

Intel® Active Management Technology (Intel® AMT) Quick Reference

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Introduction

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

This guide contains basic Intel AMT configuration instructions and information on using a web browser to access an Intel AMT client system. Additional advanced features of Intel AMT are available through software from vendors that support this new management technology. For a list of software vendors that support the advanced features of Intel AMT, please see <http://www.intel.com/technology/manage/iamt/>

Intel® AMT Basic Functions

A web browser can be used to perform basic management tasks on Intel AMT client systems. The web server built into Intel AMT 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 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.

System Requirements

Client System

The client system must be a computer with Intel® PRO Network Connections that includes Intel Active Management Technology. 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 an Intel AMT Client System for the First Time

Before configuring the client system, have the following information available to configure 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.
- Virtual Local Area Network (VLAN) settings.
If a VLAN is set up, the VLAN ID will be needed.

Intel AMT BIOS Extension Settings

1. To enter the Intel AMT BIOS Extension Menu, power on the computer and press CTRL-P when prompted, or enter system BIOS by pressing <F2> and go to the Management Configuration area located in the Advanced menu, and enable the ENTER AMT BX SETUP switch. Save and exit BIOS and restart the system.

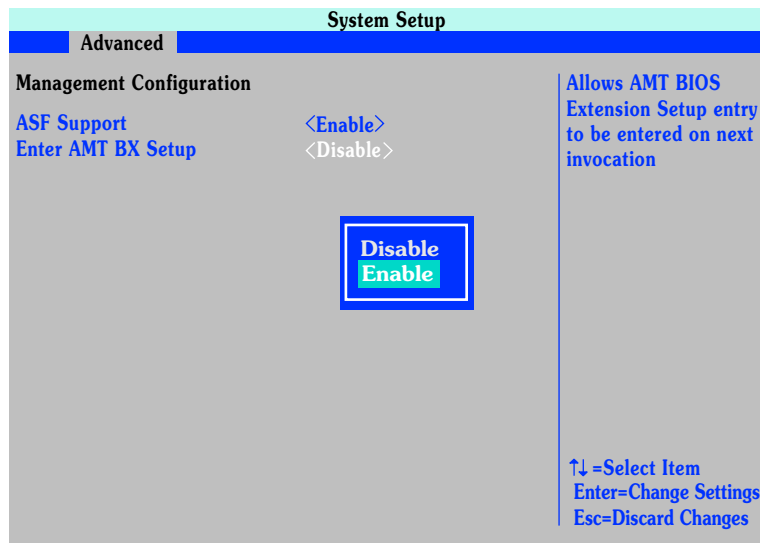


Figure 1. Management Configuration Menu in BIOS

This displays the Intel AMT BIOS Extension Menu.

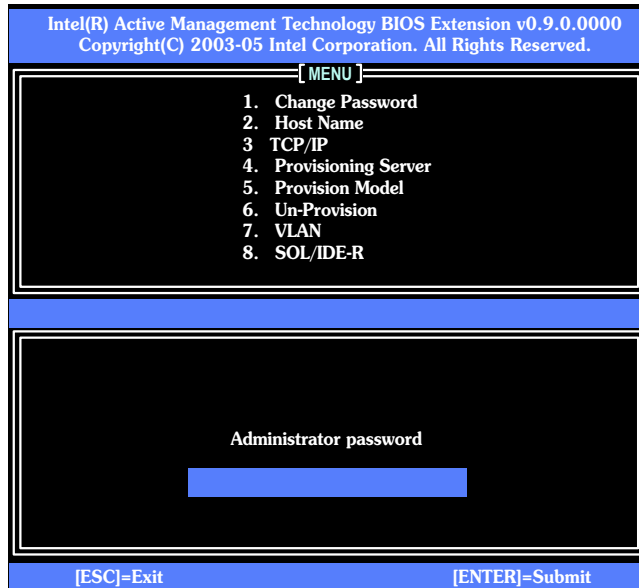


Figure 2. Intel AMT BIOS Extension Menu

2. Enter “admin” for the Administrator password.
3. Select Change Password from the Menu and enter the new Administrator password. As a security precaution, the client system will not be accessible over from the network until the default Administrator password has been changed.



CAUTION

All 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.

NOTE

*Administrator 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: !, @, #, \$, %, ^, &, *).*

4. Select Host Name from the menu and type in the name for the Intel AMT client system. If Dynamic Host Configuration Protocol (DHCP) is going to be used to assign the TCP/IP Address, then the Host Name for the Intel AMT client should be the same name as the computer name defined in the operating system. Intel AMT may automatically change its Host Name to match the Microsoft Windows computer name if DHCP is enabled.
If Intel AMT is implemented with a static IP address, then the unique Intel AMT Host Name must be different from the computer name defined in the operating system.
5. Select TCP/IP from the menu to enable or disable DHCP. 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 that 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)
6. Select Provision Model from the menu and choose Small Business. Note that the Enterprise provisioning is selected by default..
 - 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.
7. Select VLAN from the menu to enable or disable VLANs. This setting must match the VLAN settings configured in the operating system.
8. The SOL/IDE-R menu allows Serial Over LAN (SOL) and IDE Redirect (IDE-R) features to be individually enabled or disabled. Both items are enabled by default.
9. Select Exit to quit the Intel AMT BIOS Extension and allow the operating system load.

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`

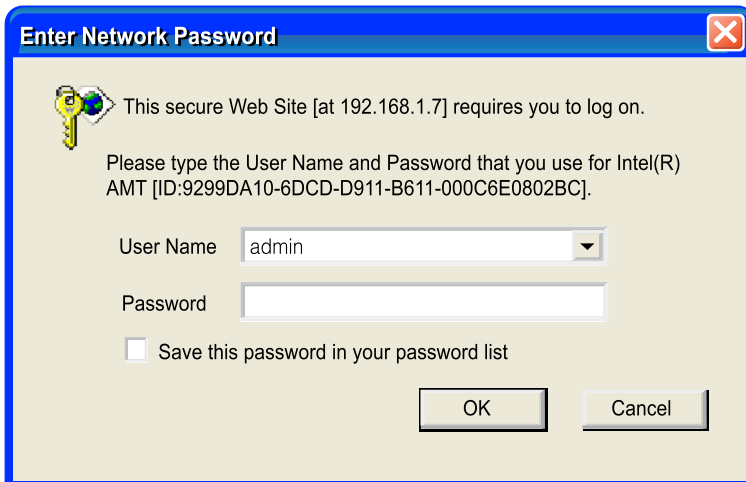


Figure 3. Intel AMT Web Login Dialog

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 AMT BIOS Extension when Intel AMT was first configured.

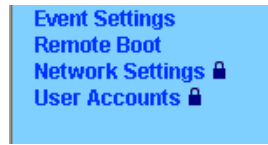
NOTE

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.

System Status

Power	Off
IP address	192.168.1.7
System ID	9299DA10-6DCD-D911-B611-000C6E0802BC
Date	8.16.2005
Time	1:42:12pm

Refresh

Copyright © 2005, Intel Corp. Intel® Active Management Technology firmware version: 1.1.33

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.

System Information

Computer model	
Manufacturer	
Version	
Serial number	
System ID	9299DA10-6DCD-D911-B611-000C6E0802BC

Baseboard

Manufacturer	Intel Corporation
Product name	D945GTP
Version	AAC97837-203
Serial number	BQTP52201333
Asset tag	Base Board Asset Tag
Replaceable?	Yes

BIOS

Vendor	Intel Corp.
Version	NT94510J86A.1042.2005.0513.1523
Release date	05/13/2005
Supported functions	PCI, Upgradeable, Shadowing is allowed, Boot from CD, Selectable boot, EDD spec, 8042 keyboard services, Serial services, Printer 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.

Event Log

Event	Time	Source	Description
-------	------	--------	-------------

Options

Figure 6. Intel AMT Event Log Screen

Remote Boot Page

The Remote Boot 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.

Remote Boot

Power state: On

Send a command to this computer:

Turn power off

Select a boot option:

Turn power on

Cycle power off and on

Reset

Normal boot

Send Command

Figure 7. Intel AMT Remote Boot Screen

Network Settings Page

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

Network Settings

Configure the network settings used for Intel® Active Management Technology.

Computer host name:

Obtain IP address automatically

Use these settings:

IP address:

Subnet mask:

Gateway address:

Domain name:

Preferred DNS address:

Alternate DNS address:

Respond to ping

Use tagged VLAN

VLAN ID:

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

All 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.

User Accounts

Grant access to this computer for Intel® Active Management Technology.

User names:

Administrator Accounts

Change the Intel® Active Management administrator account for this computer.

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 Administrator password in the Intel AMT 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 OS 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 OS is up, make sure that the DHCP/Static IP settings of Intel AMT and the OS driver are compatible. For example, if the driver is configured to DHCP and Intel AMT 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.

