

SOFTWARE | HARDWARE | SERVICE

**UTC RETAIL™**

VICTOR, NY – CLEVELAND, OH – SCOTTSDALE, AZ

# AMT Implementation on a UTC RETAIL 3170 POS

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*Controlling POS systems using Intel AMT Features*

## Scope

The document was written for use by UTC RETAIL 3170 POS customers to enable the AMT feature in the 3170 hardware. It includes step-by-step instructions to configure a 3170 system allowing AMT to be examined and exercised.

## Background

AMT is a feature of the Intel® vPro™ Technology. From the Intel website: *“Intel® vPro™ technology is a set of security and manageability capabilities built into the 3rd generation Intel Core vPro processor family, the Intel Xeon processor E3-1200 product family, Intel® chipsets, and network adapters.”* Also, vPro: *“Uses Intel® Active Management Technology (Intel® AMT) to facilitate remote management of platform applications, even when the platform is turned off, as long as the platform is connected to a power line and network.”* A discussion of vPro is beyond the scope and purpose of this document. Full vPro implementation requires a CPU upgrade from the CPU included in a base 3170 and an IT staff that has the resources to dedicate itself to implementation and use.

Every 3170 has the *Standard AMT*. The security features enabled by AMT require a certain level of Intel CPU, an Intel AMT enabled chipset and an Intel network interface IC. These components all exist in the 3170. To use the *Standard AMT*, the 3170 must have its power cord plugged into an active power plug, must be connected to an active network and its AMT system must be configured.

## Websites

1. VPro homepage: <http://www.intel.com/content/www/us/en/architecture-and-technology/vpro/vpro-technology-general.html>
2. AMT homepage: <http://www.intel.com/content/www/us/en/architecture-and-technology/intel-active-management-technology.html>

## AMT Implementation

### BIOS Verification

The 3170 default BIOS settings has AMT enabled. If the BIOS has not been changed since the 3170 was received, there is no need check the BIOS.

To check the BIOS, boot the 3170 POS and while it boots, repeatedly press the DEL (Delete) key until the Main BIOS page is seen. Right-arrow to the Advanced page. Arrow down to the AMT Configuration menu listing and press Enter. The AMT listing should read Enabled. If it does not, press the + key on your keyboard and the listing will switch from Disabled to Enabled. Press F4 to Save and Exit, press Enter to answer Yes to the exit question.

### O/S Verification

AMT on 3170 requires a valid UTC RETAIL O/S image of Windows XP SP3, Windows 7 Professional, Windows POSReady 2009 or Window POSReady 7. Boot the 3170 to the Windows desktop and you will see the Intel message in the bottom right corner of the LCD screen about one (1) minute after the desktop initialization has started.

In the Windows notification area, the Intel Management and Security Status icon can be seen:



Left click the icon and select Open.

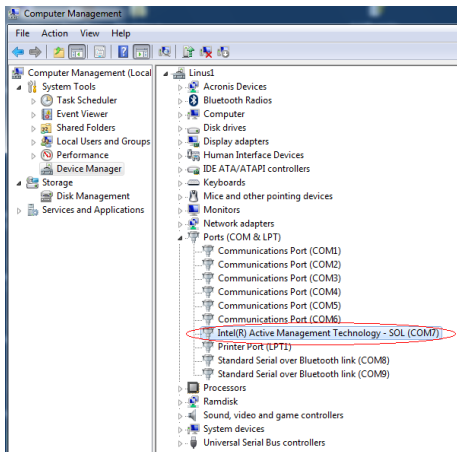
If the icon does not appear, perform BIOS Verification above.

Select the Advanced tab of the Intel software UI and observe Intel Management Engine reported as unconfigured:

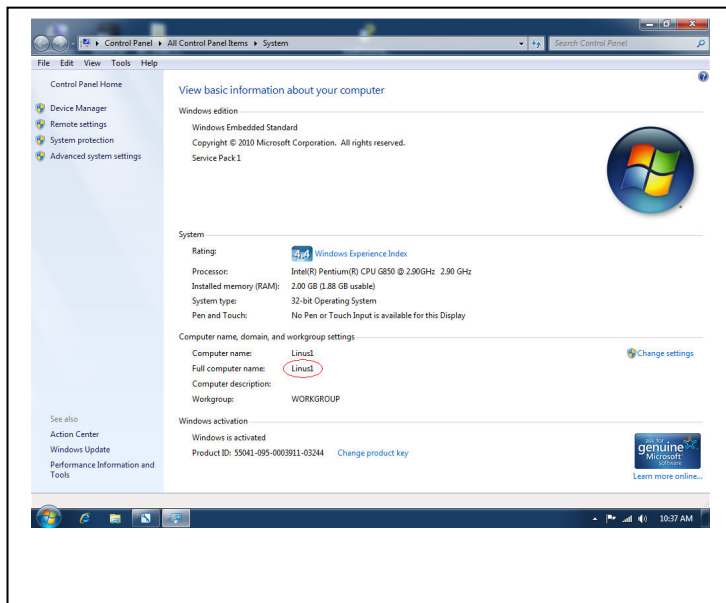


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In Device Manager, observe the SOL (Serial Over LAN) driver is installed (COM7):



From Computer Properties, obtain the name of the 3170 POS computer:



Verify you are on an active LAN network (you can see your server, your mapped drives, etc.)

## Intel ME Configuration

Restart the computer. Press CTRL-P when prompted to enter the Intel Management Engine (title page: Management Engine BIOS Extension v7.0.0.0054, Intel ME v7.1.13.1088). Enter the default password "admin" (without the quotes). When prompted, changed the default password according to these rules:

- Eight characters
- One uppercase letter
- One lowercase letter
- A number

- A special (nonalphanumeric) character, such as !, \$, or ; excluding the :, ", and , characters.)

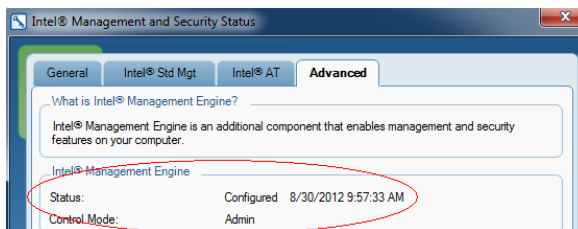
The Password menu, from the main screen, is located: Intel(R) ME General Settings → Change Intel(R) ME Password

After entering the new password, keep hitting Esc to get back to the INTEL(R) ME PLATFORM CONFIGURATION screen. From that screen, arrow to: Power Control → Intel(R) ME ON in Host Sleep States - arrow down to Desktop: ON in S0, ME Wake in S3, S4-5, hit Enter to select, hit Esc twice to return to the main screen.

Select Intel(R) Standard Manageability Configuration → Network Setup → Intel(R) ME Network Name Settings → Host Name → enter host name (the PC's computer name, obtained from Computer Properties above. Technically, the two names do not have to be the same, but to lower confusion, it is best to keep them the same).

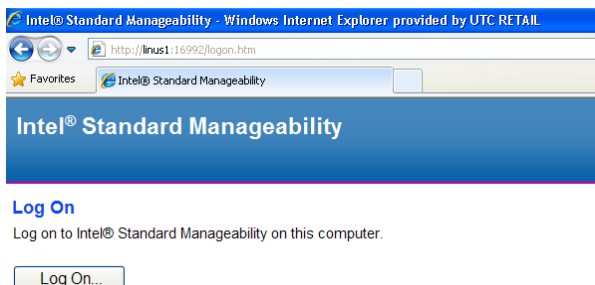
Select Domain Name, enter the Domain Name for the network, e.g., *company.com* . Press Esc twice, select Activate Network Access, "Y" to activate. Esc, select Exit, "Y" to exit and boot to Windows.

Open the Intel Management and Security Status software as before by selecting the icon in the notification area and clicking Open. Now on the Advanced tab, observe the Intel Management Engine is reported as configured:



## AMT Verification and Testing

From another Windows PC (does not have to be vPro capable), open Internet Explorer. In the address box, enter the following: <http://computername:16992> where computername is the computer name obtained from the Computer Properties screen on the AMT 3170. When connected, the page seen left

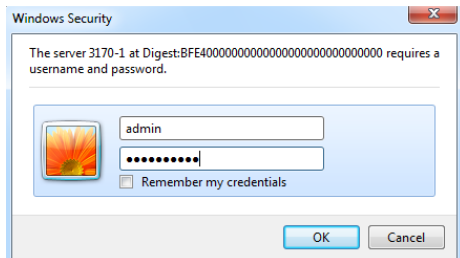


will be loaded. Note, this page is coming from the configured PC's motherboard AMT system, not from Windows running on the system.

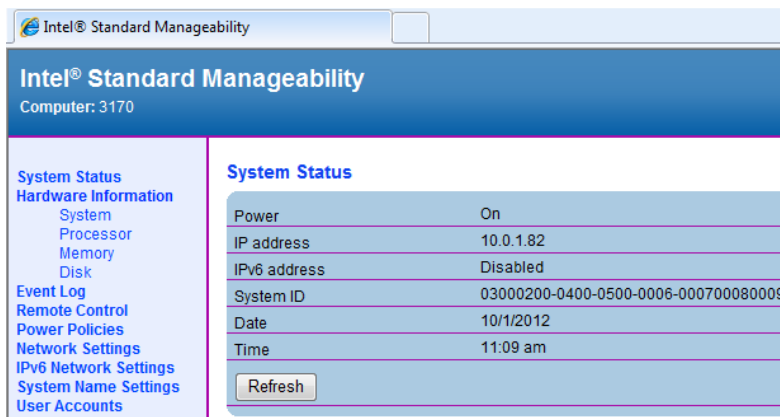


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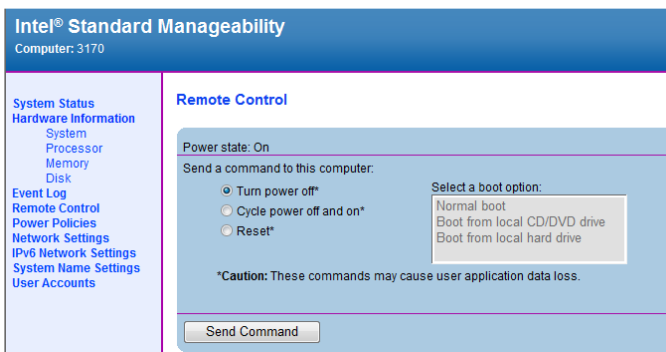
Click Log On and enter User name admin and the password created when the Intel Management Engine was configured



The main Intel Standard Manageability page appears.



Navigate the menus and observe the available information regarding the AMT 3170. Select the Remote Control item and observe the 3 commands available. Note: None of these commands will shutdown



Windows; each will immediately cause the AMT 3170 to turn off, crashing Windows. On the AMT 3170, close Windows and shutdown the machine by selecting Shutdown on the Start menu.



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On the IE machine, select System Status and observe now the AMT 3170 power is reported as Off. Observe you can still obtain the AMT 3170 information via the menu selections, even though the unit is off.

**Intel® Standard Manageability**  
Computer: 3170

**System Status**

Power	Off
IP address	10.0.1.82
IPv6 address	Disabled
System ID	03000200-0400-0500-0006-000700080009
Date	10/1/2012
Time	11:12 am

Refresh

Select the Remote Control option. Observe the options. Select Normal Boot, click Send Command, click OK to confirm the command and observe the AMT 3170 boots to Windows.

**Intel® Standard Manageability**  
Computer: 3170

**Remote Control**

Power state: On

Send a command to this computer:

- Turn power off\*
- Cycle power off and on\*
- Reset\*

Select a boot option:

- Normal boot
- Boot from local CD/DVD drive
- Boot from local hard drive

\*Caution: These commands may cause user application data loss.

Send Command

**Intel® Standard Manageability**  
Computer: 3170

**Run Command**

Performing the command sent to this computer.

Please wait  
16  
seconds before accessing another page.

Intel Standard AMT has now been configured and demonstrated on the 3170 POS.