



Hawaii Green IT

The 1E WakeUp Installation Guide

Achieve 100% Patch Management and Software Distribution Success

www.1e.com

The 1E WakeUp Installation Guide

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Section 1 Introduction

Achieve 100% Patch Management and Software Distribution Success

1E WakeUp powers up PCs using Wake-On-LAN technology, when used as a part of the NightWatchman Management Center it provides on-demand wake up functionality for individual computers or groups of computers directly from the NightWatchman Console. It also links in to the NightWatchman Alarm Clock and Maintenance Window features. Detailed reporting on 1E WakeUp success and computer health are provided via the NightWatchman Management Center Reports Console.

1E WakeUp can also integrate this ability seamlessly into Microsoft's System Center Configuration Manager 2007 (ConfigMgr) and Systems Management Server 2003 (SMS). Administrators using this combination of 1E WakeUp and SMS/ConfigMgr can now ensure that PCs are automatically powered on for software, and critical patch installation and routine management.

1E WakeUp is not only an invaluable tool for critical patch management; it also performs an essential function in power management, helping to reduce the total power usage of the PC population. When you are using 1E WakeUp, PCs can be powered off when not in use because 1E WakeUp will enable them to be there when needed.

1.1 What will 1E WakeUp do for me?

Organisations have typical management tasks that generally need to be performed across their computer network. These tasks include: software installation, upgrades and hot-fixes; data backup, system inventory and critical patch management.

Performing these tasks during the day would have a negative impact on user productivity and network resources – particularly for critical patches that require machine reboots. To avoid interrupting users, organisations often prefer to run such tasks out of business hours. This is made easier using remote management software. Traditionally this requires asking users to leave their machines switched on overnight. It may also be necessary to have technicians work during off-hours to physically visit each machine to turn it on.

With 1E WakeUp you can be sure that all PCs targeted by an advertisement will be powered up to receive it. Support personnel will not have to waste time, effort and money to personally visit PCs missed from an important software rollout. In combination with NightWatchman[®], a power management utility from 1E, you can be confident that your network is in the power state you define, and not some indeterminate state governed by the age of the PCs and their operating systems.

1.2 Who is this guide for?

This installation guide is aimed at administrators who intend to install 1E WakeUp for use across an SMS/ConfigMgr hierarchy.

1.3 Conventions used in this guide

This section shows how to interpret the different styles used in this document to denote various types of information.

Cross References

Cross references are shown in italics. Cross references may be to diagrams or tables in the current document or to other documents. For example, the following paragraph references another document in the 1E WakeUp set:

After reading this installation guide, you can get more detailed information in *The 1E WakeUp Administrators Guide*.

Notes

Notes are shown in white on an orange background. For example, the following note provides some useful information:

NOTE: always pay attention to notes.

Code fragments and command-lines

This manual uses *Lucida Console* typeface plus a shaded background to denote code fragments and command-lines. For example, the following shows a 1E WakeUp installer command-line:

```
c> msiexec /i wakeupsvr.msi PIDKEY="ABCD-1234-5678-8765-4321" SERVERCOMPONENTS=1  
SERVERTYPE=SMS AFREPORTING=ON REPORTINGSERVER=<RepServ> HEALTH=ON /QN
```

Section 2 Requirements

The following operating system, SMS/ConfigMgr or NightWatchman Management Center requirements, hardware, power management and network specifications should be met in order for 1E WakeUp to be successfully installed and run.

2.1 1E WakeUp Server Requirements

The following tables describe the requirements for the 1E WakeUp Server when using in conjunction with SMS/ConfigMgr or NightWatchman Management Center.

Table 1 - 1E WakeUp Server for SMS/ConfigMgr Requirements

1E WakeUp Server for SMS/ConfigMgr	
These requirements must be in place when using 1E WakeUp Server in conjunction with SMS/ConfigMgr.	OS Requirements
	<ul style="list-style-type: none"> Windows Server 2008 Windows Server 2003 SP1 and above (including Standard x64 Edition)
	SMS/ConfigMgr requirements
	<ul style="list-style-type: none"> ConfigMgr 2007 or SMS 2003 SP2 or above The Hardware Inventory Client Agent must be enabled The Advertised Programs Client Agent must be enabled Machine must be an SMS/ConfigMgr client
	Installation account permissions
	<ul style="list-style-type: none"> Domain user account with local administration permissions
	Number of supported instances
	You need to install a 1E WakeUp Server on each SMS/ConfigMgr Primary Site on your network
	Main related installer switches
<i>PIDKEY, SERVERCOMPONENTS, SERVETYPE, AFREPORTING, REPORTINGSERVER.</i> The complete range of 1E WakeUp Server installer switches are provided in <i>Appendix A - 1E WakeUp Installation Switches</i> under heading <i>A.1 - 1E WakeUp Server installer switch reference</i>	

Table 2 - 1E WakeUp Server for NightWatchman Management Center Requirements

1E WakeUp Server for NightWatchman Management Center	
These requirements must be in place when using 1E WakeUp Server in conjunction with the NightWatchman Management Center	OS Requirements
	<ul style="list-style-type: none"> Windows Server 2003 Windows Server 2008
	NightWatchman Management Center requirements
	<ul style="list-style-type: none"> NightWatchman Management Center 5.6 must have been previously installed
	Installation account permissions
	<ul style="list-style-type: none"> Domain user account with local administration permissions
	Number of supported instances
	You may only have one instance of the 1E WakeUp Server registered as the master wake up service for NightWatchman Management Center
Main related installer switches	
<i>PIDKEY, SERVERCOMPONENTS, SERVERTYPE, AFREPORTING, REPORTINGSERVER.</i> The complete range of 1E WakeUp Server installer switches are provided in <i>Appendix A - 1E WakeUp Installation Switches</i> under heading <i>A.1 - 1E WakeUp Server installer switch reference</i>	

2.2 1E WakeUp Agent Requirements

The following tables describe the requirements for the 1E WakeUp Agents working with SMS/ConfigMgr or NightWatchman Management Center.

Table 3 - 1E WakeUp Agent for SMS/ConfigMgr Requirements

1E WakeUp Agent for SMS/ConfigMgr	
These requirements must be in place when using 1E WakeUp Agent in conjunction with SMS/ConfigMgr	OS Requirements
	<ul style="list-style-type: none"> Windows Vista (including x64 Edition) or above Windows XP Windows 2000 SP4 Windows Server 2008 Windows Server 2003 Windows Server 2000 SP4
	Prerequisites
	<ul style="list-style-type: none"> The SMS/ConfigMgr Client must be installed and running
	Installation account permissions
	<ul style="list-style-type: none"> Domain user account with local administration permissions Sysadmin on target database
	Number of supported instances
<ul style="list-style-type: none"> In multi agent mode you need to install an agent on all target computers on each subnet. You must install in this mode to support the complete functionality of 1E 	

	<p>WakeUp</p> <ul style="list-style-type: none"> • In dedicated agent mode you need to install an agent on at least one dedicated computer on each subnet • In server only mode no remote agents are required
	Main related installer switches
	<i>AGENTTO, REPORTINGSERVER.</i> The complete range of 1E WakeUp Agent installer switches are provided in <i>Appendix A - 1E WakeUp Installation Switches</i> under heading <i>A.2 - 1E WakeUp Agent installer switch reference</i>

Table 4 - 1E WakeUp Agent for NightWatchman Management Center Requirements

1E WakeUp Agent for NightWatchman Management Center	
These requirements must be in place when using 1E WakeUp Agent in conjunction with the NightWatchman Management Center	OS Requirements
	<ul style="list-style-type: none"> • Windows Vista (including x64 Edition) or above • Windows XP • Windows 2000 SP4 • Windows Server 2008 • Windows Server 2003 • Windows Server 2000 SP4
	Prerequisites
	<ul style="list-style-type: none"> •
	Installation account permissions
	<ul style="list-style-type: none"> • Domain user account with local administration permissions
	Number of supported instances
	You may only have one instance of the NightWatchman Management Center database per implementation.
	Main related installer switches
<i>AGENTTO, REPORTINGSERVER.</i> The complete range of 1E WakeUp Agent installer switches are provided in <i>Appendix A - 1E WakeUp Installation Switches</i> under heading <i>A.2 - 1E WakeUp Agent installer switch reference</i>	

2.3 Intel® AMT Component Requirements

The following table describes the requirements for installing the Intel® AMT Component for either SMS/ConfigMgr or NightWatchman Management Center.

Table 5 - Intel® AMT Component

1E WakeUp Intel® AMT Component	
These requirements must be in place when using the Intel® AMT Component	OS Requirements
	<ul style="list-style-type: none"> Windows Server 2008 Windows Server 2003 SP1 and above (including Standard x64 Edition)
	Prerequisites
	<ul style="list-style-type: none"> Intel® AMT 2.0 and above The latest Intel ME Interface (HECI) driver and the Local Manageability service must be installed on the Intel® AMT machines If Kerberos authentication is used, the 1E WakeUp Intel® AMT module must be installed with a domain account that has been added to an Active Directory group that has access to the Intel® AMT Power Control Realm on the devices. If preconfigured, this group is called <i>Intel® AMT Collections Managers</i> In Enterprise Mode you will need the name of the TLS certificate template used for secure communications with the Intel® AMT device In Small Business Mode, the username and password for an account that has access to the Intel® AMT Power Control Realm on the devices.
	<p>Note: when installing in Small Business Mode the installer cannot verify that the user credentials supplied have the appropriate permissions.</p> <p>If you encounter problems with this functionality after installation you should check the 1E WakeUp Intel® AMT log file. If you see Connection Failed errors the likely cause is insufficient permissions on the account.</p>
	Installation account permissions
	<ul style="list-style-type: none"> Domain user account with local administration permissions
	Number of supported instances
	You may have one Intel® AMT component per 1E WakeUp Server installation
	Main related installer switches
<i>INSTALLAMT, AMTMODE, SVCUSER, SVCPASSWORD, CERTIFICATE_NAME</i>	

2.4 Non-Administrator account requirements

In order to allow non-administrators permissions to send wakeups using 1E WakeUp you do not have to change SMS/ConfigMgr security settings. You will have to change their WMI and DCOM permissions.

As best practice we recommend that you create a local group and perform the following steps appropriate to the server operating system you are running on to add the permissions to the

group. Any non-administrator account that needs to use 1E WakeUp can then be simply added to the group.

WMI

Permissions in the *NIE\WakeUp* and *SMSWAK* namespace for the account or group must include the following security rights:

- Execute Methods
- Full Write
- Enable Account
- Remote Enable

The following steps show how to do this:

1. Open the WMI Manager. (*wmimgmt.msc*)
2. Right click on the *WMI Control (Local)* node and select the *Properties* context menu item
3. In the security tab select the *NIE\WakeUp* namespace
4. Click the *Security* button to display the *Security* dialog for that node
5. Add the user/group and give them the security rights in the bullet points above
6. In the security tab select the *SMSWAK* namespace
7. Click the *Security* button to display the *Security* dialog for that node
8. Add the user/group and give them the security rights in the bullet points above

DCOM

In Windows 2003 SP1 and above, add the account or group to the following DCOM group: *Distributed COM Users*. The following steps show how to do this:

1. Open the local user and groups console (*lusrmgr.msc*)
2. Add the user account or group to the *Distributed COM Users* group

Prior to Windows 2003 SP1 you will need to do the following:

1. Run *DCOMCNFG.exe* then expand *Component services* and right click on the *My Computer* entry
2. Open *COM Security* and click on *Edit Limits*. Check that *Local Administrators* and *DCOM Users* have the required *Remote Activation* and *Remote Launch* permissions, as should be the case by default.

2.5 Hardware requirements

To utilise Wake-On-LAN technology you need *all* of the following hardware configurations:

- **A network card which can support Wake-On-LAN** - Your network card vendor can tell you if your network adapter supports Wake-On-LAN. If it does support Wake-On-LAN, it must be configured to enable remote wakeup. Some adapter drivers are disabled by default within the operating system.
- **Wake-On-LAN enabled system BIOS** - Wake-On-LAN must be enabled in the system BIOS. This option can usually be found in the 'Boot' menu of the BIOS configuration program.
- **Power management** - APM or ACPI should be enabled, otherwise the user of the machine should ensure that it is powered off by hitting the off button after shutdown.

Note: A quick way to tell if a system is Wake-On-LAN ready is to power down the system then look at the network adapter display LED's. If the lights are still on, then chances are that the system is OK. 1E also provide a diagnostic tool called Magic Test that will determine the ability for a single machine to react to a Magic Packet wakeup.

2.6 Power Management

Once you are confident that your hardware is Wake-On-LAN enabled you need to check that your operating system satisfies either of the following power management standards.

- **APM** - Advanced Power Management.
- **ACPI** - Advanced Configuration and Power Interface.

2.7 Computer Health and Reporting Requirements

To correctly build the Computer Health Collections and to view reports related to 1E WakeUp you will need to have previously installed the following products:

- NightWatchman Management Center 5.6
- The installation of NightWatchman Management Center 5.6 must include the Report Console components which includes the 1E WakeUp reports component. The ConfigMgr reports are optional depending on whether you are integrating the 1E WakeUp Server with Configuration Manager or not. See the NightWatchman Management Center Installation guide for more details

2.8 NightWatchman Management Center Prerequisites

1E WakeUp may also be used solely with the NightWatchman Management Center, which includes the product formerly known as the Agility Framework.

To integrate the 1E WakeUp Server with NightWatchman Management Center you will also need to have previously installed the following 1E products somewhere on your network:

- NightWatchman Management Center 5.6

Section 3 What is 1E WakeUp?

1E WakeUp rapidly and reliably ensures that SMS/ConfigMgr can distribute software and patch updates to your organisation.

1E WakeUp integrates remote wakeup (Wake-On-LAN) technology with Microsoft Systems Management Server (SMS). 1E WakeUp integrates with SMS 2003 or ConfigMgr 2007 to provide administrators with an easy method of ensuring that PCs are fully powered on whenever they are needed.

All PCs targeted by an advertisement will receive it, as 1E WakeUp will ensure they are fully powered on. Support personnel do not have to take the time to personally visit PCs missed from an important rollout. Additionally, total power usage of the PC population will be reduced as the PC can be powered off when not in use.

1E WakeUp additionally enables software updates to be pushed rapidly to client machines regardless of whether they are on or are in the process of being woken up. It makes sure that your machines check immediately for any SMS/ConfigMgr advertisements that are due, thereby circumventing the normal polling cycle. 1E WakeUp is an invaluable tool for critical emergency patch management.

3.1 Networks, Wake-On-LAN and Magic Packets™

1E WakeUp uses proven technology to perform system wakeups. A specific type of Wake-On-LAN network packet (also known as a *Magic Packet*™) causes the network card to signal the motherboard, which then powers up the PC. Providing the machine is Wake-On-LAN enabled, the network card still scans all incoming packets that are destined for the system, even when the machine is powered down.

A Magic Packet is a directed broadcast, and in order for the packet to reach the client, the local network infrastructure must be able to forward it across all types of network hardware.

3.2 The 1E WakeUp Server and Agents

Regardless of the capabilities of the network, whether it is able to broadcast the Magic Packet or not, 1E WakeUp can be configured to operate in most types of network. The way that 1E WakeUp enables this is through the 1E WakeUp Server and Agents.

The 1E WakeUp Server

The 1E WakeUp Server is the central controller for wakeups. It can be set up to work in conjunction with SMS/ConfigMgr or the NightWatchman Management Center. When integrated with SMS/ConfigMgr it also enumerates the SMS/ConfigMgr Advertisements and creates wakeup lists which are then passed on to the 1E WakeUp Agents.

The 1E WakeUp Agents

The 1E WakeUp Agents receive their instructions from the 1E WakeUp Server and send out Magic Packets to the machines on the wakeup list. 1E WakeUp Agents are required in all installation modes, as described below:

- **Multi-Agent Mode** - the 1E WakeUp Agents should be installed on all machines in the environment, in this mode at least one machine per subnet should be available constantly - the Last Man Standing functionality in 1E WakeUp ensures that this is the case.
- **Dedicated Agent** - the 1E WakeUp Agent is installed on specific machines that must remain permanently powered on and available on the network
- **Stand-alone Server** - the 1E WakeUp Server communicates with a locally installed 1E WakeUp Agent

3.3 Which 1E WakeUp installation mode suits my network?

In this section we discuss different types of network available and recommend 1E WakeUp installation modes that are appropriate.

Bridged networks

A Magic Packet is a standard Ethernet packet and bridges are only aware of the destination address. Even if a bridge has deleted the address of the destination system, it must forward the frame to all ports. This guarantees that the system the frame has been addressed to will receive the packet.

Note: it is possible to install in Stand-alone Server mode on a bridged network, though you should be aware that the full functionality of 1E WakeUp is only available if you install in Multi-Agent mode.

Routed networks that support directed broadcasts

If the network supports directed broadcasts, 1E WakeUp uses this method to forward the Magic Packet to the subnet where the target system resides. Once the router on the destination subnet receives the Magic Packet, it recognises that the packet requires subnet broadcast and broadcasts it. 1E WakeUp includes a utility to test the ability of the network to forward this type of broadcast.

Note: it is possible to install in Stand-alone Server mode on routed networks that support directed broadcasts, though you should be aware that the full functionality of 1E WakeUp is only available if you install in Multi-Agent mode.

Routed networks that do not support directed broadcasts

In this type of network, 1E WakeUp can use either of the Agent modes to awaken systems on remote subnets. The 1E WakeUp Agents must be installed in some mode on your remote subnets to subsequently receive instructions from the 1E WakeUp Server.

Note: in routed networks that do not support directed broadcasts you must install using either the Dedicated Agent mode or the Multi-Agent mode.

The reasons for choosing between these installation modes are described below.

3.4 Installation modes for SMS/ConfigMgr

1E WakeUp provides different installation modes for the different types of network that are liable to be encountered. In this section we describe the 1E WakeUp installation modes and common network scenarios. You must decide at installation time which mode is most suited to your network. The installation modes are:

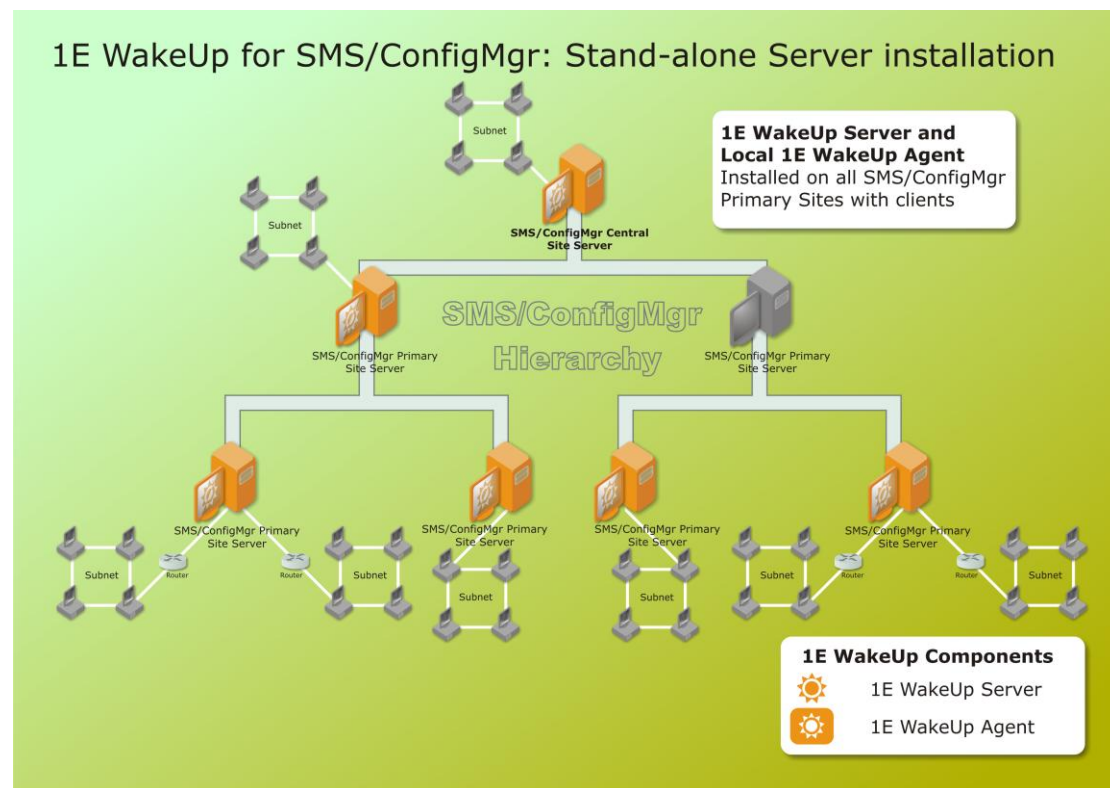
- Multi-Agent
- Dedicated Agent
- Stand-alone Server

Note: Policy Refresh, Computer Health and extended reporting functionality is only available when running in Multi-Agent mode.

1E WakeUp Server installation

In all installation modes when integrating with SMS/ConfigMgr the 1E WakeUp Server should be installed on all the primary SMS/ConfigMgr sites that have clients, as shown in *Figure 1*.

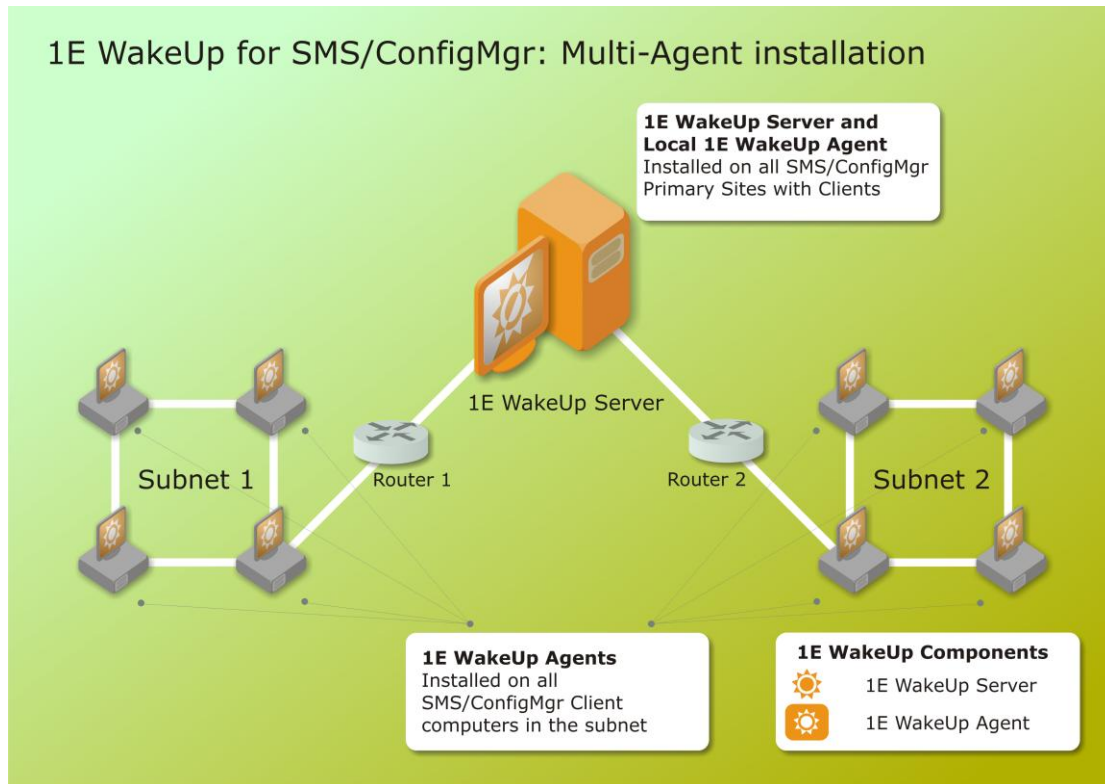
Figure 1 – 1E WakeUp Server installed on the primary SMS/ConfigMgr sites



Multi-Agent

This is the recommended installation mode providing the most flexibility and functionality. The 1E WakeUp Server should be installed as described under the *1E WakeUp Server installation* heading above. The 1E WakeUp Agent should be installed on all target computers in your environment, as shown in *Figure 2*. This mode avoids the overhead of having to support *Dedicated agents* and is ideal if there are many remote subnets.

Figure 2 - 1E WakeUp for SMS/ConfigMgr installed in Multi-Agent mode



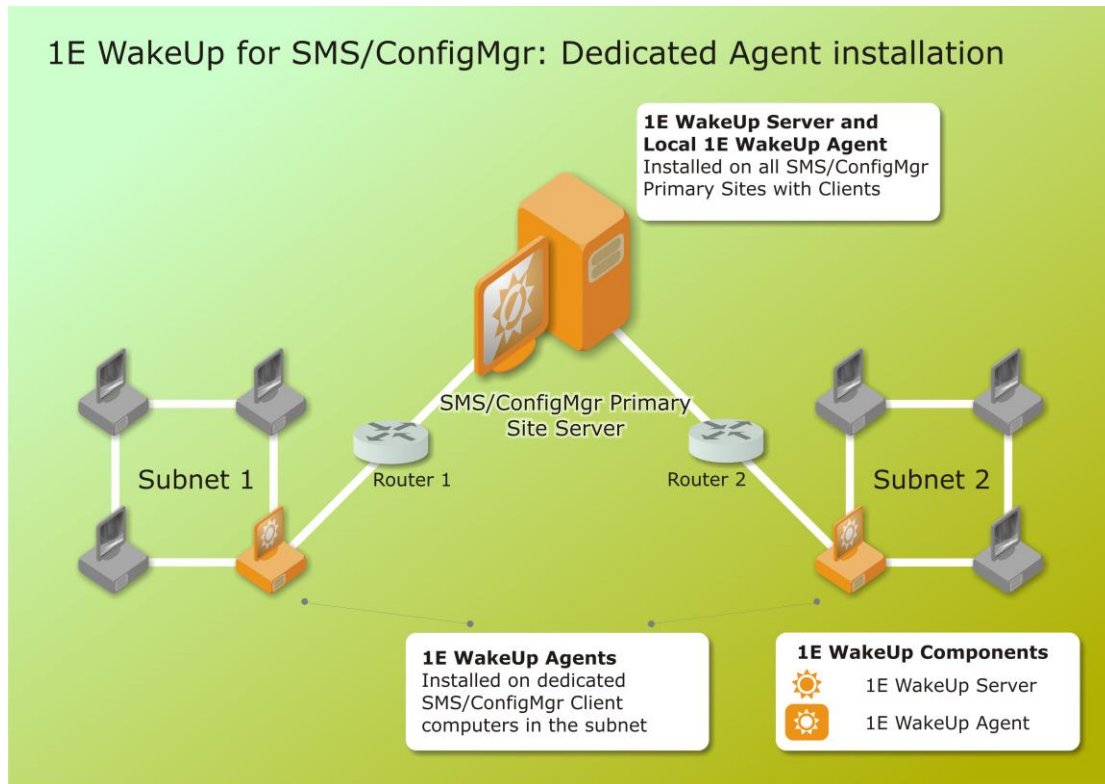
The following 1E WakeUp features are *only* available in Multi-Agent mode:

- Network wake-state reporting
- SMS/ConfigMgr Acceleration - Policy Refresh and Hardware Inventory Refresh
- Computer Health reporting and fixes
- Automatic shutdown, using NightWatchman, after wake up

Dedicated agents

In this mode a single machine on each remote subnet is identified as a 1E WakeUp Agent, as shown in *Figure 3*. The 1E WakeUp Server communicates only with this Agent. This mode means that the dedicated agent machine must remain on at all times in order to be able to process Server communications. For extra resilience, an alternate agent may also be specified if required. Again the 1E WakeUp Server should be installed as described under the *1E WakeUp Server installation* heading above.

Figure 3 - A network with dedicated 1E WakeUp Agents



Stand-alone Server

Only supported on networks that allow directed subnet broadcasts the 1E WakeUp Server and its local Agent are installed on each SMS/ConfigMgr primary site with clients, as shown in *Figure 1*. No other 1E WakeUp Agents are installed.

3.5 Installation modes for the NightWatchman Management Center

When using 1E WakeUp with the NightWatchman Management Center only a single 1E WakeUp Server can be used. This can still be installed in three modes: stand-alone server, dedicated agent and multiple-agents, as described below.

1E WakeUp Server installation

When integrating with the NightWatchman Management Center only one installation of the 1E WakeUp Server is needed. This is registered with the NightWatchman Management Center as the master wakeup service. The 1E WakeUp Server acts as the conduit for all wakeups and should be installed on a centrally located, well-connected server.

Multi-agent mode

In multi-agent mode a 1E WakeUp agent is installed on every computer on the network's subnets. The centrally located 1E WakeUp Server then communicates with selected agents to distribute wakeups locally on their subnets. This installation mode is shown in *Figure 4*. This mode avoids the overhead of having to support *Dedicated agents* and is ideal if there are many remote subnets.

Figure 4 - 1E WakeUp Multi-Agent installation



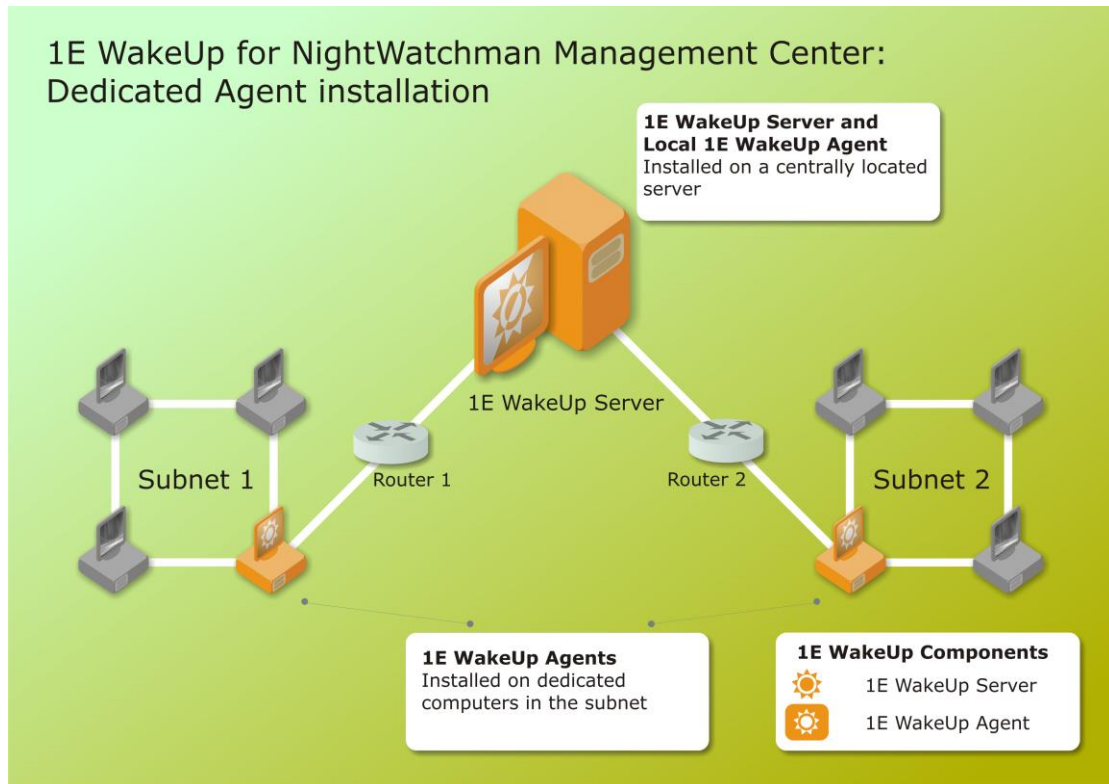
The following 1E WakeUp features are *only* available in Multi-Agent mode:

- Network wake-state reporting
- Computer Health reporting and fixes
- Automatic shutdown, using NightWatchman, after wake up

Dedicated agents

In this mode a single machine on each remote subnet is identified as a dedicated 1E WakeUp Agent, as shown in *Figure 5*. For each subnet the centrally located 1E WakeUp Server then communicates only with the dedicated Agent. As a result the dedicated agent machine must remain on at all times in order to be able to process 1E WakeUp Server communications. For more resilience, an alternate agent may also be specified if required. In this mode the additional features, such as computer health and wakeup statistics, are not supported.

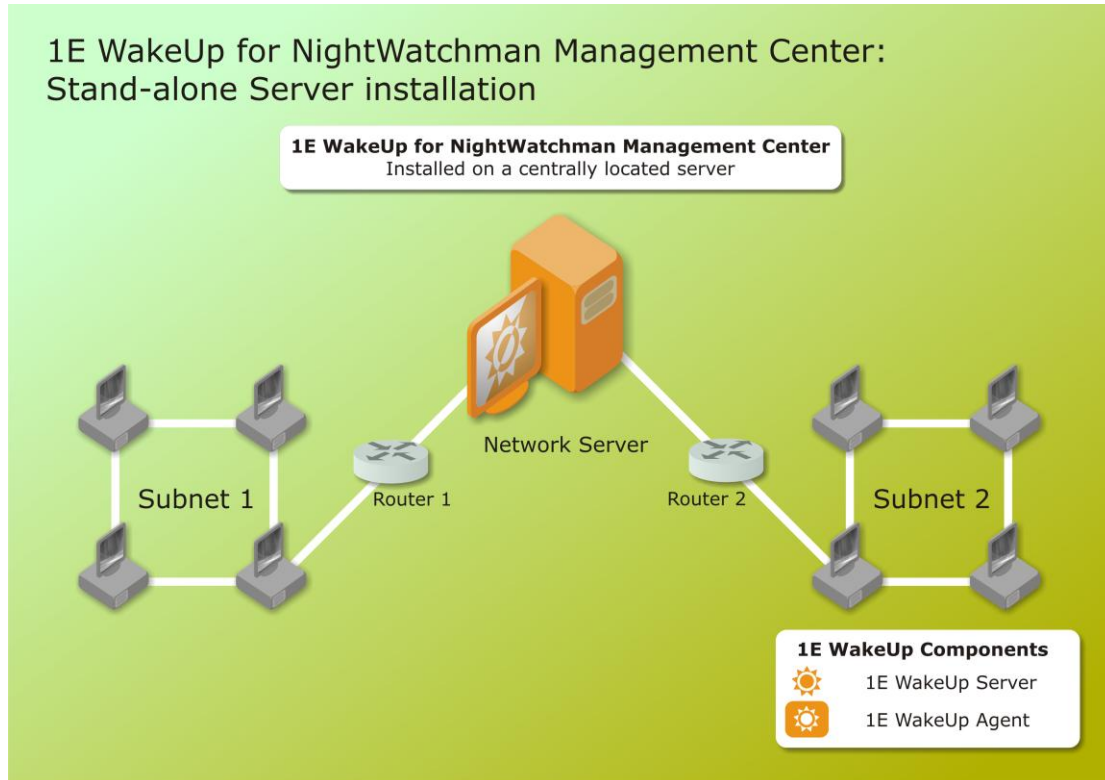
Figure 5 - Dedicated Agent installation



Stand-alone Server

In networks that support directed subnet broadcasts the 1E WakeUp Server and its local Agent may be installed on any centrally located server. No additional agents are installed as the network is open to broadcast wakeup packets. In this mode the additional features, such as computer health and wakeup statistics, are not supported.

Figure 6 - Stand-alone server installation



3.6 1E WakeUp security

Newer versions of 1E WakeUp support encryption for the packets used for communications between the 1E WakeUp server and agents. You can choose at installation whether you want full, partial or no encryption. The different options behave as follows:

Full Encryption

All communications will be encrypted and any unencrypted packets received will be ignored. This feature cannot be used in conjunction with previous versions of 1E WakeUp as these do not support encryption. For the same reason you cannot install the latest version as a hybrid where some components use no encryption and others use full encryption.

Partial Encryption

Either encrypted or unencrypted communications will be accepted. This is a useful half-way station to a fully encrypted configuration; that caters for the scenario where you upgrading an existing 1E WakeUp installation to use encryption and you do not want to re-install every single component in one go. The new installation will send out encrypted packets but the unencrypted packets sent by the previous version will still work.

No encryption

All packets sent will be unencrypted, in which case 1E WakeUp will behave the same as in previous versions.

Section 4 Installing 1E WakeUp

Prior to installation please check *Section 2 - Requirements*, and ensure that you are familiar with the 1E WakeUp installation modes and their suitability for particular networks, as described in *Section 3.3 Which 1E WakeUp installation mode suits my network?*

1E WakeUp installs using MSI technology which requires *Windows Installer*; if this is not present it can be downloaded from <http://www.microsoft.com/downloads>. You can install interactively using the wizard interface provided, or you can install 1E WakeUp quietly without interaction by setting all the configuration options on the MSI command line.

Note: You must have Administrator rights or allow the files to be installed with elevated privileges on the system in order to install and configure the 1E WakeUp Server and Agents.

The 1E WakeUp Server must be installed on all your SMS/ConfigMgr Primary servers as 1E WakeUp will only wake machines for the SMS/ConfigMgr site on which it is installed.

4.1 Installing the 1E WakeUp Server using the installation wizard

To install you run the *WakeUpSvr.msi* installer package. This can be done interactively following the steps in *Table 6*, or silently following the instructions given in *Section 4.2 - Installing the Server via the command-line*.

Table 6 - The 1E WakeUp Server installer interactive steps

1. The Welcome Screen	
No interaction required here, just click <i>Next</i> .	
2. License Agreement	
You must read and then accept this license information, by clicking on the <i>I accept the terms in the license agreement</i> option, before you can continue with the installation. Once this is done click <i>Next</i> to go to the next screen.	
3. User Information	
Here you enter your name and organization details along with the license key. You can leave the <i>License Key</i> section blank, in which case you get a 30 day evaluation license. The full license key is provided on purchase. If this is not present you can contact sales@1e.com to obtain a suitable key. Once the details have been entered click <i>Next</i> to continue.	
Note: Although the license only needs to be applied to the 1E WakeUp Server, you need to purchase licenses for all the SMS/ConfigMgr Client seats being serviced.	
4. Destination Directory	
Here you can change the 1E WakeUp installation directory or click <i>Next</i> to accept the default installation directory and settings. The default directory is:	
C:\Program Files\1E\WakeUp\	
5. Installation Type	
There are a number of options, which are described in the following table:	
Option	Description
Install Server Components	Select this checkbox to install the server components locally. This may be either the SMS/ConfigMgr or NightWatchman Management Center version of the 1E WakeUp server depending on whether the SMS/ConfigMgr provider has been found locally installed or not
SMS/ConfigMgr	Installs the SMS/ConfigMgr version of 1E WakeUp. If this option is selected the installer detected the SMS/ConfigMgr provider installed locally
NightWatchman Management Center	Installs the NightWatchman Management Center version of 1E WakeUp. If this option is selected the installer did not detect the

	SMS/ConfigMgr provider installed locally
Install Intel® AMT	This option selects to install the Intel® AMT component. This is only available when you have selected the <i>Install Server Components</i> checkbox
Admin Components	Installs the 1E WakeUp Console. This must be installed when the <i>Install Server Components</i> checkbox is selected.

6. Installation Options

Here you specify the configuration for how 1E WakeUp is installed, more details on making the correct decision for your network are provided in *Section 3 What is 1E WakeUp?*.

There are three main installation scenarios to choose from:

Scenario	Extra steps
Scenario A: Stand-alone Server	Does not require extra steps after finishing the current installation wizard.
Scenario B: Dedicated Agent	You will need to additionally install the dedicated 1E WakeUp Agents, as described in <i>Section 4.4 - Dedicated Agent Installation</i> .
Scenario C: Multiple Agents	You will need to additionally install each Multi-Agent, as described in <i>Section 4.5 - Multi-Agent Installation</i> .

On this screen you also set the level of encryption used in the communications between the 1E WakeUp server and agents during operation. Encryption prevents “packet sniffers” from examining the contents of the 1E WakeUp packet and deducing information about your network.

You have the following options to choose from when deciding on using encryption:

Encryption setting	Description
Disabled	All packets sent will be unencrypted, in which case 1E WakeUp will behave the same as in previous versions.
Partial	This option enables either encrypted or unencrypted communication to be accepted.
Full	This option specifies that all communications will be encrypted and any unencrypted packages found will be discarded.

Once you have selected the appropriate scenario and encryption settings click *Next* to continue.

7. Install AMT Mode

This screen is only displayed if you checked the *Install Intel® AMT* checkbox in *Step 5 - Installation Type*.

Here you select the type of AMT deployment mode used to configure the 1E WakeUp AMT server installation. The mode is one of the following:

Deployment mode	Description
Enterprise	Select this option if Intel® AMT is configured in enterprise mode, using Active Directory for authentication with Kerberos. This configures the service to run using an account that is a member of the Intel® AMT Collections Managers group. You will be required to enter the name of the TLS certificate template used for secure communications with the Intel® AMT device.
Small business	Select this option if Intel® AMT is configured in SMB mode. This configures the service to run using a user name and password for Digest authentication.

Underneath the AMT deployment mode you set the credentials for running the 1E WakeUp AMT service.

- If you selected *Enterprise* mode you will be prompted to provide a domain account that is a member of the AD group with access to the Intel® AMT Power Control realm for the network. The user name and password for the account must be provided, where the user name must be given in the format *Domain\User*.
- If you selected *Small Business* mode you will be prompted to provide the username and password for the account that has direct access to the Intel® AMT Power Control realm for the network.

Note: when installing 1E WakeUp Intel® AMT component in Small Business Mode the installer is unable to verify that the user credentials supplied have the appropriate permissions.

If you encounter problems with this functionality after installation you should check the 1E WakeUp Intel® AMT log file. If you see *Connection Failed* errors the likely cause is insufficient permissions on the account.

8. NightWatchman Management Center Configuration

Here you define the parameters for integrating with the NightWatchman Management Center.

You will need to have previously installed the Agility Framework and have taken note of the host Server name.

Parameter	Description
Enable reporting mode	<p>Check this checkbox to enable reporting and the other controls on this screen. This option is user configurable only when the 1E WakeUp server installation type is SMS/ConfigMgr, which happens when the installer detects a local installation of the SMS/ConfigMgr provider.</p> <p>When the 1E WakeUp server installation type is NightWatchman Management Center this will be automatically checked and all the other controls will always be available.</p>
Reporting server text field	<p>Enter the name of the Server where the NightWatchman Management Center Web Service Component is installed. This field will validate whether the name entered allows the Web Service Component to be contacted.</p>
Create Computer Health Collections	<p>This checkbox is only available when the 1E WakeUp server installation type is SMS/ConfigMgr. It enables 1E WakeUp to create the Computer Health collections in SMS/ConfigMgr to hold the resources that have failed any of the Computer Health checks.</p> <p>When Computer Health is used you must check this box on all 1E WakeUp installations on SMS/ConfigMgr Primary Sites in order to create the collections at the Central Site and populate the inherited collections at Child Sites.</p> <p>Note: the creation of the Computer Health Collections relies on the NightWatchman Management Center Report Component, including the 1E WakeUp reports, having already been installed, see the <i>Computer Health and Reporting Requirements</i> heading under <i>Section 2 - Requirements</i> for more details.</p>
Register as master WakeUp provider with NightWatchman Management Center	<p>This checkbox will register the current installation of the 1E WakeUp server as the master WakeUp provider for NightWatchman Management Center.</p> <p>You will need to restart the NightWatchman Management Center after installing 1E WakeUp for this setting to take effect.</p>

Click *Next* to continue to the *Start Installation* screen of the installer.

9. Start Installation

The *Start Installation* screen is the final step before committing to and installation. Click *Next* to continue and install using the selected options. After this you will be shown the final screen of the wizard telling you that installation has been successful, click on *Finish* to end the wizard.

4.2 Installing the Server via the command-line

Here we describe how to install 1E WakeUp server via the command-line. You can modify the 1E WakeUp installation parameters using the command line switches given in *Appendix A - 1E WakeUp Installation Switches*.

Installing 1E WakeUp for SMS/ConfigMgr

To install 1E WakeUp with the SMS/ConfigMgr server type (which must be done on the server where the SMS/ConfigMgr WMI provider is installed) you run an installer command-line like the following:

```
c> msixec /i wakeupsvr.msi PIDKEY="ABCD-1234-5678-8765-4321" SERVERCOMPONENTS=1
SERVERTYPE=SMS AFREPORTING=ON REPORTINGSERVER=<RepServ> HEALTH=ON /QN
```

Where *ABCD-1234-5678-8765-4321* in the preceding command-line is an example placeholder for the 1E WakeUp key you need to obtain from sales@1e.com and *<RepServ>* is an example placeholder for the server where the NightWatchman Management Center Web Service is installed.

Installing 1E WakeUp for NightWatchman Management Center

To install 1E WakeUp for NightWatchman Management Center you run an installer command-line like the following:

```
c> msixec /i wakeupsvr.msi PIDKEY="ABCD-1234-5678-8765-4321" SERVERCOMPONENTS=1
SERVERTYPE=NMC AFREPORTING=ON REPORTINGSERVER=<RepServ> HEALTH=ON /QN
```

Where *ABCD-1234-5678-8765-4321* in the preceding command-line is an example placeholder for the 1E WakeUp key you need to obtain from sales@1e.com and *<RepServ>* is an example placeholder for the server where the NightWatchman Management Center Web Service is installed.

Installing 1E WakeUp with the Intel® AMT component

To install 1E WakeUp for SMS/ConfigMgr with the Intel® AMT component you run an installer command-line like the following:

```
c> msixec /i wakeupsvr.msi PIDKEY="ABCD-1234-5678-8765-4321" SERVERCOMPONENTS=1
SERVERTYPE=SMS AFREPORTING=ON REPORTINGSERVER=<RepServ> HEALTH=ON INSTALLAMT=1
AMTMODE=SMB SVCUSER=<SVCUser> SVCPASSWORD=<SVCPassword> /QN
```

Where *ABCD-1234-5678-8765-4321* in the preceding command-line is an example placeholder for the 1E WakeUp key you need to obtain from sales@1e.com, *<RepServ>* is an example placeholder for the server where the NightWatchman Management Center Web Service is installed, *<SVCUser>* is an example placeholder for the AMT service account username and *<SVCPassword>* is an example placeholder for the AMT service account password.

4.3 Installing onto a split Configuration Manager installation

Details on installing 1E WakeUp Server onto a split Configuration Manager installation, where the Configuration Manager Provider is on a computer remote from the Configuration Manager Server, can be found in *Appendix B - Installing 1E WakeUp on a Split ConfigMgr install*.

4.4 Dedicated Agent Installation

To install the dedicated Agent you first need to have installed the 1E WakeUp Server and you need the name of the server where the Server was installed. You then need to identify a single machine on each remote subnet which can act as a dedicated Agent machine. It is on the dedicated Agent machine that you run the installation command line described below.

Note: This machine must be kept on at all times.

In order to reduce the size of the agent package, it is necessary to run the installation from the command line. The command line for a standard silent dedicated agent install is as follows.

```
C> msixec /i wakeUpAgt.msi AGENTTO=<WUSrv> REPORTINGSERVER=<NWMCWsrV> /qn
```

Where *<WUSrv>* is a placeholder in this example for the server name where 1E WakeUp Server is installed and *<NWMCWsrV>* is a placeholder for the server name where the NightWatchman Management Center Web Service component is installed.

Note: License key information is only required during the 1E WakeUp Server installation process. Although the license only needs to be applied to the 1E WakeUp Server, you need to purchase licenses for all the SMS/ConfigMgr Client seats being serviced.

The command-line switches specific to the dedicated agent installation are:

Table 7 - Dedicated 1E WakeUp Agent installer switches

Switch	Description
AGENTTO	This is a mandatory parameter that sets the name of the server hosting the 1E WakeUp Server.

Please refer to *Table 10* in *Appendix A - 1E WakeUp Installation Switches* for details on the other parameters that can be set at installation time.

No other action is required as the Agent will automatically register with the controlling primary site once the service starts as part of the installation.

It is also possible to install an alternate dedicated agent. This allows for two dedicated agents per subnet providing redundancy if one of the agents needs to be taken offline. Simply install the Agent as above on another machine using the same command line.

4.5 Multi-Agent Installation

Multi agent installation should be performed on all machines in your environment. This ensures that, provided at least one machine on the each subnet is turned on, the wakeup call is distributed.

The best way to install the agent is to run the installation from the command line. The command line for a standard silent Multi-Agent install is as follows:

```
C> msisexec /i wakeUpAgt.msi REPORTINGSERVER=<NWMCSrv> /qn
```

where <NWMCSrv> is a placeholder for the server name where the NightWatchman Management Center Web Service component is installed.

Note: The license does not need to be applied to the Agent. Although the license only needs to be applied to the 1E WakeUp Server, you need to purchase licenses for all the 1E WakeUp Agents being used.

The possible command-line switches for agent installation are shown in *Table 10* in *Appendix A - 1E WakeUp Installation Switches*.

No other action is required. The 1E WakeUp Server will locate a working Agent during the next wakeup request.

Configuring 1E WakeUp Computer Health reporting and fixes

The use of SMS/ConfigMgr Computer Health reporting and fixes requires the following:

- You must install using Multi-Agent mode. This is set during the installation of the 1E WakeUp Server.
- The NightWatchman Management Center from 1E must be installed and running.
- NightWatchman Management Center communications and Computer Health reporting should be enabled on the 1E WakeUp Server.
- Computer Health reporting should be enabled on all the 1E WakeUp Agents. This can be done by setting the *HEALTH* installation switch to *ON*.

Installing the 1E WakeUp Agent interactively

The following steps show how to set up the 1E WakeUp Agent interactively. It also provides links to the installer command-line switches that are used to set the equivalent when installing silently.

Table 8 - The 1E WakeUp Agent installer interactive steps

<p>1. The Welcome Screen</p> <p>No interaction required here, just click <i>Next</i>.</p>
<p>2. Destination Directory</p> <p>Here you can change the 1E WakeUp installation directory or click <i>Next</i> to accept the default installation directory and settings. The default directory is:</p> <pre>C:\Program Files\1E\wakeUp\</pre> <p>This can be set via the installer command-line using the <i>INSTALLDIR</i> installer command-line switch.</p>
<p>3. Reporting Configuration</p> <p>Here you set the communications with the NightWatchman Management Center. You can set up communications via both <i>http</i> and <i>https</i> or either one, depending on what you have implemented for the NightWatchman Management Center.</p> <p>To set up the <i>http</i> communications you click on the <i>Enable HTTP</i> checkbox and enter the name of the server where the NightWatchman Management Center Web Service Component is installed in the edit field that becomes enabled.</p> <p>This can be set via the installer command-line using the <i>REPORTINGSERVER</i> installer command-line switch.</p> <p>To set up the <i>https</i> communications you click on the <i>Enable HTTPS</i> checkbox and enter the name of the server where the NightWatchman Management Center Web Service Component is installed in the edit field that becomes enabled.</p> <p>This can be set via the installer command-line using the <i>SECUREREPORTINGSERVER</i> installer command-line switch.</p> <p>You can then optionally set the local certificate store settings for the <i>https</i> server. This is done by checking the <i>Use client certificate from local certificate store</i> checkbox and selecting to match against the certificate issuer or subject using the radio buttons and then entering some search text in the associated text field.</p> <p>This can be set via the installer command-line by setting either of the <i>CERTISSUER</i> or <i>CERTSUBJECT</i> installer command-line switches to the search text.</p> <p>Note: interactive installation of the 1E WakeUp Agent does not support specification of both the Certificate issuer and the Certificate subject match. It is possible to configure this using the installer command-line switches via the command-line.</p>
<p>4. Start Installation</p> <p>The <i>Start Installation</i> screen is the final step before committing to and installation. Click <i>Next</i> to continue and install using the selected options. After this you will be shown the final screen of the wizard telling you that installation has been successful, click on <i>Finish</i> to end the wizard.</p>

Agent web service communications

As mentioned above the 1E WakeUp Agent is able to use both http and https communications. On the 1E WakeUp Agent installer command-line you can set values for all of the *REPORTINGSERVER*, *SECUREREPORTINGSERVER*, *CERTISSUER* and *CERTSUBJECT* command-line switches. In this case the 1E WakeUp Agent will attempt to communicate with the NightWatchman Management Center Web Service using all the protocols and security levels in the following order:

1. HTTP
2. HTTPS without certificate
3. HTTPS using certificate subject match
4. HTTPS using certificate issuer match

This is to cater for the scenario where a machine is mobile and likely to connect in a variety of situations: HTTP could be used for the internal network; HTTPS could be used when connecting from an external location.

4.6 Relicensing the 1E WakeUp Server

If 1E WakeUp is initially installed using the 30-day evaluation license, it can be relicensed later, once a full license has been purchased, by running the following command line:

```
> wakeupsvr.exe -relicense=<LicenseKey>
```

Where <LicenseKey> represents the license key purchased from 1E.

4.7 Upgrading from 1E WakeUp 5.2

Upgrading from 1E WakeUp 5.2 is done using the following command-line:

```
> msixexec /i WakeUpSvr.msi /qn
```

This will keep all the appropriate settings from the earlier version.

Upgrading the agents

You will also need to upgrade the agents to version 5.6 to support the new Computer Health features. This is done using the following installer command-line:

```
> msixexec /i WakeUpAgt.msi /qn
```

This will keep all the appropriate settings from the earlier version.

4.8 Uninstalling the 1E WakeUp Server and Agents

Uninstalling is done using the *Add/Remove Programs* option in the *Windows Control Panel*.

Uninstalling the 1E WakeUp Server

Select the *1E WakeUp Server* item in the *Add/Remove Programs* dialog and click on *Remove*.

Note: The server machine will also have the 1E WakeUp Agent installed on it, as required in order for the 1E WakeUp Server to work correctly. The Agent is also removed when you use the Add/Remove programs to uninstall 1E WakeUp.

Uninstalling the 1E WakeUp Agent

Select the *1E WakeUp Agent* item in the *Add/Remove Programs* dialog and click on *Remove*. You can also uninstall silently using the following command line:

```
C> msixexec /x WakeUpAgt.msi /qn
```

4.9 Installing 1E WakeUp Reporting

To view Computer Health and other 1E WakeUp network wake state reports please refer to *The NightWatchman Management Center Reporting Guide*.

4.10 Installing 1E Web WakeUp

To install the 1E Web WakeUp component please refer to *The 1E Web WakeUp Guide*.

Section 5 Post Installation Steps

This section describes any post installation steps required for 1E WakeUp when using Intel® AMT functionality with SMS or Configuration Manager.

5.1 Using Intel® AMT functionality with SMS

In order to extend the SMS hardware inventory for Intel AMT machines you need to perform the following steps after installation:

1. Locate and create a copy of the file SMS_DEF.MOF. This can be found in the following location:

```
<sms or configmgr install directory>\inboxes\clfiles.src\hin\SMS_DEF.MOF
```

2. Append the contents of the following file to the copy of SMS_DEF.MOF

```
<1E WakeUp Server install dir>\Hardware Extensions\1EWakeUp_IntelAMT_def.mof
```

3. Save the file and run

```
mofcomp -check SMS_DEF.MOF
```

to ensure that the new MOF file is valid.

4. Backup the existing SMS_DEF.MOF file from

```
<sms or configmgr install directory>\inboxes\clfiles.src\hin
```

and overwrite the file with the copy.

The MOF file is automatically compiled by the Inventory Data Loader. To verify this, open Site Status/Component Status in the SMS\ConfigMgr Admin console and view all status messages for SMS_INVENTORY_DATA_LOADER.

You will only receive the success message here if the MOF files compile correctly. Otherwise you will need to check:

```
<sms or configmgr install directory>\logs\dataldr.log
```

for the following line:

```
End of cimv2\sms-to-policy conversion: returning 0x0
```

5. Create an SMS advertisement and compile the SMS_DEF.MOF file on all your SMS clients.
6. The next hardware inventory cycle on the clients will populate the SMS database with a list of Intel AMT machines discovered by the 1E WakeUp agent.

5.2 Using Intel® AMT functionality with Configuration Manager

In order to extend the Configuration Manager hardware inventory for Intel AMT machines you need to perform the following steps after installation:

1. Locate and create a copy of the file SMS_DEF.MOF. This can be found in the following location:

```
<sms or configmgr install directory>\inboxes\clfiles.src\hinv\SMS_DEF.MOF
```

2. Append the following entries to the copy of SMS_DEF.MOF

```

/*****
/* Class: wakeUp_1E_AMT
/* Derived from: SMS_Class_Template
/*
/* Key = KeyName
/*
/* This Application class provides 1E WakeUp Server with a list of Intel AMT
capable machines
/*
/*****
[ SMS_Report(TRUE),
  SMS_Group_Name("wakeUp_1E_IAMT"),
  SMS_Class_ID("MICROSOFT|wakeUp_1E_IAMT|1.0")]
class wakeUp_1E_IAMT : SMS_Class_Template
{
    [SMS_Report(TRUE), key]      string KeyName;
    [SMS_Report(TRUE) ] uint32 Enabled;
};
Save the file and run

mofcomp -check SMS_DEF.MOF

to ensure that the new MOF file is valid.

```

3. Locate and create a copy of the file CONFIGURATION.MOF. This can be found in the following location:

```
<sms or configmgr install directory>\inboxes\clfiles.src\hinv\CONFIGURATION.MOF
```

4. Append the following entries to the copy of CONFIGURATION.MOF

```

//-----
// 1E wakeUp - Intel AMT Detection
//-----
[DYNPROPS]
class wakeUp_1E_IAMT
{
[key]  string KeyName="";
      uint32 Enabled;
};

//Instance Info
[DYNPROPS]
instance of wakeUp_1E_IAMT
{
    KeyName="wakeUp_1E_IAMT";
    [PropertyContext
("local|HKEY_LOCAL_MACHINE\\SOFTWARE\\1E\\wakeUpAgt\\Hardware|IntelAMTEnabled"
), Dynamic, Provider("RegPropProv")] Enabled;
};

#pragma namespace ("\\.\root\cimv2")

```

5. Backup the existing SMS_DEF.MOF and CONFIGURATION.MOF files from

<sms or configmgr install directory>\inboxes\clfiles.src\hinv

and overwrite the file with the copies created above.

The MOF files are automatically compiled by the Inventory Data Loader. To verify this, open Site Status/Component Status in the SMS\ConfigMgr Admin console and view all status messages for SMS_INVENTORY_DATA_LOADER.

You will only receive the success message here if the MOF files compile correctly. Otherwise you will need to check:

<sms or configmgr install directory>\logs\dataldr.log

for the following line:

End of cimv2\sms-to-policy conversion: returning 0x0

6. The next hardware inventory cycle on the clients will populate the Configuration Manager database with a list of Intel AMT machines discovered by the 1E WakeUp agent.

Section 6 Troubleshooting

This section will help point you to the right area to diagnose any problems encountered when using 1E WakeUp. It describes how to run the diagnostic tools and techniques used for supporting and troubleshooting 1E WakeUp. Additional information on creating problem reports is given in the *Troubleshooting* section of *The 1E WakeUp Administrator's Guide*.

6.1 Check the prerequisites

When troubleshooting problems with 1E WakeUp you should first check that the system meets the requirements given in *Section 2 - Requirements*. If the requirements are met you should then run the diagnostic help system. If that does not provide an immediate solution follow the process for creating a problem report to send to the 1E technical support team as described below.

6.2 Common problems

The following is a list of commonly encountered installation problems and their solutions.

Windows Firewall settings

By default 1E WakeUp uses TCP and UDP ports 1776 to communicate with the 1E WakeUp Agents when installed in one of the Agent modes. By default windows Firewall restricts port access, so the port must be re-opened prior to using the 1E WakeUp Agent. The following command-line opens the necessary ports for access:

```
> netsh firewall set portopening tcp 1776 1EWakeUpTCP
> netsh firewall set portopening udp 1776 1EWakeUpUDP
```

Note: If you have changed the default port you will also need to change the port listed in the command-line above.

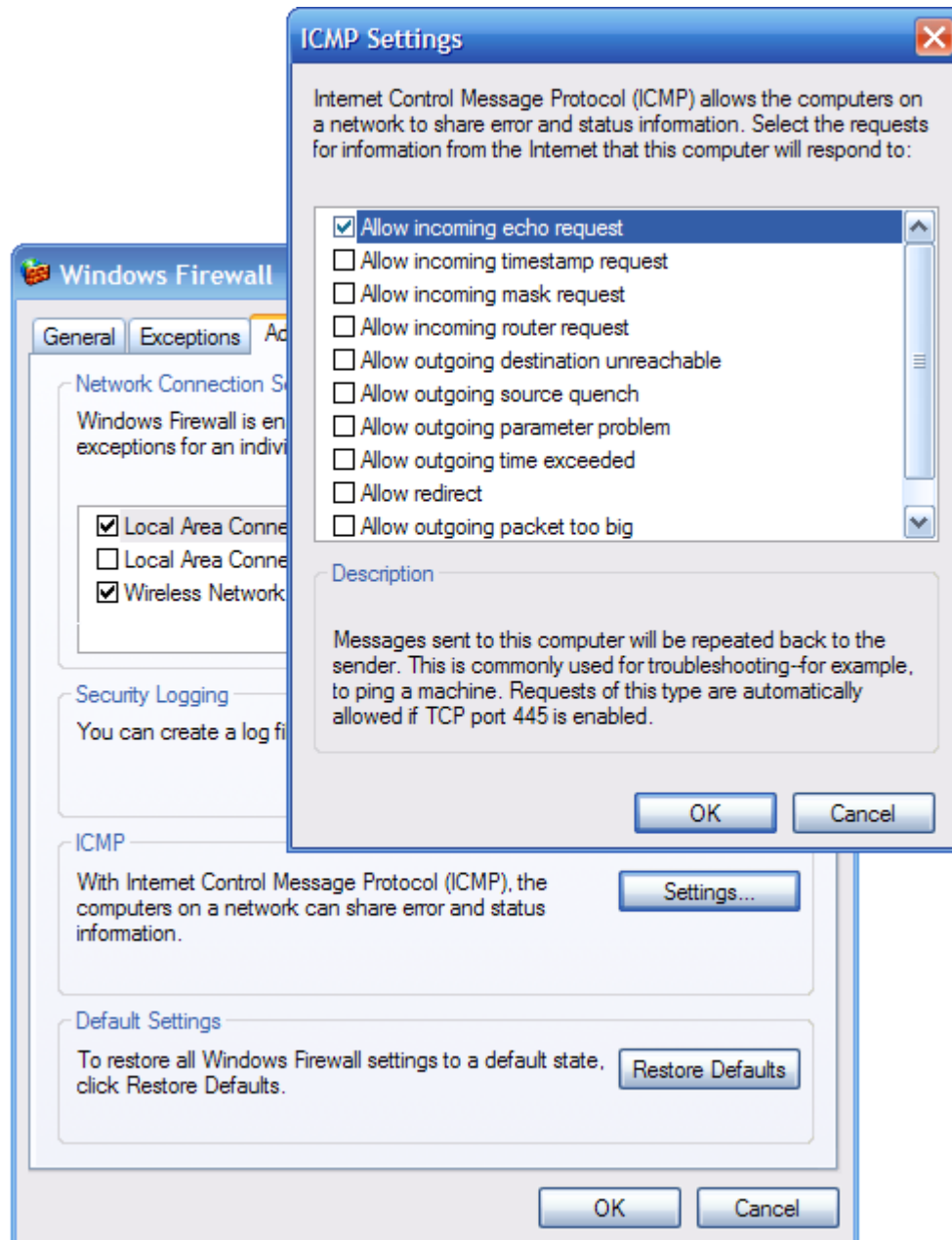
This command-line should be run on every machine where an Agent is installed, a convenient way to do this would be to create an SMS/ConfigMgr Package and Program with the above command line and advertise to all your 1E WakeUp Agent machines.

You will also need to check that the ICMP echo request settings are enabled. There are two different ways of doing this depending whether the machine is running Windows XP SP2 or Windows Vista. These methods are outlined below.

ICMP Settings on Windows XP

To do this on Windows XP you go to the *Windows Firewall Control Panel* item, switch to the *Advanced* tab and click on the *Settings...* button in the *ICMP* section. In the *ICMP Settings* dialog you need to make sure that the first item *Allow incoming echo request* is checked, as shown in *Figure 7*.

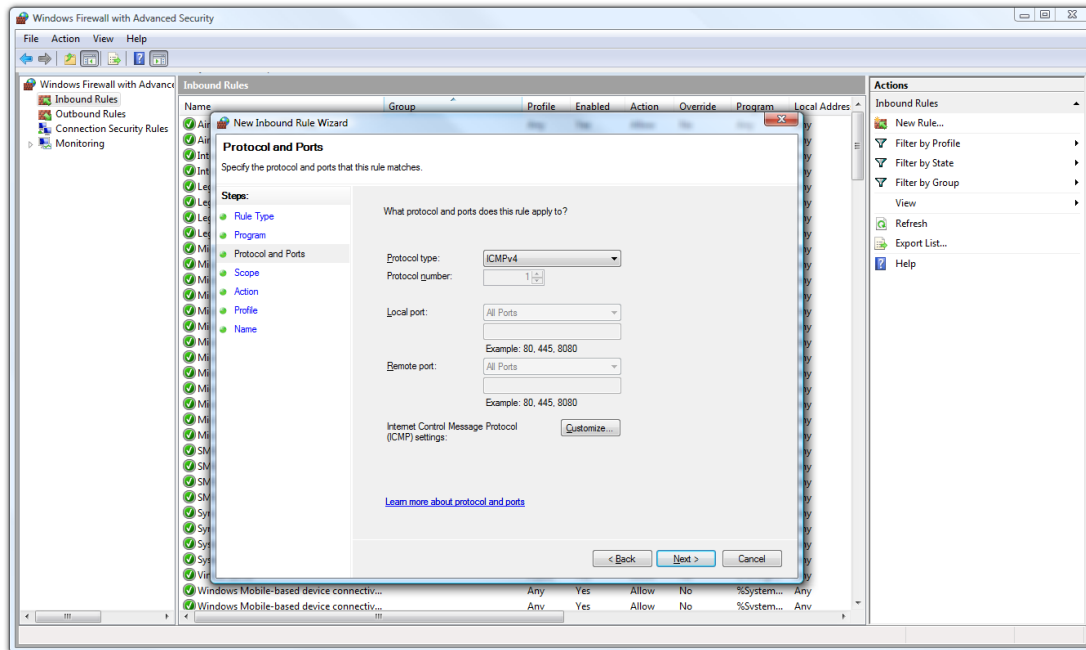
Figure 7 - The Windows Firewall ICMP Settings dialog



ICMP Settings on Windows Vista

To configure Windows Firewall on Vista to allow ICMP Ping you will need to add a new Inbound Rule in the *Windows Firewall with Advanced Security* Control Panel application. *Figure 8* shows the *New Inbound Rule Wizard* and a custom rule being created with the *ICMPv4* protocol selected. You will also need to choose the *Echo Request* type from the *Customize ICMP Settings* dialog, displayed when you click on the *Customize...* button. Please check your Windows documentation for complete details on adding the Inbound Rule.

Figure 8 - The New Inbound Rule Wizard



Problems using Intel® AMT functionality in Small Business mode

When the 1E WakeUp Intel® AMT component has been installed in Small Business Mode the installer is unable to verify that the user credentials supplied have the appropriate permissions.

If you encounter problems with this functionality after installation you should check the 1E WakeUp Intel® AMT log file called *amtlog.log* by default. If you see *Connection Failed* errors the likely cause is insufficient permissions on the account.

1E WakeUp menu does not appear in SMS/ConfigMgr console after installation

If you install 1E WakeUp with the SMS/ConfigMgr console open, the installation will complete successfully but the 1E WakeUp option menu will not become available until the SMS/ConfigMgr console has been closed and restarted.

Policy Refresh does not cause faster software distributions

If this is the case, if the agent log file indicates that a policy refresh has occurred, but the software distribution still takes longer to start, then it is likely that the policy refresh occurred before the SMS/ConfigMgr Management Point was updated. This can occur when creating new Advertisements for immediate distribution.

The delay before a policy refresh is performed can be set at installation time using the *DELAYCYCLEMSSECS* installer command-line switch.

Post installation, to increase the delay before a policy refresh is performed, the following registry key can be used:

```
HKLM\SOFTWARE\1E\wakeUpAgent\DelayCycleSMSSECS
```

This is set to 16 seconds by default.

Error message *Check Service is running* is displayed

This error message may be displayed when running on Windows Server 2003 after selecting *1E WakeUp* from the right-click context menu in the SMS/ConfigMgr Admin Console. This sometimes occurs when the *.MOF* files fail to get compiled during installation. To resolve this issue perform the following steps:

1. Open a command-prompt
2. Change directory to the 1E WakeUp installation folder
3. Run the following command-line:

```
Mofcomp -class:forceupdate SMSwakProv.mof
```

No scheduled wakeups when SMS/ConfigMgr server is restored after downtime

If an SMS/ConfigMgr server is down for a period of around two hours, wakeups will not be sent for adverts that would have been scheduled in that time. Once the server is restored you are advised to use the *1E WakeUp* right-click context menu action to manually send any required wakeups.

Section 7 Further Information

After you have completed the installation of 1E WakeUp, additional information can be found in *The 1E WakeUp Administrators Guide*. That guide provides information about configuring 1E WakeUp for use on your network. It also has a comprehensive troubleshooting section that provides details on determining the capabilities for your network supporting Magic Packets.

For more detailed questions about specific situations that may be relevant to your network you are always welcome to contact 1E directly. Our contact details are provided below.

7.1 Contact Details

1E provide a number of SMS/ConfigMgr enhancement tools as well as consultancy services. This section provides information on how to get information about 1E and contact details for the various departments within 1E.

Website

The essential resource for information about 1E and its products is the website.

1e.com

The postal address for 1E is:

Head Office:
1E Ltd,
97-107 Uxbridge Rd,
London W5 5TL, UK

Sales

To contact the sales department at 1E you can use the following email address:

sales@1e.com

Technical Support

To contact the technical support department at 1E you can use the following address:

support@1e.com

Appendix A 1E WakeUp Installation Switches

This appendix describes the complete set of install switches for both the 1E WakeUp Server and Agents.

A.1 1E WakeUp Server installer switch reference

Where values are supplied the syntax for setting the switch is *switch=value*. Quotes are not required for the value unless it includes spaces, though quotes can be added to all values without problem. For example the following sets Agility Framework reporting to on and the installation directory to *C:\Program Files\1E\WakeUp\Server*.

```
C> msiexec /i wakeUpSvr.msi AFREPORTING=ON INSTALLDIR="C:\Program
Files\1E\WakeUp\Server" /qn
```

The following table shows the 1E WakeUp Server installation switches which enable configuration of certain 1E WakeUp console parameters at install time.

Table 9 - The 1E WakeUp Server installer switches

Switch	Description						
AFREPORTING	<p>Set the Agility Framework reporting state. This can be one of the following values:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>"OFF"</td> <td>Turns the 1E WakeUp reporting off.</td> </tr> <tr> <td>"ON"</td> <td>Turns the 1E WakeUp reporting on.</td> </tr> </tbody> </table> <p>The default value for this flag is <i>OFF</i>.</p>	Value	Description	"OFF"	Turns the 1E WakeUp reporting off.	"ON"	Turns the 1E WakeUp reporting on.
Value	Description						
"OFF"	Turns the 1E WakeUp reporting off.						
"ON"	Turns the 1E WakeUp reporting on.						
AGENTTCP_PORT	<p>Set the listening port used by the 1E WakeUp Server to communicate with the 1E WakeUp Agents. The value for this switch must be the same for the 1E WakeUp Server and all Agents.</p> <p>The default value for this switch is 1776.</p>						
AMTLOGFILENAME	<p>Sets the log file name for the Intel® AMT component.</p> <pre>AMTLOGFILENAME=amtlog.log</pre> <p>This will be located in the directory specified by <i>LOGFILEPATH</i>.</p> <p>The default value for this switch is <i>WakeUpAMTSvr.log</i>.</p>						
AMTMODE	<p>Here you select the type of AMT deployment mode used to configure the 1E WakeUp AMT server installation. The mode is one of the following:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Enterprise</td> <td>Select this option if Intel® AMT is configured in enterprise mode, using Active Directory for authentication with Kerberos. This configures the service to run using an account that is a member of the Intel® AMT Collections Managers group.</td> </tr> <tr> <td>SMB</td> <td>Select this option if Intel® AMT is configured in SMB mode. This configures the service to run using a user name and password for Digest authentication.</td> </tr> </tbody> </table>	Value	Description	Enterprise	Select this option if Intel® AMT is configured in enterprise mode, using Active Directory for authentication with Kerberos. This configures the service to run using an account that is a member of the Intel® AMT Collections Managers group.	SMB	Select this option if Intel® AMT is configured in SMB mode. This configures the service to run using a user name and password for Digest authentication.
Value	Description						
Enterprise	Select this option if Intel® AMT is configured in enterprise mode, using Active Directory for authentication with Kerberos. This configures the service to run using an account that is a member of the Intel® AMT Collections Managers group.						
SMB	Select this option if Intel® AMT is configured in SMB mode. This configures the service to run using a user name and password for Digest authentication.						
BURSTDELAY	<p>Sets the number of seconds between each batch of wakeup requests being transmitted to a 1E WakeUp Agent system.</p> <p>This defaults to 5 seconds.</p>						

CHECKPOLICYREFRESHINNAME	<p>Determines whether policy refreshes are sent depending on specific strings that appear in the SMS/ConfigMgr Advertisement name.</p> <table border="1" data-bbox="655 297 1347 611"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Policy refreshes are sent for each Advertisement unless the text <i>NoPolicyRefresh</i> appears in the SMS/ConfigMgr Advertisement name or comment.</td> </tr> <tr> <td>1</td> <td>Wakeups are only sent when the text <i>PolicyRefreshEnabled</i> exists in the SMS/ConfigMgr Advertisement name or comment.</td> </tr> </tbody> </table> <p>This parameter defaults to 0.</p>	Value	Description	0	Policy refreshes are sent for each Advertisement unless the text <i>NoPolicyRefresh</i> appears in the SMS/ConfigMgr Advertisement name or comment.	1	Wakeups are only sent when the text <i>PolicyRefreshEnabled</i> exists in the SMS/ConfigMgr Advertisement name or comment.		
Value	Description								
0	Policy refreshes are sent for each Advertisement unless the text <i>NoPolicyRefresh</i> appears in the SMS/ConfigMgr Advertisement name or comment.								
1	Wakeups are only sent when the text <i>PolicyRefreshEnabled</i> exists in the SMS/ConfigMgr Advertisement name or comment.								
CHECKWAKEUPINNAME	<p>Determines whether wakeups are sent depending on specific strings that appear in the SMS/ConfigMgr Advertisement name.</p> <table border="1" data-bbox="655 781 1347 1064"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Wakeups are sent for each Advertisement unless the text <i>NoWakeUps</i> appears in the SMS/ConfigMgr Advertisement name or comment.</td> </tr> <tr> <td>1</td> <td>Wakeups are only sent when the text <i>WakeUpsEnabled</i> exists in the SMS/ConfigMgr Advertisement name or comment.</td> </tr> </tbody> </table> <p>This parameter defaults to 0.</p> <p>Note: if the check wakeups in name option is turned on then any Software Updates Assignment in ConfigMgr that you want to associate with 1E WakeUp will have to have the text <i>WakeUpsEnabled</i> in the name or comment.</p>	Value	Description	0	Wakeups are sent for each Advertisement unless the text <i>NoWakeUps</i> appears in the SMS/ConfigMgr Advertisement name or comment.	1	Wakeups are only sent when the text <i>WakeUpsEnabled</i> exists in the SMS/ConfigMgr Advertisement name or comment.		
Value	Description								
0	Wakeups are sent for each Advertisement unless the text <i>NoWakeUps</i> appears in the SMS/ConfigMgr Advertisement name or comment.								
1	Wakeups are only sent when the text <i>WakeUpsEnabled</i> exists in the SMS/ConfigMgr Advertisement name or comment.								
CERTIFICATENAME	Sets the name for the TLS certificate template used for secure communications when running Intel® AMT service in enterprise mode								
DEBUG	<p>Sets the debug level for 1E WakeUp Server.</p> <p>The default value for this switch is 9.</p>								
ENCRYPTIONLEVEL	<p>Sets the encryption level for packets used in 1E WakeUp communications. It takes the following values:</p> <table border="1" data-bbox="655 1550 1347 1731"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>No encryption</td> </tr> <tr> <td>1</td> <td>Partial encryption</td> </tr> <tr> <td>2</td> <td>Full encryption</td> </tr> </tbody> </table> <p>The default value for this flag is 0 for <i>no encryption</i>.</p>	Value	Description	0	No encryption	1	Partial encryption	2	Full encryption
Value	Description								
0	No encryption								
1	Partial encryption								
2	Full encryption								
FEEDBACKENABLED	<p>Enables or disables 1E WakeUp agent reporting of Advertisement status. By default reporting is on.</p> <table border="1" data-bbox="655 1872 1347 2011"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Reporting is disabled</td> </tr> <tr> <td>1</td> <td>Reporting is enabled</td> </tr> </tbody> </table>	Value	Description	0	Reporting is disabled	1	Reporting is enabled		
Value	Description								
0	Reporting is disabled								
1	Reporting is enabled								

	Note: if this reporting is disabled, 1E WakeUp reports will be unavailable, except for Computer Health.						
HEALTH	<p>Configures whether 1E WakeUp creates SMS/ConfigMgr Collections containing resources whose SMS/ConfigMgr Clients failed the Computer Health check. It takes the following values:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>"OFF"</td> <td>Disables the creation of SMS/ConfigMgr Collections.</td> </tr> <tr> <td>"ON"</td> <td>Enables the creation of SMS/ConfigMgr Collections.</td> </tr> </tbody> </table> <p>The default value for this flag is <i>OFF</i>.</p>	Value	Description	"OFF"	Disables the creation of SMS/ConfigMgr Collections.	"ON"	Enables the creation of SMS/ConfigMgr Collections.
Value	Description						
"OFF"	Disables the creation of SMS/ConfigMgr Collections.						
"ON"	Enables the creation of SMS/ConfigMgr Collections.						
HOURSON	<p>Set reporting on the SLA hours on the network health check.</p> <p>This parameter may be set to OFF or ON.</p>						
HTTP	<p>Set the communications used for the Agility Framework reporting. This can be one of the following values:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>HTTP</td> <td>Configure 1E WakeUp to communicate with the Agility Framework using standard communications.</td> </tr> <tr> <td>HTTPS</td> <td>Configure 1E WakeUp to communicate with the Agility Framework using secure HTTP.</td> </tr> </tbody> </table> <p>Note: This flag must be set to the same mode that the Agility Framework has been configured for.</p>	Value	Description	HTTP	Configure 1E WakeUp to communicate with the Agility Framework using standard communications.	HTTPS	Configure 1E WakeUp to communicate with the Agility Framework using secure HTTP.
Value	Description						
HTTP	Configure 1E WakeUp to communicate with the Agility Framework using standard communications.						
HTTPS	Configure 1E WakeUp to communicate with the Agility Framework using secure HTTP.						
INSTALLAMT	<p>Sets the installation of the 1E WakeUp AMT service. This may take one of the following values:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1E WakeUp AMT will not be installed</td> </tr> <tr> <td>1</td> <td>1E WakeUp AMT will be installed</td> </tr> </tbody> </table>	Value	Description	0	1E WakeUp AMT will not be installed	1	1E WakeUp AMT will be installed
Value	Description						
0	1E WakeUp AMT will not be installed						
1	1E WakeUp AMT will be installed						
INSTALLDIR	<p>This is an optional parameter that determines the agent installation directory. This defaults to <i>C:\Program Files\1E\WakeUp\Server</i>.</p>						
LOGFILENAME	<p>Specifies the name of the log file. This parameter defaults to the value: <i>WakeUpSvr.log</i></p>						
LOGFILEPATH	<p>Specifies the path to the log file. Defaults to the value: <i>\Documents and Settings\All Users\Application Data\1E\WakeUp\Server\</i></p>						
LOGVIEWPATH	<p>Specifies the path to a log viewer. This can be used to define an alternative log viewer to SMSTrace, or if SMSTrace is not in the default location.</p>						
MAGICPACKET_PORT	<p>Sets the UDP port used to send wakeup broadcasts.</p> <p>This defaults to 1776.</p>						
MAGICPACKETDELAY	<p>Sets the time delay in milliseconds between sending Magic Packets.</p> <p>This defaults to 10.</p>						
MAXBURST	<p>Specifies the maximum numbers of wakeup requests that will be forwarded to a 1E WakeUp agent system in a single</p>						

	<p>hit.</p> <p>This defaults to a maximum of 100.</p>												
MAXCONNECTIONS	<p>Specifies the maximum number of connections that the 1E WakeUp server will attempt to open at one time. This parameter is only relevant if TCP/IP agent communication is used.</p> <p>Note: there is an inbuilt maximum limit of 64.</p> <p>This defaults to 16 connections.</p>												
MAXLOGFILESIZE	<p>Determines the maximum size for the log file in bytes. This parameter defaults to 524288 bytes.</p> <p>Once the file reaches the specified size, a copy will be made with a <code>.lo_</code> extension in the same directory as the original file. A new log file will then be created.</p>												
MAXPINGSPERBURST	<p>The number of ping packets to generate in a single burst. This parameter requires that the server is installed in multi-agent mode.</p> <p>This value defaults to 256 packets.</p>												
MAXWAKEUPSPERPOLL	<p>Maximum number of magic packets to be sent per poll interval. This parameter defaults to 1000 wakeups per polling interval.</p> <p>This should be set based on the maximum number of systems likely to require waking in one hour of advertisement processing. The figure also depends on the poll interval itself and should be set in order to make it possible to process all outstanding wakeup requests within one hour.</p> <p>Here are some example configuration scenarios for this setting.</p> <table border="1"> <thead> <tr> <th>Number of systems</th> <th>Poll interval in seconds</th> <th>Maximum wakeups per poll</th> </tr> </thead> <tbody> <tr> <td>1000</td> <td>30 (120 per hour)</td> <td>8 (1000/120)</td> </tr> <tr> <td>5000</td> <td>20 (180 per hour)</td> <td>28 (5000/180)</td> </tr> <tr> <td>10000</td> <td>60 (60 per hour)</td> <td>166 (10000/60)</td> </tr> </tbody> </table>	Number of systems	Poll interval in seconds	Maximum wakeups per poll	1000	30 (120 per hour)	8 (1000/120)	5000	20 (180 per hour)	28 (5000/180)	10000	60 (60 per hour)	166 (10000/60)
Number of systems	Poll interval in seconds	Maximum wakeups per poll											
1000	30 (120 per hour)	8 (1000/120)											
5000	20 (180 per hour)	28 (5000/180)											
10000	60 (60 per hour)	166 (10000/60)											
MINREADVERTTIME	<p>The minimum time in seconds before the same advertisement will be reprocessed. This timer is only relevant if short poll intervals are required.</p> <p>This parameter defaults to 60 seconds.</p>												
MINREWAKEUPTIME	<p>Minimum time in seconds between wakeups of the same machine.</p> <p>For example, a system may be a member of two or more collections, and may have more than one advertisement due. This parameter is designed to prevent a system from receiving multiple Magic Packets when it has already been awakened.</p> <p>Note: MINREWAKEUPTIME is not applicable to manual wakeups.</p> <p>This parameter defaults to 200 seconds.</p>												
NOAUTOTHROTTLE	<p>Auto throttle automatically increases the number of wakeups per polling cycle if the wakeup list grows to the</p>												

	<p>point where all systems cannot be processed within one hour.</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Enable auto throttle</td> </tr> <tr> <td>1</td> <td>Disable auto throttle</td> </tr> </tbody> </table> <p>This parameter defaults to 0.</p>	Value	Description	0	Enable auto throttle	1	Disable auto throttle
Value	Description						
0	Enable auto throttle						
1	Disable auto throttle						
NOTZSUPPORT	<p>This parameter controls whether all wakeups occur relative to the client or SMS/ConfigMgr Server time.</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Wakeups occur relative to the time on the local client system.</td> </tr> <tr> <td>1</td> <td>Wakeups occur relative to the time on the SMS/ConfigMgr server.</td> </tr> </tbody> </table> <p>This parameter defaults to 1.</p>	Value	Description	0	Wakeups occur relative to the time on the local client system.	1	Wakeups occur relative to the time on the SMS/ConfigMgr server.
Value	Description						
0	Wakeups occur relative to the time on the local client system.						
1	Wakeups occur relative to the time on the SMS/ConfigMgr server.						
PIDKEY	<p>Set the 1E WakeUp server license key. This value should be set to a valid license key obtained from sales@1e.com.</p> <p>The default behaviour if this switch is not defined is to generate a 30 day evaluation license key.</p>						
PINGBURSTDELAY	<p>The delay in seconds between successive ping bursts. This parameter requires that the server is installed in multi-agent mode.</p> <p>This value defaults to 2 seconds.</p>						
PINGTIMEOUT	<p>The time in seconds to wait for a response from the 1E WakeUp agents. This parameter requires that the server is installed in multi-agent mode.</p> <p>This value defaults to 1 second.</p>						
POLLINTERVALSECS	<p>The time in seconds between reporting spooler directory scans. It defaults to 600 seconds.</p> <p>1E WakeUp will look for new reporting messages added since the last spooler directory scan, if the Agility Framework server was unavailable at the last scan.</p>						
POLLTIME	<p>The time in seconds between database scans. This parameter is also used to define the period between wakeups. It defaults to 30 seconds.</p> <p>1E WakeUp will look for new advertisements added since the last database scan and will action them according to the other 1E WakeUp Server settings.</p>						
REGISTERMASTER	<p>When being used with the NightWatchman Management Center, select to register the 1E WakeUp server being installed as the master wakeup provider.</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Do not register as the master wakeup provider.</td> </tr> <tr> <td>1</td> <td>Register as the master wakeup provider.</td> </tr> </tbody> </table> <p>This setting uses the <i>REPORTINGSERVER</i> parameter to determine where the NightWatchman Management Center is located.</p>	Value	Description	0	Do not register as the master wakeup provider.	1	Register as the master wakeup provider.
Value	Description						
0	Do not register as the master wakeup provider.						
1	Register as the master wakeup provider.						

	<p>For example the following switch sets the installer to register the 1E WakeUp server as the master wakeup provider:</p> <pre>REGISTERMASTER=1</pre>								
REPEATCOUNT	<p>Number of times to repeat sending Magic Packets. If you suspect that your network is prone to dropping datagram packets you should try different configurations for the <i>REPEATCOUNT</i> and <i>REPEATDELAY</i> settings. Otherwise these should be left at their default values.</p> <p>This defaults to 0.</p>								
REPEATDELAY	<p>Time delay in seconds before resending a repeated Magic Packet. If you suspect that your network is prone to dropping datagram packets you should try different configurations for the <i>REPEATCOUNT</i> and <i>REPEATDELAY</i> settings. Otherwise these should be left at their default values.</p> <p>This defaults to 0.</p>								
REPORTINGSERVER	<p>Set this parameter to the host server name where the NightWatchman Management Center Web Service Component has been installed.</p>								
SCENARIO	<p>Set the 1E WakeUp installation scenario. The values for this parameter are:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>"A"</td> <td>Installs 1E WakeUp in Stand-alone Server mode</td> </tr> <tr> <td>"B"</td> <td>Installs 1E WakeUp in dedicated agent mode</td> </tr> <tr> <td>"C"</td> <td>Installs 1E WakeUp in multi agent mode</td> </tr> </tbody> </table> <p>The default for this value is C, which sets multi-agent mode.</p>	Value	Description	"A"	Installs 1E WakeUp in Stand-alone Server mode	"B"	Installs 1E WakeUp in dedicated agent mode	"C"	Installs 1E WakeUp in multi agent mode
Value	Description								
"A"	Installs 1E WakeUp in Stand-alone Server mode								
"B"	Installs 1E WakeUp in dedicated agent mode								
"C"	Installs 1E WakeUp in multi agent mode								
SERVERCOMPONENTS	<p>Select whether to install the 1E WakeUp Service component. Depending on the value of <i>SERVERTYPE</i> this may install the NightWatchman Management Center or SMS/ConfigMgr oriented service.</p> <p>This switch may take one of the following values:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Do not install the 1E WakeUp Service component</td> </tr> <tr> <td>1</td> <td>Install the 1E WakeUp Service component</td> </tr> </tbody> </table>	Value	Description	0	Do not install the 1E WakeUp Service component	1	Install the 1E WakeUp Service component		
Value	Description								
0	Do not install the 1E WakeUp Service component								
1	Install the 1E WakeUp Service component								
SERVERTYPE	<p>Sets the 1E WakeUp Service type to install. This may take one of the following values:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>NMC</td> <td>Installs the NightWatchman Management Center oriented 1E WakeUp service</td> </tr> <tr> <td>SMS</td> <td>Installs the SMS/ConfigMgr oriented 1E WakeUp service</td> </tr> </tbody> </table>	Value	Description	NMC	Installs the NightWatchman Management Center oriented 1E WakeUp service	SMS	Installs the SMS/ConfigMgr oriented 1E WakeUp service		
Value	Description								
NMC	Installs the NightWatchman Management Center oriented 1E WakeUp service								
SMS	Installs the SMS/ConfigMgr oriented 1E WakeUp service								

SUBCOLLSENABLED	<p>This parameter determines whether sub collections should be included when processing advertisements.</p> <table border="1" data-bbox="655 271 1343 409"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Do not process sub-collections</td> </tr> <tr> <td>1</td> <td>Process sub-collections</td> </tr> </tbody> </table> <p>Although this setting is available for an advertisement within SMS, systems within a sub collection may not always require processing by 1E WakeUp.</p> <p>This parameter defaults to 0.</p>	Value	Description	0	Do not process sub-collections	1	Process sub-collections
Value	Description						
0	Do not process sub-collections						
1	Process sub-collections						
SUBNETRESCAN	<p>The time in seconds to wait before rescanning the subnet to detect 1E WakeUp agents. This parameter requires that the server is installed in multi-agent mode.</p> <p>This value defaults to 300 seconds.</p>						
SVCPASSWORD	<p>Sets the password for the 1E WakeUp Intel® AMT service account.</p>						
SVCUSER	<p>Sets the service account for the 1E WakeUp Intel® AMT service. Depending on the value for the <i>AMTMODE</i> switch this account will be used in one of the following contexts:</p> <table border="1" data-bbox="655 904 1343 1160"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Enterprise</td> <td>Account should be a member of the Intel® AMT Collections Managers group.</td> </tr> <tr> <td>SMB</td> <td>Account will be used for digest authentication. Must have access to the Intel® AMT Power Control realm on the target computers.</td> </tr> </tbody> </table>	Value	Description	Enterprise	Account should be a member of the Intel® AMT Collections Managers group.	SMB	Account will be used for digest authentication. Must have access to the Intel® AMT Power Control realm on the target computers.
Value	Description						
Enterprise	Account should be a member of the Intel® AMT Collections Managers group.						
SMB	Account will be used for digest authentication. Must have access to the Intel® AMT Power Control realm on the target computers.						
TCP_PORT	<p>Set the listening port used by the 1E WakeUp agents to communicate with the 1E WakeUp Server. This must be different to the <i>AGENTTCP_PORT</i> value and must be the same for the 1E WakeUp Server and all Agents.</p> <p>The default value for this switch is 1777.</p>						
WAKEUPSVCPASSWORD	<p>Sets the password for the 1E WakeUp service, used when installing onto a split SMS/ConfigMgr configuration where the Configuration Manager Provider is remote from the Configuration Manager Server</p>						
WAKEUPSVCUSER	<p>Sets the user name for the 1E WakeUp service, used when installing onto a split SMS/ConfigMgr configuration where the Configuration Manager Provider is remote from the Configuration Manager Server</p>						

A.2 1E WakeUp Agent installer switch reference

The following table shows the 1E WakeUp Agent installation switches which enable configuration of certain 1E WakeUp console parameters at install time.

Table 10 - General 1E WakeUp Agent installer switches

Switch	Description
AGENTTCP_PORT	<p>Set the listening port used by the 1E WakeUp Server to communicate with the 1E WakeUp Agents. The value for this switch must be the same for the 1E WakeUp Server and all Agents</p> <p>The default value for this switch is 1776</p>

AGENTTO	<p>This parameter is only used for the dedicated Agent installation mode</p> <p>In dedicated agent mode, this is a mandatory parameter that sets the name of the server hosting the 1E WakeUp Server</p>								
ALTERNATIVESUBNETS	<p>This parameter is only used for the dedicated agent installation mode. It enables the dedicated 1E WakeUp Agent to register to awaken multiple subnets. It requires that directed subnet broadcasts are enabled in the routers supporting the subnets</p> <p>It takes a comma delimited list of subnets</p>								
CERTISSUER	When using HTTPS for communications and using a site certificate, set this to the certificate issuer text								
CERTSUBJECT	When using HTTPS for communications and using a site certificate, set this to the certificate subject text								
CHECKINTERVALWHENHEALTHYMINS	<p>Determines the interval in minutes at which Computer Health checks are run when the machine appears to be healthy</p> <p>The minimum value for this flag is 60</p> <p>The maximum value is 999</p> <p>The default value is 480 (8 hours)</p>								
CHECKINTERVALWHENUNHEALTHYMINS	<p>Determines the interval in minutes at which Computer Health checks are run when the machine appears to be unhealthy</p> <p>The minimum value for this flag is 30</p> <p>The maximum value is 999</p> <p>The default value is 60</p>								
DEBUG	<p>Sets the debug level for the 1E WakeUp Agent.</p> <p>The default value for this switch is 9.</p>								
DELAYCYCLESMSSECS	<p>The number of seconds the 1E WakeUp Agent will wait before performing a policy refresh. This delay allows time for the SMS/ConfigMgr Management Point to be updated in instances where Advertisements have been newly created</p> <p>The default value for this flag is 16 seconds</p> <p>Note: this value does not affect the active 1E WakeUp Agent, as it is intended to cater for the scenario where the machine has just started up. For the active 1E WakeUp Agent the machine will already be running so this delay is not necessary</p>								
ENCRYPTIONLEVEL	<p>Sets the encryption level for packets used in 1E WakeUp communications. It takes the following values:</p> <table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>No encryption</td> </tr> <tr> <td>1</td> <td>Partial encryption</td> </tr> <tr> <td>2</td> <td>Full encryption</td> </tr> </tbody> </table> <p>The default value for this flag is 0 for <i>no encryption</i></p>	Value	Description	0	No encryption	1	Partial encryption	2	Full encryption
Value	Description								
0	No encryption								
1	Partial encryption								
2	Full encryption								

HEALTH	<p>Set the state for 1E WakeUp Computer Health reporting</p> <table border="1" data-bbox="735 271 1348 409"> <thead> <tr> <th data-bbox="735 271 874 309">Value</th> <th data-bbox="874 271 1348 309">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="735 309 874 347">"OFF"</td> <td data-bbox="874 309 1348 347">Turns Computer Health reporting off.</td> </tr> <tr> <td data-bbox="735 347 874 409">"ON"</td> <td data-bbox="874 347 1348 409">Turns Computer Health reporting on.</td> </tr> </tbody> </table> <p>The default value for this flag is <i>OFF</i></p>	Value	Description	"OFF"	Turns Computer Health reporting off.	"ON"	Turns Computer Health reporting on.
Value	Description						
"OFF"	Turns Computer Health reporting off.						
"ON"	Turns Computer Health reporting on.						
INSTALLDIR	<p>This is an optional parameter that determines the agent installation directory. This defaults to <i>C:\Program Files\1E\WakeUp\Server</i></p>						
LASTMANENABLED	<p>The value of this switch determines whether the 1E WakeUp last man standing functionality is turned on or off. The values are shown in the following table</p> <table border="1" data-bbox="735 663 1348 835"> <thead> <tr> <th data-bbox="735 663 852 701">Value</th> <th data-bbox="852 663 1348 701">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="735 701 852 786">0</td> <td data-bbox="852 701 1348 786">Turns last man standing functionality off.</td> </tr> <tr> <td data-bbox="735 786 852 835">1</td> <td data-bbox="852 786 1348 835">Turns last man standing functionality on</td> </tr> </tbody> </table> <p>The default value for this switch is 1</p>	Value	Description	0	Turns last man standing functionality off.	1	Turns last man standing functionality on
Value	Description						
0	Turns last man standing functionality off.						
1	Turns last man standing functionality on						
LOGFILENAME	<p>Sets the name for the 1E WakeUp agent log file</p> <p>The default value for this switch is <i>WakeUpAgt.log</i></p>						
LOGPATH	<p>Location of the 1E WakeUp log file. The path will be created if it does not exist</p> <p>The default value for this switch is <i>C:\Documents and Settings\All Users\Application Data\1E\WakeUp\Agent</i></p>						
MAGICPACKET_PORT	<p>Sets the UDP port used to send wakeup broadcasts</p> <p>This defaults to 1776</p>						
MAGICPACKETDELAY	<p>Sets the time delay in milliseconds between the 1E WakeUp Agent sending subsequent Magic Packets</p> <p>This defaults to 1</p>						
MAXLOGFILESIZE	<p>Integer defining the size (in bytes) of 1E WakeUp agent log file. When this size is reached, the file is renamed with a <i>.LO_</i> extension and a new <i>.LOG</i> file is created. The <i>.LO_</i> file is overwritten each time</p> <p>The default value for this switch is 65536</p>						

REFRESHONSUBNETCHANGE	<p>Controls behaviour when local PC changes subnet. This can be one of the following values:</p> <table border="1" data-bbox="735 264 1348 667"> <thead> <tr> <th data-bbox="735 264 879 309">Value</th> <th data-bbox="879 264 1348 309">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="735 309 879 387">OFF</td> <td data-bbox="879 309 1348 387">No action is taken when the subnet changes.</td> </tr> <tr> <td data-bbox="735 387 879 667">ON</td> <td data-bbox="879 387 1348 667">Forces a hardware refresh for the local SMS/ConfigMgr Client. This, in turn, updates the central SMS/ConfigMgr site, thereby enabling SMS/ConfigMgr to work correctly with respect to the local PC. This is particularly useful where laptops are in use between home and office networks.</td> </tr> </tbody> </table> <p>This defaults to ON</p>	Value	Description	OFF	No action is taken when the subnet changes.	ON	Forces a hardware refresh for the local SMS/ConfigMgr Client. This, in turn, updates the central SMS/ConfigMgr site, thereby enabling SMS/ConfigMgr to work correctly with respect to the local PC. This is particularly useful where laptops are in use between home and office networks.
Value	Description						
OFF	No action is taken when the subnet changes.						
ON	Forces a hardware refresh for the local SMS/ConfigMgr Client. This, in turn, updates the central SMS/ConfigMgr site, thereby enabling SMS/ConfigMgr to work correctly with respect to the local PC. This is particularly useful where laptops are in use between home and office networks.						
REPEATCOUNT	<p>Number of times to repeat sending Magic Packets. If you suspect that your network is prone to dropping datagram packets you should try different configurations for the <i>REPEATCOUNT</i> and <i>REPEATDELAY</i> settings. Otherwise these should be left at their default values.</p> <p>This defaults to 0</p>						
REPEATDELAY	<p>Time delay in milliseconds before resending a repeated Magic Packet. If you suspect that your network is prone to dropping datagram packets you should try different configurations for the <i>REPEATCOUNT</i> and <i>REPEATDELAY</i> settings. Otherwise these should be left at their default values.</p> <p>This defaults to 0</p>						
REPORTINGSERVER	<p>When using HTTP for communications, set this parameter to the host server name where the NightWatchman Management Center Web Service Component has been installed</p>						
SECUREREPORTINGSERVER	<p>When using HTTPS for communications, set this parameter to the host server name where the NightWatchman Management Center Web Service Component secure site has been installed</p>						
TCP_PORT	<p>Set the listening port used by the 1E WakeUp Agents to communicate with the 1E WakeUp Server. This must be different to the <i>AGENTTCP_PORT</i> value and must be the same for the 1E WakeUp Server and all Agents</p> <p>The default value for this switch is 1777</p>						
WURESULTDELAY	<p>Configures the time, in seconds, the 1E WakeUp Agent allows for responses to magic packets and pings for reporting purposes.</p> <p>The default value for this switch is 120 seconds</p>						

Appendix B Installing 1E WakeUp on a Split ConfigMgr install

The following steps describe how to configure 1E WakeUp Server to work with a split ConfigMgr installation, where the SMS/ConfigMgr WMI Provider is installed remotely from the SMS/ConfigMgr Site Server, usually on an SQL Server.

B.1 Installation account requirements

The following permissions must be set for the logged on user when running the 1E WakeUp Server installer:

- Local and SMS/ConfigMgr Administrator
- Administration rights to the SMS/ConfigMgr SQL database

B.2 Requirements

You must have the following prepared before starting the installation:

Using a domain account

- A domain account with *Log on as service* rights
- To access the WMI Provider on the remote SQL server the domain account or domain machine account of the 1E WakeUp Server must be granted sufficient rights to the relevant WMI namespaces.

You must add the WMI permissions as described under heading *2.4 - Non-Administrator account requirements* and then grant full WMI permissions for both the *Root\SMS* and the *Root\SMS\Site_<SiteCode>* namespaces. These permissions are set in *Computer Management/Services and Applications/WMI Control/Security*

- In the Configuration Manager Console grant the domain account specific ConfigMgr class security rights as follows:

Site:	Read
Collection:	Read, Read Resource
Advertisement:	Read
Query:	Read

Using a network service account

This heading describes the requirements needed when using the *NT AUTHORITY\NETWORK SERVICE*:

- A pre-requisite of installing SMS/ConfigMgr in the split install configuration is that the domain machine account of the Primary Site server, and therefore the 1E WakeUp Server, is a local administrator of the remote SQL server - so the appropriate SMS/ConfigMgr security rights should already have been granted
- In the Configuration Manager Console grant the *NT AUTHORITY\NETWORK SERVICE* specific *ConfigMgr* class security rights as follows:

Site:	Read
Collection:	Read, Read Resource
Advertisement:	Read
Query:	Read

B.3 Installing 1E WakeUp Server

Install the 1E WakeUp Server via the command-line using the installer switches *WAKEUPSVUSER* and *WAKEUPSVCPASSWORD*.

When using a domain account add *WAKEUPSVUSER* and *WAKEUPSVCPASSWORD* on the installer command-line as follows:

```
WAKEUPSVUSER=<Domain>\<User> WAKEUPSVCPASSWORD=<Password>
```

Where the following place holders need to be replaced with the correct values: *<Domain>* is the domain where the account is located, *<User>* is the account user name and *<Password>* is the password for the domain account.

When using the network service just add the *WAKEUPSVUSER* on the installer command-line as follows:

```
WAKEUPSVUSER="NT AUTHORITY\NETWORK SERVICE"
```

B.4 Post installation

Grant additional security rights to the local 1E WakeUp Server and Agent installation directories:

By default these directories are:

```
C:\Program Files\1E\wakeUp\  
C:\Documents and Settings\Application Data\1EwakeUpSvr\  
C:\ProgramData\1E\wakeUpSvr\
```

Grant *Modify* permissions to these directories for the domain account or network service, whichever is being used.

All folders and files below these locations should be set to inherit these permissions.

B.5 Example installer command-lines

The following examples show *msiexec* command-lines for installing 1E WakeUp on a split Configuration Manager installation using a domain account and a network service account.

Using a domain "Log on as service" account

The following example installer command-line will install the 1E WakeUp server for SMS/ConfigMgr without AMT using the domain account *ACME\ACMESVC* with the password *ACMEPSWD*. Reporting and Computer Health are turned on and the reporting server is set to *ACMECFGMR02*.

```
msiexec /i wakeupsvr.msi SERVERCOMPONENTS=1 SERVERTYPE=SMS INSTALLAMT=0  
WAKEUPSVUSER=ACME\ACMESVC WAKEUPSVCPASSWORD=ACMEPSWD AFREPORTING=ON  
REPORTINGSERVER=ACMECFGMR02 HEALTH=ON /QN
```

Using a network service account

The following example installer command-line will install the 1E WakeUp server for SMS/ConfigMgr, this time with AMT, using the network service account - no password is necessary. Reporting and Computer Health are turned on and the reporting server is set to *ACMECFGMR02*.

```
msiexec /i wakeupsvr.msi SERVERCOMPONENTS=1 SERVERTYPE=SMS INSTALLAMT=1  
WAKEUPSVUSER="NT AUTHORITY\NETWORK SERVICE" AFREPORTING=ON  
REPORTINGSERVER=ACMECFGMR02 HEALTH=ON /QN
```