieved the current policy. <p>Note Delivered does not necessarily mean the policy has been completely applied. For EnergyWise devices with policies that are updated through the EW proxy server, there can be a delay between policy deliveries and policy updates on the switches.</p>
Wake on WAN proxy	<p>A green check mark means that the computer is operating as a Wake On WAN proxy.</p> <p>Devices not running the Orchestrator agent software cannot be elected as proxies.</p>

Table 4-3 table describes EnergyWise attributes and properties.

Table 4-3 EnergyWise Attributes and Properties

Name	Description
Caliber	<p>The value received during the most recent scan that describes how the usage was measured:</p> <ul style="list-style-type: none"> • Max—Means that the actual power drawn cannot be determined. A presumed value that is the maximum that the Cisco EnergyWise entity could draw appears. • Presumed—Means that the actual power drawn cannot be determined but can be presumed from the model, for example, PC model X draws 200 W, and PC model Y draws 210 W. • Unknown—Means that the usage reported is unknown. In some cases, entities report aggregate power as does a lighting controller or aggregate controller. In such cases, it is not known whether the usage reported is actual or presumed. • Actual—Means that the usage data reported is the real power drawn. For example, a PoE phone drawing x watts of power can be determined by reading from the port, and then report the actual usage as x W. • Trusted—Means that the usage data reported was reported from another source.
Delta vector	<p>The difference between the actual power usage and the maximum power usage for each power level. A range from 0 to 10 represent the difference between the <i>Usage in Watts</i> and the <i>Usage Vector</i> for each level.</p>
Domain name	<p>Name of the EnergyWise domain that the device belongs to.</p>
Energy units	<p>Shows the units of power for a Cisco EnergyWise entity. The value represents an exponent of 10.</p> <p>For example, if current usage of an entity is 3, it could be 3 W, 3 mW, 3 KW, or 3 MW, depending on the value of Cisco EnergyWise power unit, that is, 0, -3, 3, or 6, respectively.</p>
Importance	<p>The relative priority of one device compared another. The range is from 1 (least important) to 100 (most important). The default is 1.</p> <p>Importance is used to differentiate among devices in the domain and to determine the relative importance of different switches in the network.</p> <p>For example, an office phone has a lower importance compared to an emergency phone. An emergency phone would be set to 100, and an office phone would be set to 50.</p> <p>This attribute is editable.</p>
Keywords	<p>A tag for the EnergyWise entity. Separate multiple keywords with commas (no spaces between keywords).</p>
Physical description	<p>The physical description of the device.</p>

Table 4-3 *EnergyWise Attributes and Properties (continued)*

Name	Description
Power level	<p>An EnergyWise power level, from 0 to 10.</p> <p>Note The default power level is 10. A Cisco switch does not support level 0. You cannot turn off the power to a switch.</p> <p>Orchestrator maps EnergyWise power levels to PC power states as:</p> <ul style="list-style-type: none"> • Levels 3 - 10—Wake or On • Level 2—Sleep • Level 1—Hibernate • Level 0—Shut down or Off
Provisioned	The maximum power in watts that a Cisco EnergyWise entity can draw at the current level.
Role	<p>The role of an EnergyWise entity in the EnergyWise domain, for example, <i>lobby.b20</i>.</p> <p>For a switch, the default is the model number.</p> <p>This attribute is editable.</p>
Usage vector	A vector from 0 to 10 representing the maximum power in watts that an EnergyWise entity can draw at each power level.
Usage in watts	The power draw of an entity in watts. Orchestrator reads this value from a device or PC client. If the Caliber is <i>Actual</i> , this value varies with the actual watt usage of the device. For example, a phone uses more power when its speaker is on than when off. Usage sampled while the phone is on will be higher than when it is off.

Table 4-4 table describes the advanced attributes and properties.

Table 4-4 *Advanced Attributes and Properties*

Name	Description
Baseboard manufacturer	The name of the organization responsible for producing the physical element of the baseboard, for example, Dell Computer Corporation.
Baseboard product	The baseboard part number defined by the manufacturer, for example, OOT606.
CPU	The processor on the PC, for example, Intel Pentium 4 CPU 2.40 GHz.
Chassis type	The physical container housing the components of a computer, for example, desktop or laptop.
DNS name	Fully qualified domain name of the computer.
Description	A text string that describes a Windows PC client. This property is editable.
Device GUID	Unique identifier of the device. Also the EnergyWise identifier for EnergyWise-capable devices.

Table 4-4 *Advanced Attributes and Properties (continued)*

Name	Description
LDAP distinguished name	Distinguished name from LDAP server.
Licensing disabled	<i>Yes</i> means that licensing is disabled for the device. <i>No</i> means that a license will be allocated when available. The option selected in Device Licensing page (Edit Devices > Device Licensing) controls the setting.
Manufacturer	Name of the company that manufactures the computer or device.
Power platform role	Shows an OEM's preferred power management profile for a computer. These values are read from the Preferred_PM_Profile field of the Fixed ACPI Description Table (FADT). For example, PlatformRoleDesktop or PlatformRoleMobile.
System BIOS	BIOS string text, for example, DELL - 8, 02/26/03

Table 4-5 table describes the troubleshooting attributes and properties.

Table 4-5 *Troubleshooting Attributes and Properties*

Name	Description
Client version	Build number of the Orchestrator agent software installed on a device.
Computer model	Model name of the computer, for example, OptiPlex GX260.
Last connected	Date and time of the last complete connection. The last connected time is the last time the EnergyWise proxy server checked in with Orchestrator for a device. For EnergyWise devices, this occurs even when the device is at power level 0 (Off) because the device is still in the EnergyWise domain.
MAC address	MAC address of the interface most recently used for communication with the server.
Memory (KB)	Available memory in KB.
Network address	Unique identifier of the device on the network at Layer 3.
Portable	<i>Yes</i> if a Windows notebook. <i>No</i> if otherwise. This is a derived (computed) field, based on the values of Chassis Type and Platform Power Role.

Table 4-5 Troubleshooting Attributes and Properties (continued)

Name	Description
Proxy Wake on WAN preference	Shows the ranking for the computer as a Wake on WAN proxy. Preferred—The computer is ranked higher in proxy-selection criteria. Never—The computer is never selected as a proxy. Default—Other computer attributes are only used as selection criteria if no preferred proxies are available. The setting is controlled by an option selected in Edit Device Properties (click Edit Devices > Edit Device Properties.)
Subnet mask	Subnet mask (network mask and an address of a host in the network) of the broadcast domain.

Displaying Device Information

- [Viewing Devices and Attributes, page 4-14](#)
- [Excluding Interfaces from the Device List, page 4-15](#)
- [Excluding Unlicensed Devices from the Device List, page 4-15](#)

Viewing Devices and Attributes

Use the Manage Devices page to access device information. You can search for and display devices based on a variety of attributes, including by group, by policy, by device family, or by PC subnet. All devices meeting the filter or search criteria appear in the device list.

For a list of device attributes and properties, see the [“Device Properties and EnergyWise Attributes” section on page 4-6](#).

Orchestrator provides many options to see devices. You can go to tab views that filter devices based on group, policy, or subnet (displays only PCs on the selected subnet). You can also use the search function to filter by group, policy, subnet (PCs only), and device family.



Note

By default, the device list displays the first 2000 devices that meet the search and filter criteria. If you need to see a larger set of devices, in the Server menu click **Configure Server Settings**, and increase the *Max items per search result* value. The maximum value allowed is 20,000. Setting this value to a higher number can result in longer display times for search results.

- Click **Customize View** on the Manage Devices page to add columns to or remove columns from the view.
- Change the order of columns by dragging a column to a new position in the list.
- Click the **Charts** tab to see a high-level picture of device activity and membership.



Note

- The chart data is based on the current result set of devices being viewed in the device list (2000 by default). For a representative sample of devices in the charts, you might need to increase the *Max items per search result* value on the Configure Server Settings page.
- Click the **Reports** menu to display details on operational state, user activity, and event log information for devices.
- To display only devices that are currently licensed, select **Exclude devices with licensing disabled in the device lists** on the Configure Server Settings page (on the Server menu, click **Configure Server Settings**).
- Devices that appear as *Interface* in the device list are ports with no IP phones, wireless access points, or other PoE devices plugged into them. To hide interfaces from the device list, select **Do not display Interface devices in the device lists** on the Configure Server Settings page (on the Server menu, click **Configure Server Settings**).

To see device information:

-
- Step 1** On the Devices menu, click **Filtered Search**.

- Step 2** Click the tab (Groups, Policies, or Subnets) that you want to use to filter the display, and select a filter on that tab to see the results in the device list.
- You can also click the **Search** tab, select options in the device filters to display the set of devices that you want, and enter a search string.
- Step 3** Click **Search** to see the results set in the device list.



Note To see only licensed devices, select **Exclude devices with licensing disabled in the device lists** on the Configure Server Settings page. On the Server menu, click **Configure Server Settings**.

Devices that appear as *Interface* in the device list are empty ports (ports with no end points).

To hide interfaces from the device list, select **Do not display Interface devices in the device lists** on the Configure Server Settings page. On the Server menu, click **Configure Server Settings**.

Excluding Interfaces from the Device List

Devices that appear as *Interface* in the device list are ports with no IP phones, wireless access points, or other PoE devices plugged into them.

To hide empty ports in the device list, select **Do not display Interface devices in the device lists** on the Configure Server Settings page.

-
- Step 1** On the Server menu in the Administrator console, click **Configure Server Settings**.
- Step 2** Check the **Do not display Interface devices in the device lists** check box.
- Step 3** Click **Save**.

For information on viewing devices, see the [“Viewing Devices and Attributes”](#) section on page 4-14.

Excluding Unlicensed Devices from the Device List

To see only the licensed devices in the device list, you can select **Exclude devices with licensing disabled in the device lists** on the Configure Server Settings page.

For information on removing a device or disabling its licensing, see the [“Removing a Device from the System”](#) section on page 4-19.

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- Step 1** On the Server menu, click **Configure Server Settings**.
- Step 2** Check the **Exclude devices with licensing disabled in the device lists** check box.
- Step 3** Click **Save**.

For information on viewing devices, see the [“Viewing Devices and Attributes”](#) section on page 4-14.

Managing Devices

- [Assigning Devices to Groups](#), page 4-16
- [Assigning Policies to Devices](#), page 4-17
- [Controlling Devices Directly](#), page 4-17
- [Setting Device Properties and Attributes](#), page 4-18
- [Removing a Device from the System](#), page 4-19

Assigning Devices to Groups

You can assign devices to groups from the device list or automatically by using group assignment rules. For details on configuring group assignment rules, see the [“Configuring Group Assignment Rules” section on page 2-3](#).

For details on creating groups, see the [“Creating Administrative Groups” section on page 3-2](#).

Follow these steps to manually assign a device to a group:

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- Step 1** On the Devices menu, click **Filtered Search**.
 - Step 2** Click the tab (Groups, Policies, or Subnets) that you want to use to filter the display, and select a filter option for seeing the results in the device list.
(Optional) Click the Search tab, select different options in the device filters to display the set of devices that you want, and enter a search string.
 - Step 3** Click the Search button to see the results in the device list.
 - Step 4** Select the device or devices in the list.
 - Step 5** On the Move to Group menu, click Manually Assign Group, or click Use Group Assignment Rules.



Note When you manually assign a policy to a device, it is flagged as a manual assignment. To clear the flag, select the device from the device list. On the Move to Group menu, click **Use Group Assignment Rules**.

If you choose Use Group Assignment Rules and one or more selected devices was manually assigned, select **Include N manually assigned devices** and click **OK** to confirm that you want to change from a manually assigned group to rule-based assignment.

- Step 6** For manual assignment, click the group name, and click **OK**.
 - Step 7** For rule-based assignment, click **OK**.
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Assigning Policies to Devices

You can assign policies to devices in device list or automatically by using policy assignment rules.



Note All power settings in policies apply to PCs. For other types of devices, only scheduled power level changes apply. For non-PC devices, a scheduled power level change might be the only setting that you apply by using a policy.

For details on policy assignment rules, see the [“Configuring Group Assignment Rules” section on page 2-3](#).

For details on creating policies, see the [“Creating and Editing Policies” section on page 5-8](#).

To manually assign policies:

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- Step 1** On the Devices menu, click **Filtered Search**.
 - Step 2** Click the tab (Groups, Policies, or Subnets) that you want to use to filter the display, and select a filter option to see the results in the device list.
(Optional) Click the Search tab, select different options in the device filters to display the set of devices you want, and enter a search string.
 - Step 3** Click the Search button to see the results set in the device list.
 - Step 4** Select the device or multiple devices in the resulting list.
 - Step 5** On the Assign Policies menu, click **Manually Assign Policy** or **Use Policy Assignment Rules**.



Note When you manually assign a policy to a device, it is flagged as being manually assigned. To clear the flag, select the device from the device list, and then on the Assign Policies menu, click **Use Policy Assignment Rules**.

If you choose **Use Policy Assignment Rules** and one or more of the selected devices had been manually assigned, select **Include N manually assigned devices** and click **OK** to confirm that you want to change from a manually assigned policy to a rule-based assignment.

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- Step 6** For manual assignment, click the policy name, and click **OK**.
 - Step 7** For rule-based assignment, click **OK**.
-

Controlling Devices Directly

You can change the power levels of devices directly from the device list.

For details on enforcing power state changes within policies, see the [“Creating and Editing Policies” section on page 5-8](#).

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- Step 1** On the Devices menu, click **Filtered Search**.
 - Step 2** Click the tab (Groups, Policies, or Subnets) that you want to use to filter the display, and select a filter option on that tab to see the results in the device list.

You can also click the Search tab, select different options in the device filters to display the set of devices that you want, and enter an optional search string.

Step 3 Click the **Search** button to see the results set in the device list.

Step 4 Select the device or devices in the list.

Step 5 On the Set Power Level menu, click a power level.



Note

- You can also right-click a device to select a power level from a context menu.
- Set EnergyWise Power Level automatically maps to PC power states. This works for PCs and non-PC devices.
- For PCs only: If you select *Sleep*, *Shut Down*, *Restart*, or *EnergyWise Power Level*, you can force a change of the power state by selecting **Force transition**. You can also choose whether to force a state change for Wake on WAN proxies.
- Use **Force transition** only when necessary. Some applications could block normal Windows shut down requests. For example, Word or Notepad might display a dialog box asking a PC user to save document changes. When you select **Force transition**, applications cannot block shut down and unsaved changes in the application are lost.

Step 6 (PCs only) Enter and select the options that you want to use for the transition (message, force transition), and click OK.



Note

The options for forcing a transition or displaying a message are ignored for non-PC devices.

Step 7 Enter and select the options that you want to use for the transition, and click **OK**.

Setting Device Properties and Attributes

You can change device properties for PCs (description Wake on WAN), or edit EnergyWise attributes (Role, Keyword, or Importance) from the device list on the Manage Devices page (**Devices** menu > **Filtered Search**).

For PC properties, you can specify the ranking for the device as a Wake on WAN proxy. In the Edit Device Properties dialog box, check the **Preferred Wake on WAN proxy** check box, and select:

- **Preferred** increases the ranking of the selected computers in the proxy selection criteria.
- **Never** prevents the selected computers from being selected as proxies.
- **Default** or **Don't change** means that other computer attributes are used as selection criteria and only if there are no preferred proxies available.

For other details, see the [“Setting a Device As a Preferred Wake on WAN Proxy”](#) section on page 6-8.

For EnergyWise devices, you can edit the Role, Keyword, and Importance attributes for parents (switches) or children (interfaces). You can use the attributes to identify a specific device or a group of devices.

- Use the Role attribute to show the general business context.

- Importance ranges from 1 (least important) to 100 (most important). Use the Importance attribute to differentiate between devices in a domain.

For example, an office phone has a lower importance compared to an emergency phone. Because it is critical that the emergency phone never enter sleep mode, you should set the Importance to 100.

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- Step 1** On the Devices menu, click **Filtered Search**.
- Step 2** Click the tab (Groups, Policies, or PC Subnets) that you want to use to filter the display, and select a filter on that tab to see the results in the device list.
- You can also click the Search tab, select options in the device filters to display the set of devices you want, and enter a search string.
- Step 3** Click **Search** to see the results set in the device list.
- Step 4** Select the device or devices in the list.
- Step 5** On the Edit Devices menu, select **Edit device properties** or **Edit EnergyWise attributes**.
- Step 6** Enter and select the options that you want to use, and click **OK**.
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Removing a Device from the System

To remove a device from the Orchestrator system or to unlicense a device, you can disable the device license on the Manage Devices page (**Edit Devices > Device Licensing > Do not allocate a license to the device**). Orchestrator does not collect or report data for any devices with disabled licensing. However, historical data collected while the device was licensed is retained.

Reinstall a device by choosing **Allocate a license when one is available** in the License devices dialog box.

To see only the licensed devices in the device list, select **Exclude devices with licensing disabled in the device lists** on the Configure Server Settings page. On the Server menu, click **Configure Server Settings**.

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- Step 1** On the Devices menu, click **Filtered Search**.
- Step 2** Click the tab (Groups, Policies, or Subnets) that you want to use to filter the display, and select a filter on that tab to see the results in the device list.
- You can click the Search tab, select different options in the device filters to display the set of devices that you want, and then enter a search string.
- Step 3** Click the **Search** button to display the results set in the device list.
- Step 4** Select the device or devices in the list.
- Step 5** On the Edit Devices menu, click **Device Licensing**.



Note You can also right-click a device, and click **Device Licensing**.

- Step 6** Click **Do not allocate a license to the device**, and click **OK**.

**Note**

You can re-enable a device by choosing the **Allocate a license when one is available** option in the License Devices dialog box.
