

Intel® Active Management Technology with System Defense Feature Quick Start Guide

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Introduction

Intel® Active Management Technology with System Defense Feature (Intel® AMT) is a hardware-based solution that uses out-of-band communication for system management access to client systems. Even with a crashed hard drive, a locked operating system, or if a system is turned off, access is still available to the client system to perform basic management tasks.

This guide contains basic system configuration instructions and information on using a web browser to access a client system. Advanced features of Intel AMT are available from software vendors that support these new management technologies. Advanced features are outside the scope of this guide. Please see <http://www.intel.com/technology/manage/iamt/> for more information and a list of software vendors that support Intel Active Management Technology with System Defense Feature.

Basic Functions

A web browser can be used to perform basic management tasks. The web server on each Intel AMT system enables administrators to:

- View the system status.
- View the hardware installed in the system.
- View, start/stop, and clean the Intel AMT event log.
- Remotely reset, or power the computer on or off (when enabled in the client system BIOS).
- View and manage Intel AMT network parameters.
- View and manage Intel AMT user accounts.
- View and configure VLAN settings.

System Requirements

Client System

The client system must be a computer with Intel® PRO Network Connections that includes Intel Active Management Technology with System Defense Feature. The operating system loaded on the client system does not matter.

Console System

The console system (i.e., the system used to access the Intel AMT client system) must have one of the following web browsers installed:

- Microsoft* Internet Explorer 6 SP1 or newer
- Netscape* Navigator 7.1 or newer
- Mozilla* Firefox* 1.0 or newer
- Mozilla Mozilla* 1.7 or newer

Configuring the Client System

Before configuring the client system, have the following information available to configure the Intel® Management Engine and Intel AMT properly:

- A computer name:
 - In Microsoft Windows*, right-click My Computer, click Properties, and click the Computer Name tab.
- Terminal Communication Protocol / Internet Protocol (TCP/IP) settings:
 - In Windows, open the Control Panel, open Network Connections, and right click the connection and click Properties. Click TCP/IP and click Properties.

Intel® Management Engine Configuration

The Intel Management Engine BIOS password must be entered and changed before configuring Intel AMT setup options. As a security precaution, the client system will not be accessible over the network until the default Intel Management Engine password is changed and Intel AMT is provisioned.

1. Power on the computer and enter system BIOS by pressing the F2 key.
2. Using the arrow keys, select the Intel Management Engine item from the top menu bar and press the Enter key.
3. Type in the default password: admin. (Note: This password is case sensitive.)

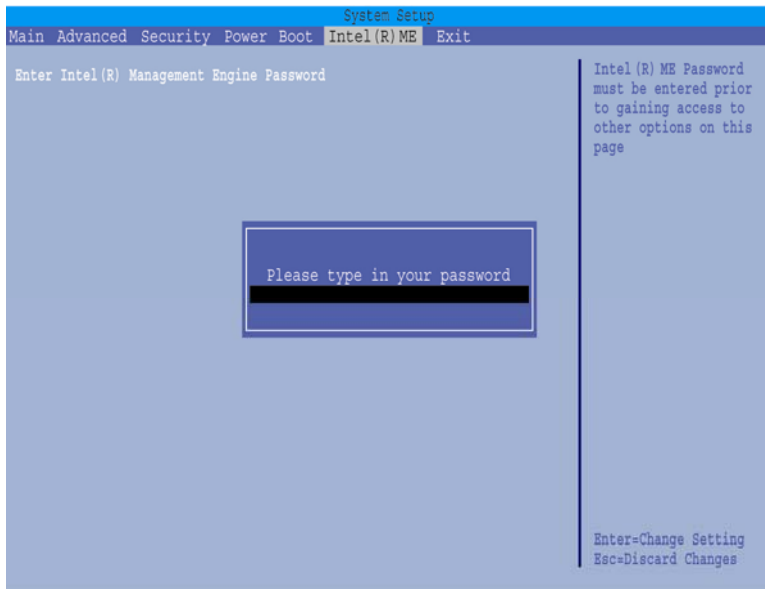


Figure 1. Intel Management Engine Configuration Menu in the BIOS

4. The Intel Management Engine password must be changed prior to gaining access to Intel AMT setup options. Change the Intel Management Engine password.



NOTE

*Intel Management Engine passwords must be between 8 and 32 characters long, have at least one upper case character, one lower case character, one number, and a special character (for example: !, @, #, \$, %, ^, &, *).*

The system owner should document the new Intel Management Engine password, store it in a secured location (a vault, safe deposit box, or off-site storage), and have it available for future use. This document should be updated after any password change is made.

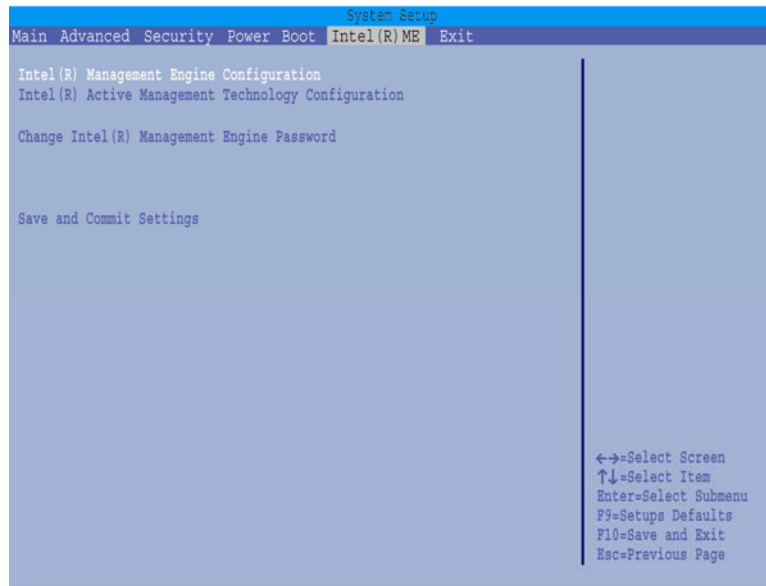


Figure 2. Intel Management Engine Menu in the BIOS

5. Select the Intel Management Engine Configuration item.
6. To enable Intel AMT, confirm that the Manageability Feature is set to Intel AMT. Other manageability options include enabling ASF and disabling manageability altogether. Intel AMT will be disabled if either of these options are selected.
7. To enable Intel AMT out-of-band communication in all sleep states, change the value of Turn On Intel Management Engine in Sleep States item to Always.
8. Press the ESC key to return to the Intel Management Engine main menu.
9. Select Save and Commit Settings.
10. Select Yes, submit new settings.
11. Press the F10 key and select Y to save and reboot.

Intel® AMT Configuration and Provisioning

After completing configuration of the Intel Management Engine, the Intel AMT settings can be set.

1. Power on the computer and enter the system BIOS by pressing the F2 key.
2. Using the arrow keys, select the Intel Management Engine item from the top menu bar and press the Enter key.
3. Type in the Intel Management Engine password. (Note: This password is case sensitive.)
4. Select Intel Active Management Technology Configuration and press the Enter key.
5. Change the Computer Name and press the Enter key.



NOTE

*Computer name must be between 1 and 32 characters long, may contain upper case characters, lower case characters numbers, however spaces, dashes, and any other special characters (for example: !, @, #, \$, %, ^, &, *) are not allowed.*

6. Select TCP/IP Configuration and press the Enter key.
7. By default, DHCP is enabled. If DHCP is disabled, enter the following TCP/IP settings for Intel AMT:
 - Static TCP/IP address. Both the TCP/IP address and Host Name must be different than those configured for the operating system.
 - Subnet mask.
 - Default Gateway address (optional).
 - Preferred Domain Naming Services (DNS) server address (optional).
 - Alternate DNS server address (optional).
 - Domain name (optional).
8. When done, press the ESC key to exit to the Intel Active Management Technology menu.
9. Select Provisioning Configuration.

10. Select Provisioning Mode from the menu and choose Small-Medium Business. By default, Enterprise provisioning is selected.
 - The Small Business setting indicates that Intel AMT will be locally configured for this system.
 - The Enterprise setting indicates that Intel AMT will be configured by an external provisioning server within the local enterprise. Enter the following information:
 - Provisioning Server Address
 - Provisioning Server Port
 - TLS Pre-Shared Key PID
 - TLS Pre-Shared Key PPS
11. Depending on the third-party management software that is chosen to be used with this system (if any), set the Compatibility Mode appropriate to the management software.
12. When done, press the ESC key to exit to the Intel Active Management Technology menu.
13. The optional SOL/IDER authentication method and the Intel AMT Protected Real Time Clock (PRTC) may be set through respective menu items.
14. When done, press the ESC key to exit to the Intel Management Engine main menu.
15. Select Save and Commit Settings.
16. Select Yes, submit new settings.
17. Press the F10 key and select Y to save and reboot.

Changing the Intel Management Engine Password

1. Power on the computer and enter system BIOS by pressing the F2 key.
2. Using the arrow keys, select the Intel Management Engine item from the top menu bar and press the Enter key.
3. Type in the old Intel Management Engine password. (Note: This password is case sensitive.)
4. Select Change Intel Management Engine Password
5. Type in and confirm the new Intel Management Engine password.



NOTE

*Intel Management Engine passwords must be between 8 and 32 characters long, have at least one upper case character, one lower case character, one number, and a special character (for example: !, @, #, \$, %, ^, &, *).*

The system owner should document the new Intel Management Engine password, store it in a secured location (a vault, safe deposit box, or off-site storage), and have it available for future use. This document should be updated after any password change is made.

6. Select Save and Commit Settings.
7. Select Yes, submit new settings.
8. Press the F10 key and select Y to save and reboot.

Resetting the Intel Management Engine Password / Unprovisioning an Intel AMT System

Resets all Intel Management Engine / Intel AMT settings and passwords to the factory defaults.

1. While the system is powered off, move the Configuration Jumper on the desktop board to pins 2-3.
2. Power on the system and allow it to enter BIOS maintenance mode.
3. Select Reset Intel AMT to default factory settings.
4. Press the F10 key and select Y to save and reboot.
5. Power off the system.
6. Restore the Configuration Jumper to pins 1-2 for normal operation.

Using the Intel AMT Web Browser Interface

Logging In From a Remote Console

1. On the remote console, open a web browser and enter the client computer name or IP address, and the port number.
 - Use the following, if the network can resolve the client system host name to a TCP/IP address:
http://*host_name*:16992
Example: http://TestSystem:16992
 - Use the following if a static TCP/IP address is defined for the Intel AMT client system:
http://*ip_address*:16992
Example: http://192.168.1.7:16992

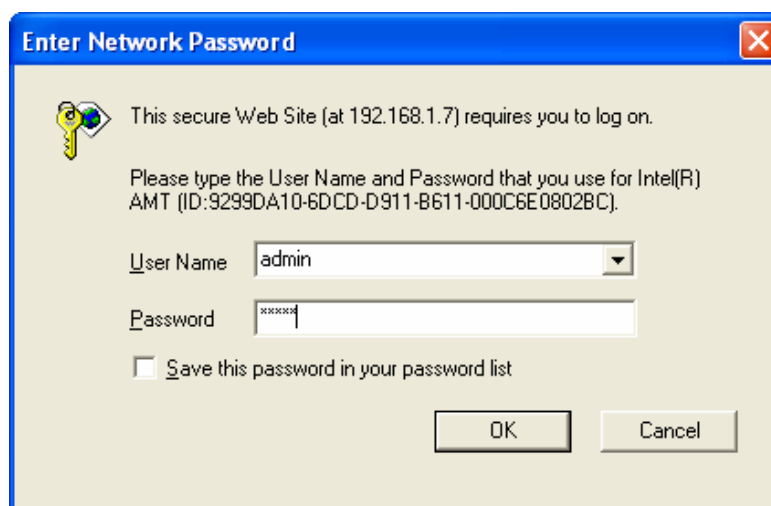


Figure 3. Login Dialog

2. To Log in as an Intel AMT administrator, use “admin” for the User Name and use the password that was set in the Intel Management Engine when Intel AMT was first configured.



NOTE

Both the user name and password are case sensitive. Make sure to note any capitalization changes in either field when defining or changing them.

The web browser shows the current status of the computer.
The computer host name is shown in the top banner.

Using the Intel AMT Web Pages

Click the links on the left to access the Intel AMT information pages.



The padlock icon indicates areas where the current Intel AMT user does not have sufficient rights to view.

If an attempt is made to access an area where the Intel AMT user doesn't have sufficient rights, the browser will display a login dialog box. If another Intel AMT user account that has sufficient rights is used to login, the browser will then display the page. To update the display of the padlock icons, click the browser's refresh button.

System Status Page

This page displays the power state, IP address, and other basic system information.

Intel® Active Management Technology
Computer: BWCLIENTMT

System Status

Power	On
IP address	192.168.1.102
System ID	3b18f2c2-d101-db11-82cb-001113186f6
Date	8/28/2006
Time	10:27 am

Refresh

Copyright © 2006, 2006 Intel Corp. Intel® Active Management Technology firmware version: 2.0.5-build 1124

Figure 4. Intel AMT System Status Screen

Hardware Pages

These pages display information about the hardware installed in the computer. Intel AMT gets this information from the client system's BIOS. Hardware changes will not be shown until after the client system is rebooted.

Intel® Active Management Technology
Computer: testsystem1

System Information

Platform

Computer model	
Manufacturer	
Version	
Serial number	
System ID	3b18f2c2-d101-db11-82cb-0011113186f6

Baseboard

Manufacturer	Intel Corporation
Product name	DQ965MT
Version	AAD36265-401
Serial number	AZMT626000060
Asset tag	Base Board Asset tag
Replaceable?	Yes

BIOS

Vendor	Intel Corp.
Version	C096510J.15A.0042.2006.0804.2140
Release Date	08/04/2006
Supported functions	PCI Shadowing is allowed Selectable boot 8042 keyboard services Printer services
	Upgradeable Boot from CD EDD spec Serial services CGA/Mono video services

Figure 5. Intel AMT System Information Screen

Event Log Page

This page displays the Intel AMT Event Log. The options at the bottom of the page can be used to stop and start the Event Log and clear all events from the log.

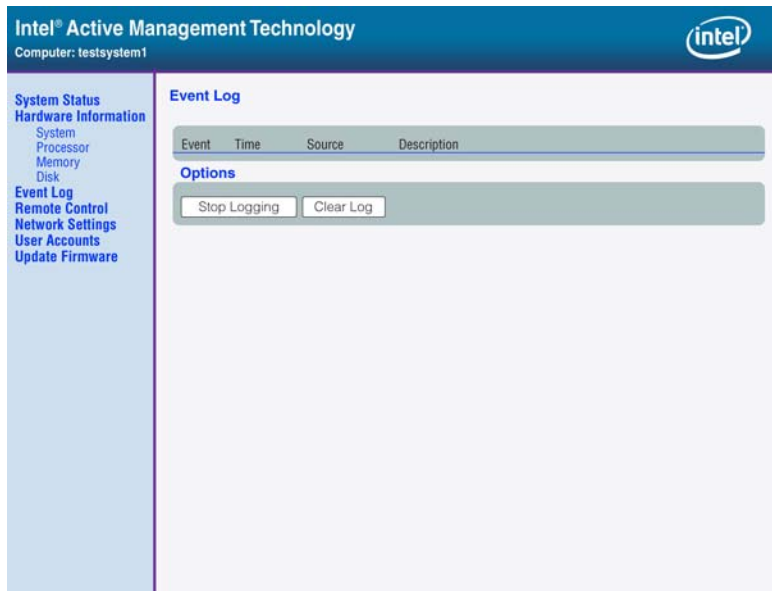


Figure 6. Intel AMT Event Log Screen

Remote Control Page

The Remote control page can be used to power cycle the client system, reset it, and power the system on or off. Boot options for the Intel AMT client system can also be specified.



NOTE

The options available on this page depend on the abilities of the client system.



CAUTION

These commands may cause data loss. They go directly to the system hardware and do not cause the operating system to shutdown gracefully.

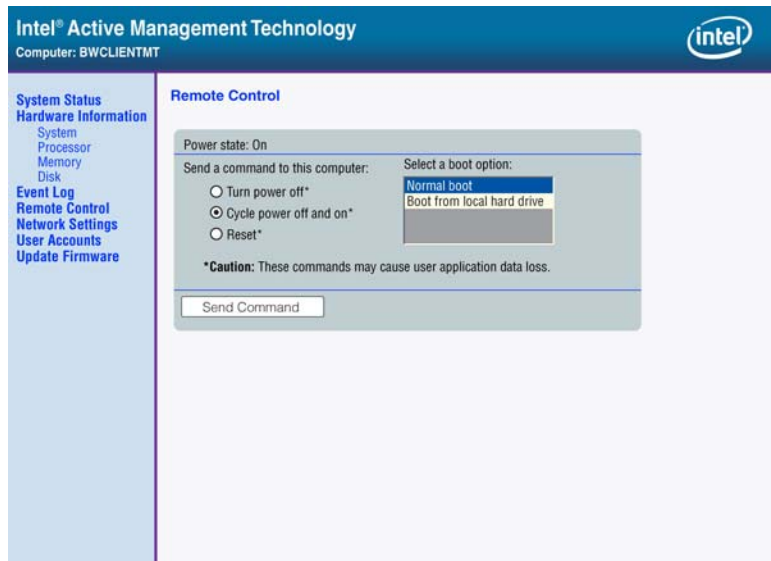


Figure 7. Intel AMT Remote Control Screen

Network Settings Page

The Network Settings page can be used to change the Intel AMT network settings made on the client system.

Intel® Active Management Technology
Computer: BWCLIENTMT

System Status
Hardware Information
System
Processor
Memory
Disk
Event Log
Remote Control
Network Settings
User Accounts
Update Firmware

Network Settings

Configure Intel® Active Management Technology network settings for this computer.
Computer host name: BWCLIENTMT

Obtain IP settings automatically
 Use the following IP settings:

IP address: 0.0.0.0
Subnet mask: 0.0.0.0
Gateway address*:
Domain name*:
Preferred DNS address*:
Alternate DNS address*: *Optional

Respond to ping
 Use tagged VLAN
VLAN ID:

Submit

Figure 8. Intel AMT Network Settings Screen

Host Name: The Host Name is a name that can be used to browse to this computer. In DHCP mode, use the same name as the one set in the operating system. In static IP mode, use a name different from the one set in the operating system.

After changing the host name, click the Refresh button in the web browser to update the name in the banner at the top of the page.

Obtain IP address automatically: Intel AMT can automatically obtain an IP address from a DHCP server. If the DHCP option is selected, make sure the operating system is also set up for DHCP, and it is recommended that the network have a Domain Naming Services (DNS) server that can resolve the name.

Use these settings: Intel AMT will use the specified TCP/IP settings.

Preferred and Alternate DNS addresses: Specify the address of the DNS server that will resolve the computer host name.

Respond to ping: Configures Intel AMT to respond to an IP ping. In static IP mode, Intel AMT always responds to a ping. In DHCP mode, Intel AMT will only respond to a ping when the operating system is down.

Use tagged VLAN: This option is used to confine network traffic to a VLAN. The VLAN ID range is 1-4094. VLAN ID 1 is often reserved. Check the network switch documentation for details.

User Accounts Page

Select User Accounts to change admin name and password used to access the Intel AMT configuration screen and web interface on the client system.



CAUTION

User account passwords associated with the Intel Active Management Technology are NOT RECOVERABLE and cannot be reset without the original text. Both the user name and password are case sensitive. Make sure to note any capitalization changes in either field when defining or changing them.

The system owner should document the new Administrator password, store it in a secured location (a vault, safe deposit box, or off-site storage), and have it available for future use. This document should be updated after any password change is made.

User accounts can also be setup with limited access rights. If access is limited, then that user will see a padlock icon on the links to the pages that the account cannot access.



Figure 9. Intel AMT User Accounts Screen

Troubleshooting

I can ping the client system, but cannot connect using a web browser

- Make sure you changed the client system's default Intel Management Engine password in the BIOS.
- Make sure you are using a valid user name and password.
- Make sure that you are connecting to the correct http interface (http, not https) and the correct port (16992).

After the operating system loads, I can't connect to the client system

If you have installed the correct base driver and are working in DHCP mode, try to manually renew the DHCP lease.

The client system is not reachable over the network

If the operating system is up, make sure that the DHCP/Static IP settings of Intel Management Engine and the operating system driver are compatible. For example, if the driver is configured to DHCP and Intel Management Engine to use a static IP, then the Intel AMT device is in effect isolated from the network.

Login fails after a successful login

If the link is followed by a padlock icon, the user account you are using does not have rights to access this page. You must log in using an account with sufficient rights.

