



**Intel AppUpSM Small Business Service
Built on
Intel[®] Hybrid Cloud Platform**



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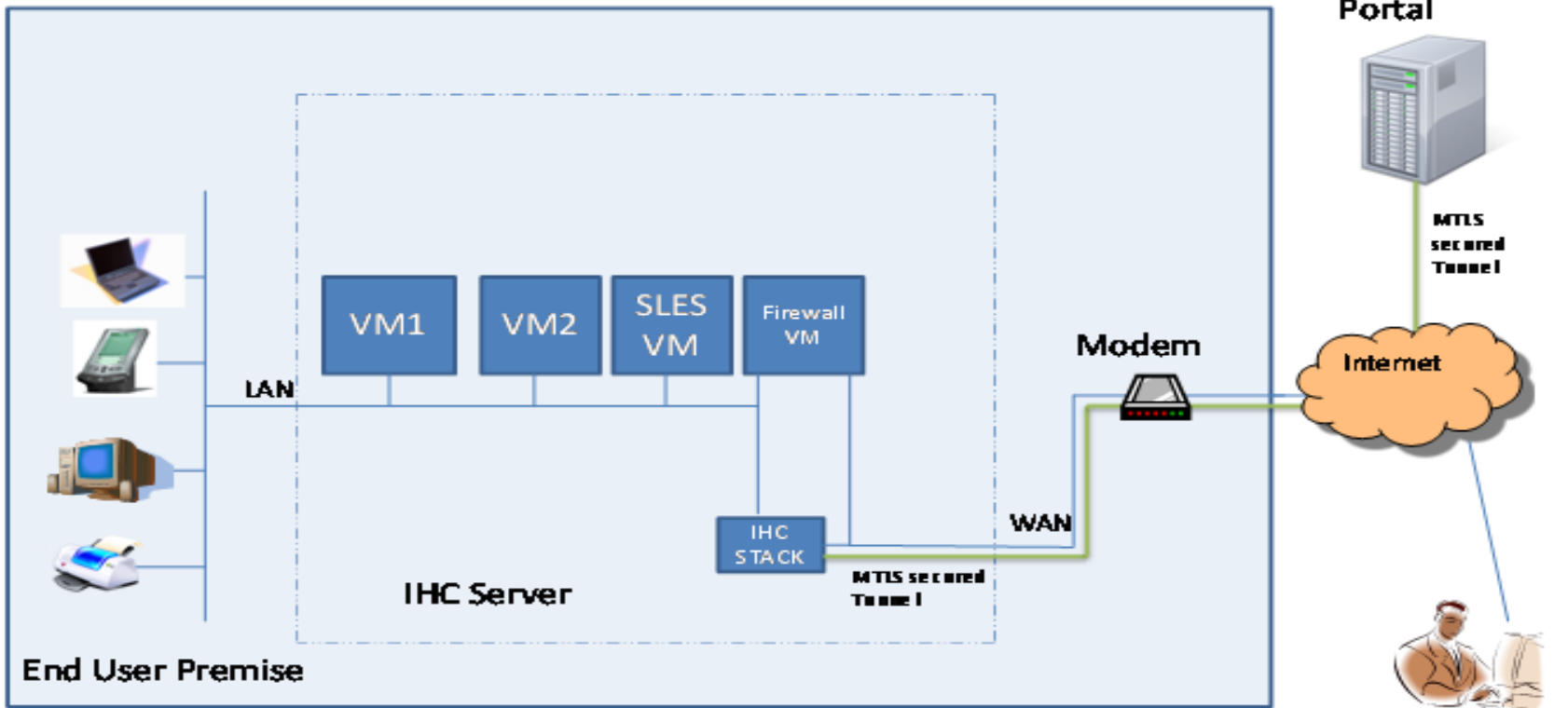
Agenda

- Server Activation
- Solution and Technology Overview
- Live Demo: Management and diagnostic tools
 - Management Portal
 - Server Manager Console
 - SOL
 - Reference Guides
- Support/Resources
- Q/A



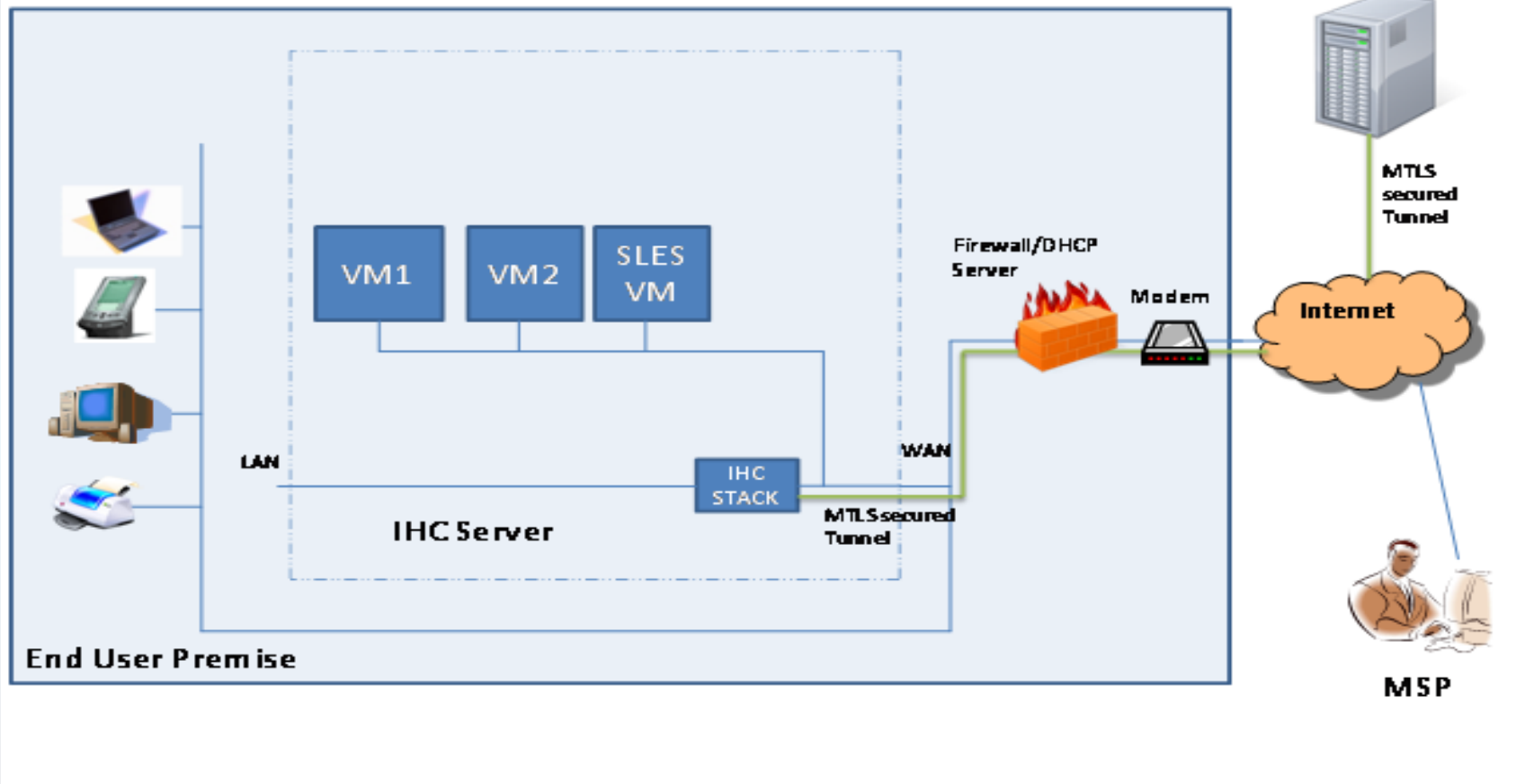
Intel® Hybrid Cloud server - Setup as the DHCP server

No external Firewall



Intel® Hybrid Cloud server - Setup with a external DHCP server

With External Firewall



Server Activation

Intel AppUpSM Small Business Service
Intel[®] Hybrid Cloud server

Quick Start Guide

Thank you for subscribing to Intel[®] Hybrid Cloud.
The following information will help you set up and configure the Intel[®] Hybrid Cloud server and management software.

IMPORTANT:
Read all cautions and warnings before powering-up the system.

For detailed system information,
Download the Intel[®] Hybrid Cloud - User Guide:

<http://www.intel.com/support/motherboards/server/hybrid>

Support:

<http://www.intel.com/support/motherboards/server/hybrid/sb/CS-032313.htm>



Before You Get Started

You will need the following items:

- 1 Local Computer (Windows XP, Windows Vista, or Windows 7)
NOTE: The local computer must have access to ping the Intel[®] Hybrid Cloud Server's IP address.
- Internet Connection
- 2 CAT5 Ethernet Cables (for LAN & WAN Connections)
- Your Intel[®] Hybrid Cloud user Login (depending on the firewall configuration)
- A Keyboard & Monitor
- AMT Configuration Instructions

1 Connect the Cables

STATIC IP NOTE: If the internet connection at the installation site uses a Static IP address, complete the AMT Configuration step before proceeding (see AMT Configuration Instructions).

Server IP address:
WAN: DHCP
LAN: 192.168.77.1

- Connect the Intel[®] Hybrid Cloud server's WAN port to your Internet source.
- Connect your local computer's network port to the LAN port (in the PCI slot) on the Intel[®] Hybrid Cloud server.
NOTE: Remove the warning sticker & connect to the local computer.
- Connect the power cable to the server and to an appropriate power source.
- Power-up the Intel[®] Hybrid Cloud server.
NOTE: Before proceeding to the next step, allow 8 to 10 minutes for the server to boot completely.



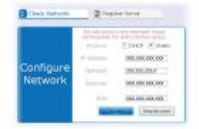
2 Establish Communication & Log In

- Log into your local computer as the Administrator.
- Change the network settings on your local computer to:
LAN IP: 192.168.77.42
Subnet Mask: 255.255.255.0
- Use an Internet browser to navigate to:
https://192.168.77.1:64440/login
- Choose "Continue to this website" at the Security Certificate warning.
- Enter the default User Name and Password in the "Connect to Server" login box:
Username: admin
Password: admin
- Click the "Login" button.
- Read and Accept the Intel End User Software License agreement.



3 Configure the Network

- DHCP - The values will automatically populate. Select the "Keep the Same" button.
- Static IP:
 - Enter the appropriate network configuration values.
 - Select the "Update" button.



4 Register the Server

- Enter a System Name (no spaces allowed).
NOTE: The System Name (Server Name) will differentiate this server from your other servers.
- Enter your Intel[®] Hybrid Cloud user ID (i.e. the same ID is used for your Intel[®] Channel account).
ATTENTION: Management of this server will be limited to this Login ID.



5 Download Tools

- ATTENTION: Leave the browser open after downloading and installing the software (also used in Step 6).**
- NOTE: If the Adobe Shockwave Flash Player plugin is installed in your browser, a single "Install Now" button will be provided in the "Download Tools" screen (for both Adobe Air Runtime and Intel[®] Hybrid Cloud server manager).*
- Record the data from the Server Configuration box on the Intel[®] Hybrid Cloud - Server Management Form (also required for Step 7 below).
 - Under the Download Tools heading, select the link to install Adobe Air Runtime.
IMPORTANT: Adobe Air Version 3.0 is required! (Do NOT Update - Other versions of Adobe Air are NOT compatible with the Intel[®] Hybrid Cloud server manager.)
 - Install Intel[®] Hybrid Cloud server manager:
 - Install the Certificate in the store titled "Trusted Root Certification Authorities"
 - Follow the prompts to install the Intel[®] Hybrid Cloud server manager.
 - If the Intel[®] Hybrid Cloud server manager launches after installation, return to the browser window and continue to Step 6.



6 Activate the Server

- Disconnect the local computer's LAN from the Intel[®] Hybrid Cloud server.
- Connect your local computer to the Internet.
ATTENTION: Reconfigure your local computer's network settings so that you can access the Internet.
- In the upper left, click where it says "Click here to login" (or go to <https://192.168.77.1> in your browser).
- Enter your Intel[®] Hybrid Cloud user ID and Password.
- Click the "Login" button.
- Select which appliances to activate.
- Enter your Customer's Name.
- Select which appliances to activate.
- Click the "Confirm" button.



7 Connect to the Server

- Launch the Intel[®] Hybrid Cloud server manager as the Administrator (e.g. Right-click the icon on your desktop and select "Run as...").
 - Select the "Connect" tab.
 - Enter the remote login information in the "Connect to Server" screen:
Server Name: (created in Step 4)
Username: admin
Password: admin
AMT Password: 4L3n0v0l
 - Click the "Connect" button.
 - Enter the Remote IP address.
NOTE: The server connection information will be stored in the Windows "Hosts" file.
 - Press the "Add" button.
NOTE: The server connection information will be stored in the Windows "Hosts" file.
 - Install the Certificate in the store titled "Trusted Root Certification Authorities".
- TIP: If you are experiencing difficulty with the server connection, refer to the primary setup document for details on Port Forwarding and/or Intel[®] AMT Configuration for Static IP Networks.**



Firewall Port Settings

Port	Function	Forward to IP Address
64440	Management port used for the managing Intel [®] Hybrid Cloud server	Server IP Address
22	SSH to the Intel [®] Hybrid Cloud server	Server IP Address
65222	for the script engine that helps in debugging and executing some critical tasks	Server IP Address
16993	Intel [®] AMT Management port used for the managing Intel [®] Hybrid Cloud server "out of band" (OOB)	Server IP Address
16994-16995	Management port used for the managing Intel [®] Hybrid Cloud server via SOL	Server IP Address
5910-5920	VNC ports used for accessing the Appliance remotely	Server IP Address



Intel® AMT Setup

- By default, Intel® AMT is configured for a dynamic IP
- For static IP:

Intel® AMT Configuration for Static IP Networks

(Must be done at the server site)

If the installation site has a Static Network, you will need to complete the following steps to enable remote access via Intel® Active Management Technology 6.0 (Intel® AMT).

1. You will need the following items to get started:
 - Customer Network Details
 - Monitor & Keyboard
2. Connect the Keyboard & Monitor.
3. Press and hold the "CNTRL" and "P" keys while booting the Intel® Hybrid Cloud Server.
4. Press "1" to enter the ME Configuration screens.
5. Enter the default AMT (ME) Password: See Password Guide Document
6. Return to the Intel(R) ME General Settings screen, and Select the following path:

```
graph TD; A[Intel(R) ME General Settings] --> B[Network Setup]; B --> C[TCP/IP Settings]; C --> D[Wired LAN IPV4 Configuration];
```
7. Set DHCP Mode to: **Disabled**
8. Enter the appropriate values for Network Configuration.
9. Select the following path to change the AMT (ME) Password:

```
graph TD; A[Intel(R) ME General Settings] --> B[Change ME Password];
```
10. Write down the AMT (ME) Password for your records.
11. Exit the AMT (ME) Configuration screen & allow the server to boot.



Enabling Intel® Active Management Technology Usage on Windows 7* and Vista*

- By default, Intel® AMT features on the Intel® Hybrid Cloud Server Manager will not work on Microsoft* Windows 7, Vista, and IE8 under certain configurations
- To solve this: (page 76 of user guide)
 - download and install the Manageability_Developer_Tool_Kit_0_6_0937_2.msi file: <http://software.intel.com/en-us/articles/download-the-latest-version-ofmanageability-developer-tool-kit/>
 - scroll down and click Download EOL'd DTK components here: <http://software.intel.com/en-us/articles/code-samples-license-2/?target=http://software.intel.com/file/10854>



Enabling Intel® Active Management Technology Usage on Windows 7* and Vista* continue...

- Generate and export the certificate:
 1. Open Manageability Director Tool.
 2. Under Certificate Manager generate a sample root certificate, make it trusted and install it.
 3. Add new security profile (sample profile).
 - a. Under Intel® AMT Feature add – Web interface, Redirection port, IDE redirection and SOL.
 - b. Configure AMT Security to “Use TLS security.”
 - c. Configure generated sample root certificate to AMT certificate.
 - d. Go to “Certificate Store” on the left pane.
 - e. Choose the Certificate and click on the “Export” button on the bottom of the window and choose the desired destination to store the certificate.



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Intel AppUpSM Small Business Service

Built on the Intel[®] Hybrid Cloud Platform

Intel AppUpSM Small Business Service Catalog



Service Provider



SMB



Intel[®] Hybrid Cloud Server Manager

Secure Usage Monitoring
Remote Management
Management Portal



Intel[®] Hybrid Cloud Server Reference Design



Multiple Xeon[®] based hardware options with Intel[®] VT, TXT, AMT technologies

- **SMB Benefits:**
 - Pay-as-you-go Software
 - Cloud access to Software Catalog
 - Data onsite, no capex
- **MSP/ISV Benefits:**
 - Convert to subscription model
 - Immediate On-Line Software Catalog
 - Create your own offers
 - Pre-configured , remotely managed
- **OEM Benefits:**
 - Grow SMB sales with Hybrid Cloud appliance



Intel® Hybrid Cloud server, software and Intel AppUpSM Small Business Service catalog

- Intel® Hybrid Cloud server
 - Intel® Xeon® Processor
 - Intel® Active Management Technology
 - Trusted Platform Module (TPM)
 - Intel® Virtualization Technology
 - Reliability and Redundancy
- Intel® Hybrid Cloud software
 - Citrix* XenServer - virtual machine monitor (VMM)
 - Intel software stack provides an abstraction layer for deployment, configuration and manageability
- Intel AppUpSM Small Business Service catalog
 - Selection of hosted virtual appliances



Storage and Redundancy

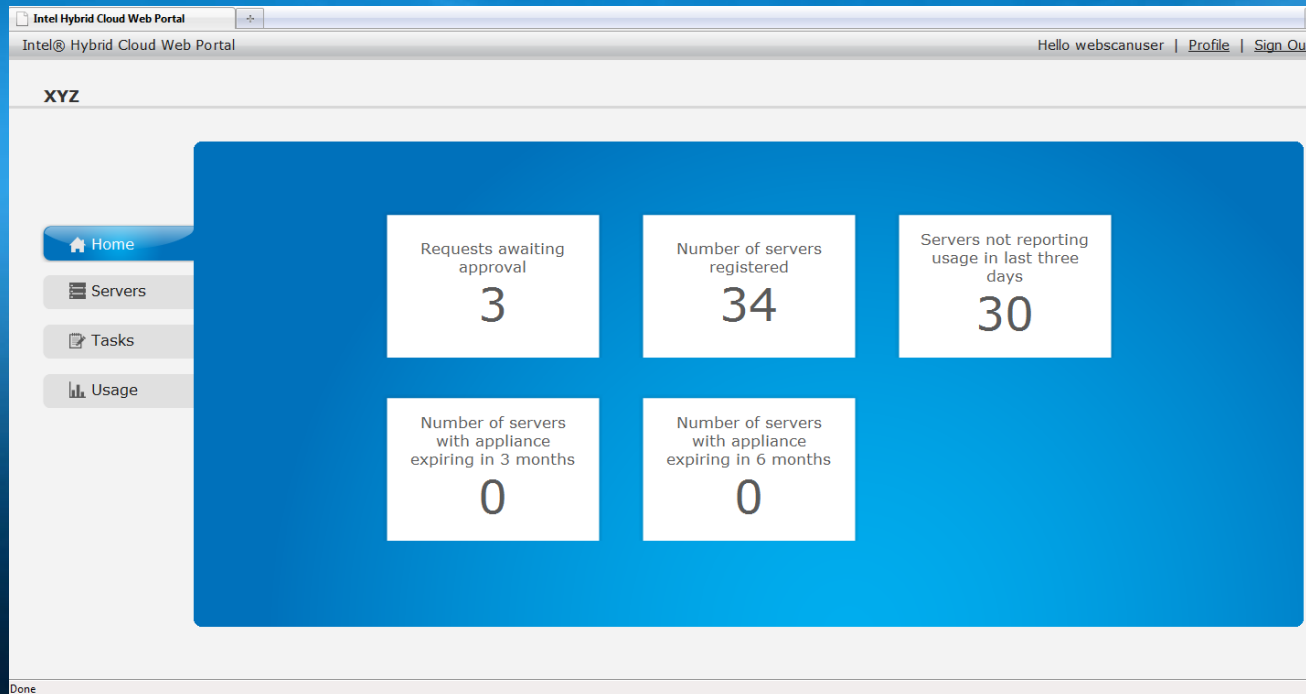
- Standard & Standard Plus sku
 - RAID 1: 2 x 1TB 7.2K RPM drives
 - Software RAID
- White Box sku
 - RAID 5: 4 x 600GB 10K RPM drives
 - Hardware RAID
- ECC Memory
 - Up to 16GB (4 x 4GB)
Unbuffered 1333MHz DDR3

Storage Volume Partitions



Intel® Hybrid Cloud management portal

- Management portal used for registration, activation, tracking and monitoring usage of all servers and appliances in account
- Accessible through multiple web browsers
 - <https://hybridcloud.intel.com>
- Easy to use



Done



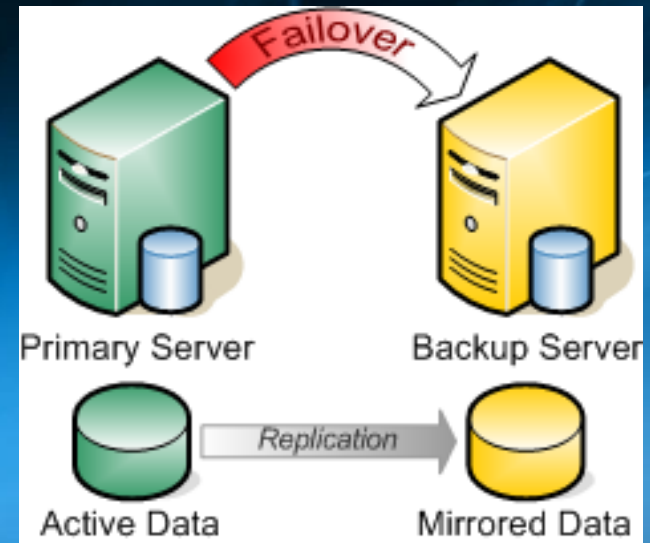
Intel® Hybrid Cloud server manager

- One console to manage, configure and troubleshoot the server and its software appliances
- Access server remotely or locally
- Can be installed on a PC with very low hardware requirements
- Easy to use
- Popular features:
 - Add a new VM/appliance
 - Start/Stop VMs
 - Allocate hardware resources to VMs
 - Backup/Restore VMs
 - Manage each VM via VNC Console
 - Configure Email Alerts
 - View Scripts
 - Isolate a VM from the network
 - Change VM boot up sequence
 - Manage disaster recovery



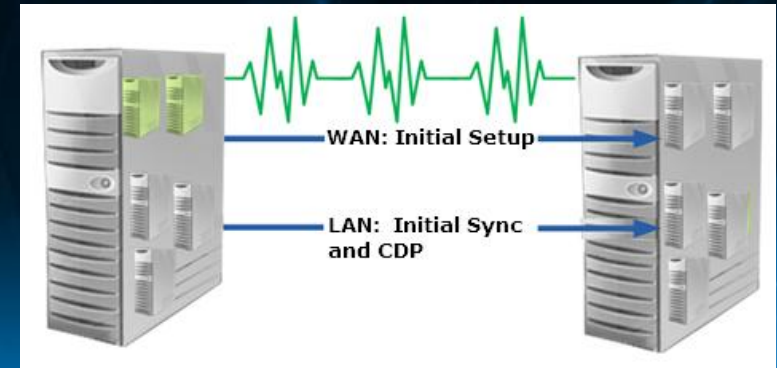
Disaster Recovery

- Available on ver. 2.5 platform
- 2 Servers with identical storage partitions and sizes required
- Unplanned Downtime
- Protects Against Hardware Failure
- Protects Against Hypervisor Failure
- Continuous Data Protection (CDP)
- Backup Server can be brought online as the primary server in 10 minutes



Disaster Recovery

- Initial setup via WAN NIC port
- Initial sync and continuous data protection (CDP) via LAN NIC port
- DR Status shows which VMs are protected
- VM metadata and various other system details are also sync'ed (network details, API ACL, SMTP)



The screenshot shows the Intel(R) Hybrid Cloud management console. The interface includes a navigation sidebar with options like Dashboard, Appliances, Configuration, Disaster Recovery, Controls, and Logs. The main content area displays the DR Status for a VM, showing a table of VMs and their synchronization status.

	Primary	Secondary
	In service - Synchronized	Recoverable - Synchronized
StoreGrid 3.5 SP Edition	In sync	In sync
Windows SBS 2008 Premium	In sync	In sync



Disaster Recovery

1

Intel Hybrid Cloud - Hello admin

54ee129d1ce064e3

Connected: Secondary

Model: To be filled by O.E.M. CPU: Intel(R) Xeon(R) CPU E31275 @ 3.40GHz
Memory: 15016.7 MB free of 16276.7 MB Uptime: 0 Day(s) and 09 Hour(s)
Storage: 31.8 GB free of 100.0 GB

DR Status: Recovery

No messages available

The Secondary server is unable to reach the primary server. Please verify network settings or use recovery tab to move this server to primary server

	Primary	Secondary
Windows SBS 2008 Premium	Not Present	Recoverable - Primary not found
StoreGrid 3.5 SP Edition		

myIesPR

2

Intel Hybrid Cloud - Hello admin

54ee129d1ce064e3

Connected: Secondary

Model: To be filled by O.E.M. CPU: Intel(R) Xeon(R) CPU E31275 @ 3.40GHz
Memory: 15016.7 MB free of 16276.7 MB Uptime: 0 Day(s) and 09 Hour(s)
Storage: 31.8 GB free of 100.0 GB

DR Status: Recovery

No messages available

Appliances available for recovery.

- Windows SBS 2008 Premium
- StoreGrid 3.5 SP Edition

Recover

myIesPR

3

Intel Hybrid Cloud - Hello admin

myIesPR

Connected: Primary

Model: To be filled by O.E.M. CPU: Intel(R) Xeon(R) CPU E31275 @ 3.40GHz
Memory: 15529.7 MB free of 16276.7 MB Uptime: 0 Day(s) and 00 Hour(s)
Storage: 31.8 GB free of 100.0 GB

DR Status: Repair

Unable to contact secondary server. Please verify network connections or use repair tab to add a new server

	Primary	Secondary
StoreGrid 3.5 SP Edition	Insync	Not Present
Windows SBS 2008 Premium	Insync	Not Present

myIesPR

4

Intel Hybrid Cloud - Hello admin

myIesPR

Connected: Primary

Model: To be filled by O.E.M. CPU: Intel(R) Xeon(R) CPU E31275 @ 3.40GHz
Memory: 15529.7 MB free of 16276.7 MB Uptime: 0 Day(s) and 00 Hour(s)
Storage: 31.8 GB free of 100.0 GB

DR Status: Repair

Disaster recovery setup is running in degraded mode. Add a new server to repair the setup

Note: You can also add an old server after resetting it to factory defaults.

Remote IP address of replacement machine:

Repair

myIesPR



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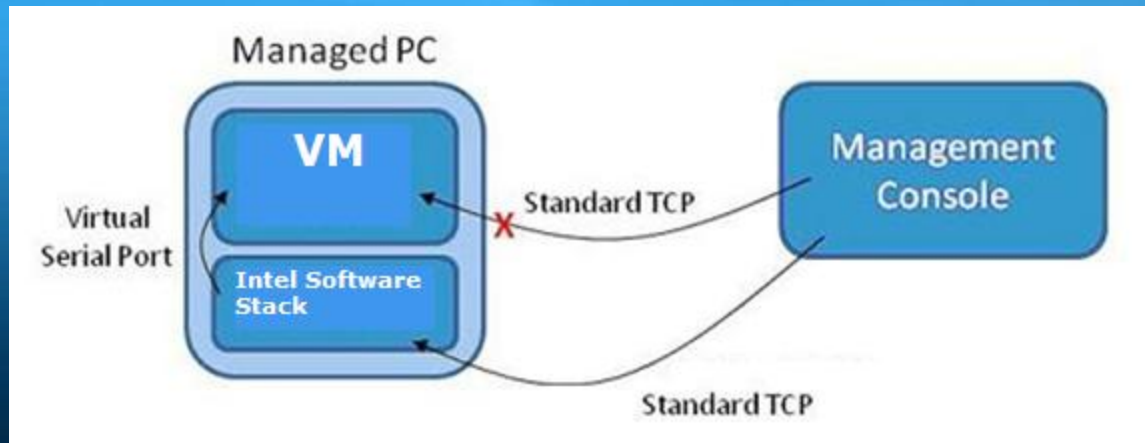
Live Demo

- Management portal
 - Intel® Hybrid Cloud server manager
 - Hardware resources allocation to VMs
 - Microsoft* Windows Server 2008 Setup
 - VNC console
 - VM backup/restore
 - VM network access
 - Script
 - VM boot sequence
 - Email alert
 - Astaro* Gateway web console
- SOL
 - Lenovo* PC Doctor
 - Remote reboot into BIOS
- Reference guides
 - User Guide – Command Line Tool (IXE)
 - Troubleshooting Guide – Reset admin password



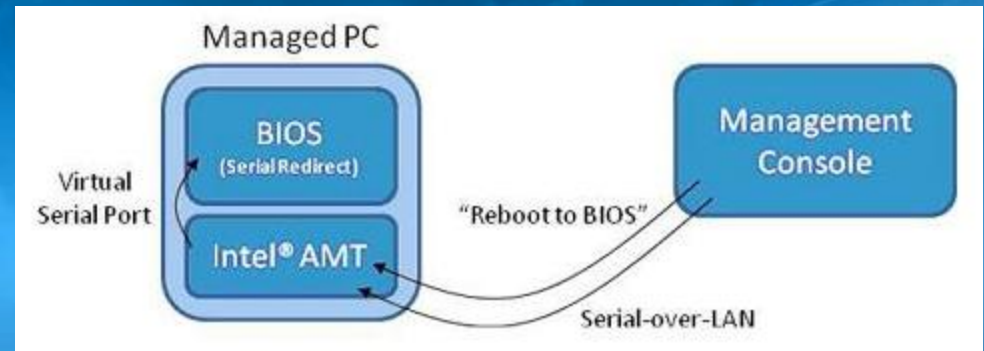
VNC Console

- Connect to individual VMs even if the TCP/IP connection has failed on the VM
 - A video is sent to the VNC Console via the virtual port as if a monitor is connected to the VM
 - Developers call this the “mid-band”



Intel® Active Management Technology

- Enables Out-Of-Band (OOB) remote support and management of networked computer systems
- Firmware level
- Basic feature of AMT is virtual serial port (Serial-over-LAN)
 - Virtual serial port is accessible to authenticated management consoles

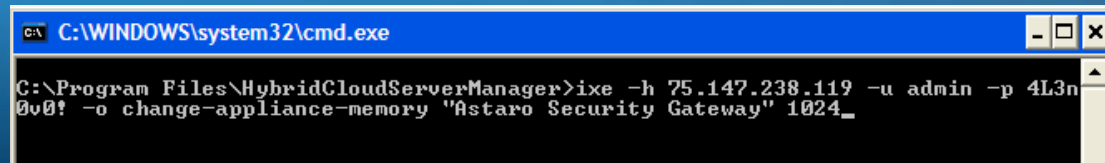


User guide – Command Line Tool (IXE)

- Server can also be managed using IXE command line tool
- One operation-at-a-time
- Commands can be scripted
- Both Linux* & Windows* variants of the tool are supported
- Create automated scripts to backup appliances
- Create automated scripts to setup server
- Example Commands:
 - save-restore-configuration
 - start-appliance-backup
 - get-alert-messages
 - get-system-event-log

Table 69. Command: change-appliance-memory

Required Parameter	<Appliance name> <Memory in MB>
Description	Create Increase or Decrease the appliance Memory.
Supported User	{'admin'}
Usage	ixe -h <server ip> -u <username> -p <password> -o change-appliance-memory <Appliance name> <Memory in MB>
Result	Command successful



```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\HybridCloudServerManager>ixec -h 75.147.238.119 -u admin -p 4L3n0v0! -o change-appliance-memory "Astaro Security Gateway" 1024_
```



Troubleshooting guide – Password Reset

Reset the admin login to the default (login: admin, password: admin):

1. Connect keyboard and monitor to the server
2. Type Alt + F5
3. Type Pageup+F2+F6+End <enter>

The new password must meet all of the following security conditions:

- At least 1 upper case alphabet character
- At least 1 lower case alphabet character
- At least 1 number
- At least 1 of these special characters:
• ~,!,@,#,%,^,&
- A total of at least 8 characters



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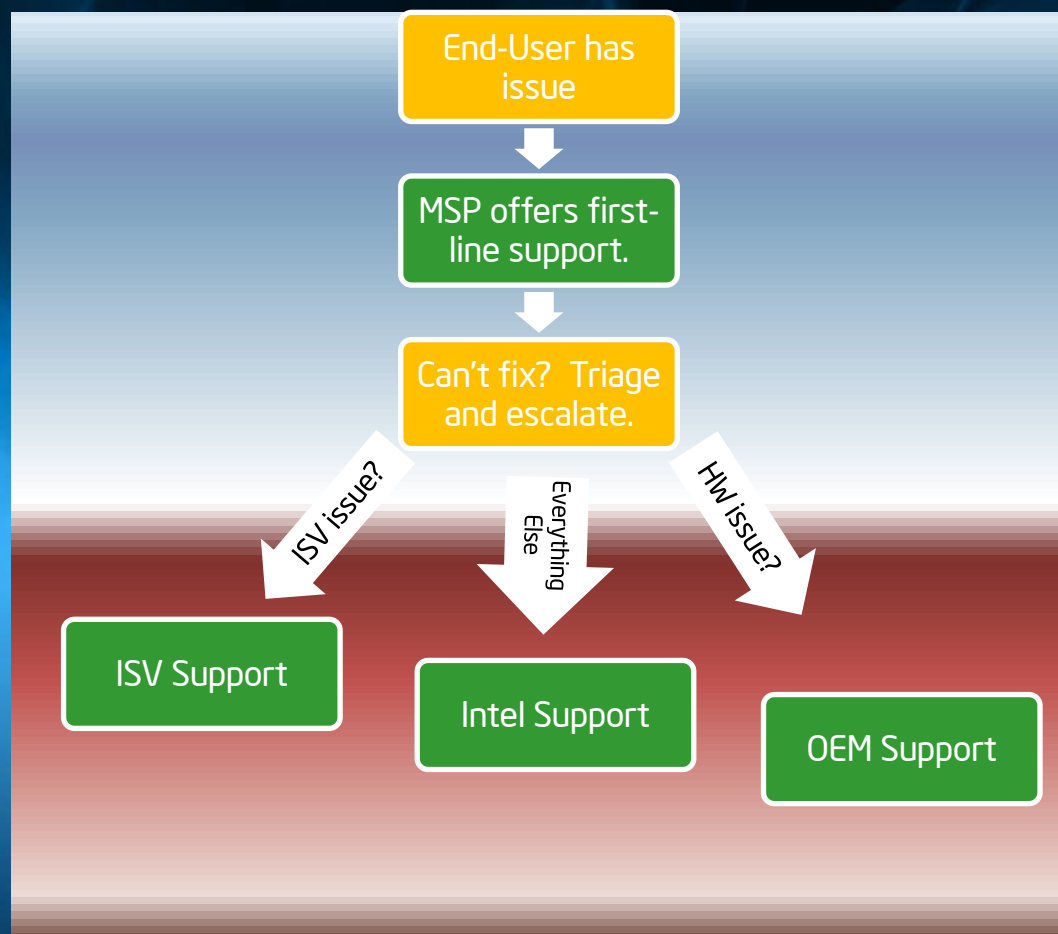
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Support/Resources

Support includes:

- Problem solving
- Technical training & webinars
- Online support, <http://www.intelhybridcloud.com/support.html>
- 1-800 numbers from Intel and Lenovo*
- ISV support contacts
- FAQs



MANY great support resources available to you from Intel and its software and hardware partners...



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Thank You!

