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Toshiba International Corporation
Uninterruptible Power Systems

RemotEye ESXi Client Software Installation Guide



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Requirements

1. Compatible with ESXi 5.0/5.1/ 5.5/ 6
2. ESXi full or evaluation version (not compatible with free version)
3. vSphere Management Assistant (vMA)

Installation Procedure

1. Please confirm your license type. Only full or evaluation supports this function. You can check the license type from “Configuration > Licensed Features.”

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10.1.1.200

localhost.localdomain VMware ESXi, 5.1.0, 799733

Getting Started Summary Virtual Machines Resource Allocation Performance Configuration Local Users & Groups Events Permissions

Hardware

- Health Status
- Processors
- Memory
- Storage
- Networking
- Storage Adapters
- Network Adapters
- Advanced Settings
- Power Management

Licensed Features

ESX Server License Type

Product: VMware vSphere 5 Hypervisor Licensed for 1 physical CPUs (unlimited cores per CPU)
License Key: SHOCM-22J9J-18Y48-0J1RK-35UM
Expires: Never

Product Features:
Up to 32 GB of memory
Up to 8-way virtual SMP

Free Version

localhost.localdomain VMware ESXi, 5.1.0, 799733 | Evaluation (60 days remaining)

Getting Started Summary Virtual Machines Resource Allocation Performance Configuration Local Users & Groups Events Permissions

Hardware

- Health Status
- Processors
- Memory
- Storage
- Networking
- Storage Adapters
- Network Adapters
- Advanced Settings
- Power Management

Licensed Features

ESX Server License Type

Product: Evaluation Mode
Expires: 2013/6/15

Product Features:
Up to 64-way virtual SMP
vCenter agent for VMware host
vShield Endpoint
vSphere Replication
SR-IOV
vSphere API
Storage APIs
VmSafe
vSphere HA
Hot-Pluggable virtual HW
vSphere vMotion
vSphere FT
vSphere Data Protection
vShield Zones
vSphere DRS
vSphere Storage vMotion
MPIO / Third-Party Multi-Pathing
vSphere Distributed Switch
vSphere Host Profiles
Remote Virtual Serial Port Concentrator
vSphere Storage I/O Control
Direct Path vMotion
vSphere Storage APIs for Array Integration

Full or Evaluation

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2. Download vMA from VMware website (the version of vMA must be same as ESXi). For example, if using “ESXi 5.5” download “vMA v5.5”.

The screenshot shows a web browser displaying the VMware Developer Center. The URL in the address bar is <https://developercenter.vmware.com/web/dp/tool/vma/5.5>. The page title is "vSphere Management Assistant for vSphere 5.5". A navigation bar at the top includes links for "Home", "Resources", "Tools", and "vSphere Management Assistant for vSphere 5.5". A search bar is also present. Below the title, there are three tabs: "Supported Versions" (selected), "vSphere 6.0", "vSphere 5.5" (highlighted with a red box), and "vSphere 5.1". The main content area has a section titled "Overview" which describes vMA as a prepackaged Linux virtual machine for managing ESX and ESXi systems. It includes a note about a refreshed build. Below the overview, there's a "Documentation" section with links to "Release Notes" and "vSphere Management Assistant Guide (pdf)".

vSphere Management Assistant for vSphere 5.5

Supported Versions **vSphere 5.5**

Overview

The VMware vSphere Management Assistant (vMA) is a prepackaged Linux virtual machine in which administrators can deploy scripts and select third-party agents to manage ESX and ESXi systems. Software included in vMA includes vSphere CLI and an authentication component that supports non-interactive login.

Note: The vSphere Management Assistant build has been refreshed. Please download the newest released build.

Documentation

- Release Notes
- vSphere Management Assistant Guide (pdf)

Tags: 5.5 / cloud

Downloads

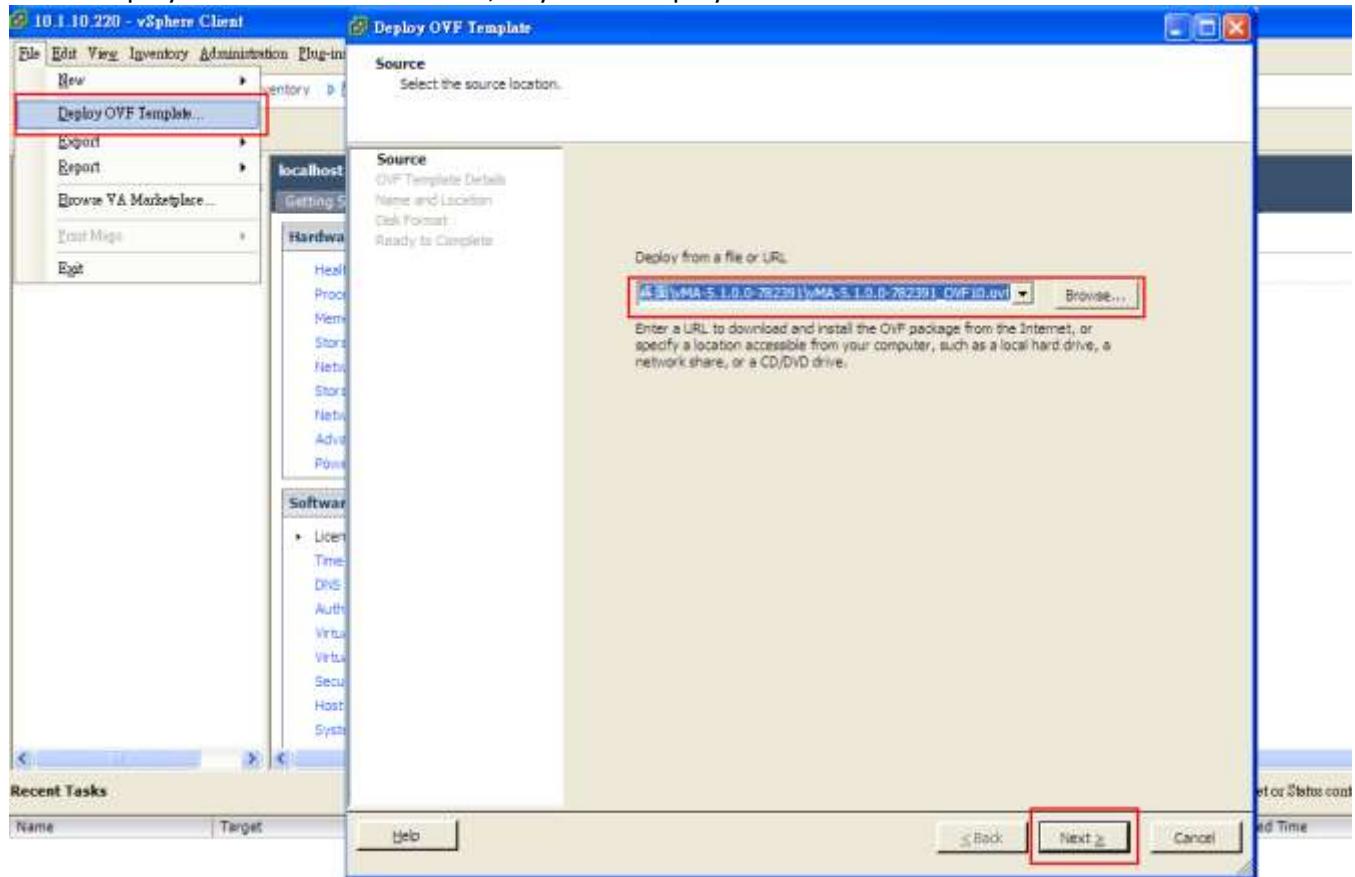
Name	Version	Size	Action
vSphere Management Assistant	5.5		Download

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3. Unzip vMA and deploy to ESXi. If the environment has more than one ESXi server, vMA should be deployed to the last ESXi server, or you can deploy vMA in all ESXi servers.

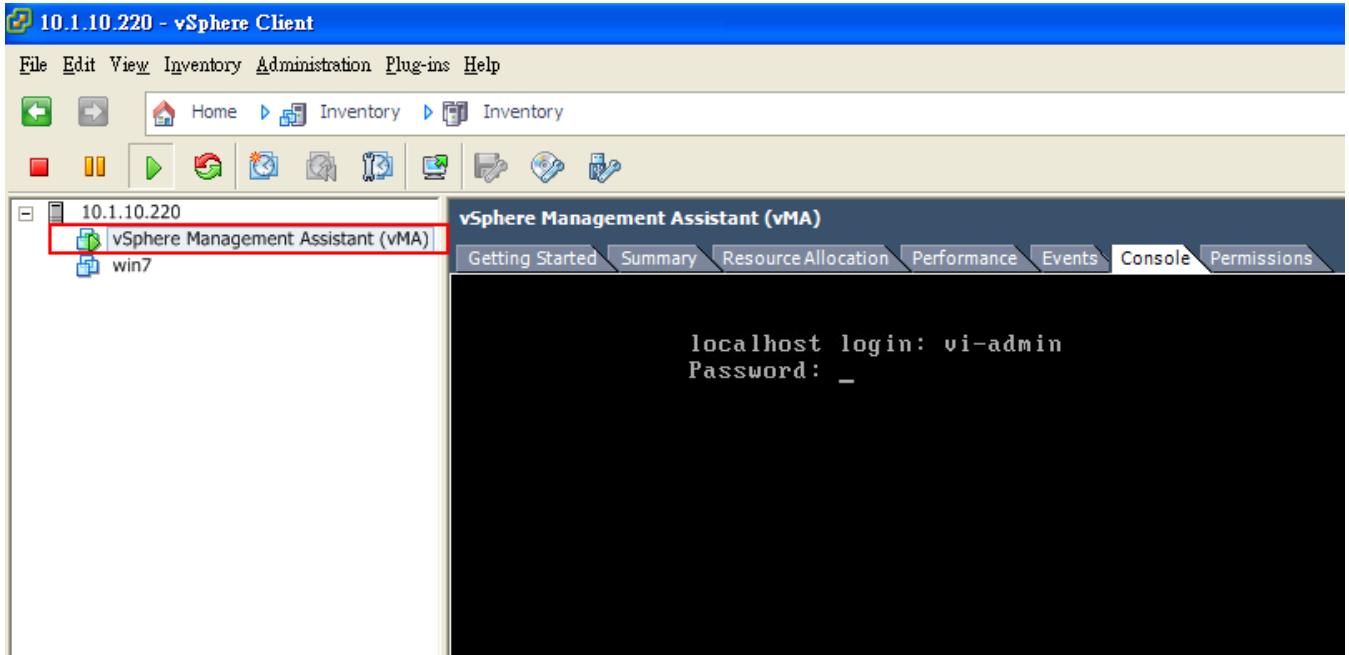


4. Boot up vMA. It will ask you to configure the password while installing. NOTE: Default account is <vi-admin>



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5. Use <sudo passwd> to change root's password. Then change to the root account by using <su root>

```
vi-admin@localhost:/root> sudo passwd
vi-admin's password:
Changing password for root.
New UNIX password:
Retype new UNIX password:
Password changed.
vi-admin@localhost:/root> su root
Password:
localhost:~ # _
```

6. Type <vifp addserver [server IP]> to add ESXi server to vMA (requires ESXi server root password). Then type <vifp listservers> to confirm if it was added. If you want to remove ESXi server, type command <vifp remove server[server IP]>.

```
localhost:/home # vifp addserver 10.1.1.200
root@10.1.1.200's password:
localhost:~ # vifp addserver 10.1.5.205
root@10.1.5.205's password: _
localhost:~ # vifp listservers
10.1.1.200      ESXi
10.1.5.205      ESXi
```



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7. Uncompress the shutdown daemon to the folder you want by typing <tar xvf

```
Sd_ESXi_HA_TSB_v090b3.tar>
```

```
localhost:/R4SD # ls
Sd_ESXi_HA_TSB_v090b3.tar
localhost:/R4SD # tar xvf Sd_ESXi_HA_TSB_v090b3.tar
Sd_ESXi_HA_TSB/
Sd_ESXi_HA_TSB/install.sh
Sd_ESXi_HA_TSB/oslist
Sd_ESXi_HA_TSB/uGuard.tar.gz
Sd_ESXi_HA_TSB/unins.sh
localhost:/R4SD # _
```

8. Type <./install.sh> to start install shutdown daemon and then input RemotEye IP address.

```
localhost:/R4SD/Sd_ESXi_HA_TSB # ls
install.sh oslist uGuard.tar.gz unins.sh
localhost:/R4SD/Sd_ESXi_HA_TSB # ./install.sh
*****
OS TYPE:Linux
OS NAME:Suse

*****
Input RemotEye IP Address:_
```



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9. Finish the configuration settings, see below.

```
*****
Input RemotEye IP Address:10.1.1.25
Input Client Name (Max 28 bytes & Only allow English, Number, - and _)(Default Root):
Warning Beep On?(Y/n)
Shutdown delay time is 120 seconds?(Y/n)
Input shutdown delay time(0~65535):30
Estimate script file running time is 120 seconds?(Y/n)
RemotEye Event Polling Rate is 10 seconds?(Y/n)
Input shutdown script path:
Shutdown Enable?(Y/n)_

*****
Input RemotEye IP Address:10.1.1.25
Input Client Name (Max 28 bytes & Only allow English, Number, - and _)(Default Root):
Warning Beep On?(Y/n)
Shutdown delay time is 120 seconds?(Y/n)
Input shutdown delay time(0~65535):30
Estimate script file running time is 120 seconds?(Y/n)
RemotEye Event Polling Rate is 10 seconds?(Y/n)
Input shutdown script path:
Shutdown Enable?(Y/n)y

RemoteHostIP = 10.1.1.25
ClientName = Root
WarnBeep = 1
;1 = TRUE(default); 0 = FALSE
ShutdownDelayTime = 30
ForceShutdownDelay = 120
PollingRate = 10
ShutdownScript =
ShutdownEnable = 1
;1 = Enable(default); 0 = Disable

Press any key to continue.....
-
```

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```
uGuard/script/sys/menu_control.sh
uGuard/script/sys/menu_ESXi_config.sh
uGuard/script/sys/menu_log.sh
uGuard/script/sys/sendmsg.sh
uGuard/script/sys/uginit.sh
uGuard/script/sys/uginit_hpx.sh
uGuard/script/sys/uGuard.conf
uGuard/script/sys/uGuard.help
uGuard/script/sys/uGuard_ESXiList.conf
uGuard/script/sys/uGuard_shutdownorderList.conf
uGuard/script/sys/ug_boot
uGuard/script/sys/ug_killbg.sh
uGuard/script/sys/ug_msg.sh
uGuard/script/sys/ug_run.sh
uGuard/script/sys/ug_run_old.sh
uGuard/script/sys/ug_Unload
uGuard/script/sys/VERSION
uGuard/script/uGuard.sh
uGuard/script/usr/
/etc/uGuard/script/sys/uginit.sh
Enter /etc/uGuard/script folder for running uGuard.sh
```

```
Execute shutdown client software now?(y/n)
y_
```

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10. Setting ESXi server list

```
+=====+ [ uGuard Main menu ] +=====+
| uGuard Version : uGuard-0.9.0.b3
| uGuard Status  : Stopped
1. uGuard Configuration
2. uGuard Control
3. uGuard Status
4. uGuard Log
5. ESXi server List Configuration
0. Exit
Please Enter Your Choice =>5_
+=====+ [ ESXi Config Group Menu ] +=====+
| uGuard Version : uGuard-0.9.0.b3
| uGuard Status  : Stopped
1. ESXi 1 setting
2. ESXi 2 setting
3. ESXi 3 setting
4. ESXi 4 setting
5. ESXi 5 setting
0. Return to previous menu
Please Enter Your Choice =>1_
+=====+ [ ESXi 1 Config ] +=====+
1. ESXi 1 IP Address :10.1.1.200
2. ESXi 1 Account   :root
3. ESXi 1 Password  :*
0. Return to ESXi Config Group Menu
Please Enter Your Choice =>_
```

11. Select uGuard control and start the program

```
+=====+ [ uGuard Main menu ] +=====+
| uGuard Version : uGuard-0.9.0.b3
| uGuard Status  : Stopped
1. uGuard Configuration
2. uGuard Control
3. uGuard Status
4. uGuard Log
5. ESXi server List Configuration
0. Exit
Please Enter Your Choice =>2_
```

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```
+=====+  
| Control Group Menu |  
+=====+  
 uGuard Version : uGuard-0.9.0.b3  
 uGuard Status : Stopped  
 1. Start the program now.  
 2. Start the program at next boot time.  
 3. Stop the program.  
 4. Stop the program, don't restart at next boot time.  
 5. Suspend program  
 6. Resume program  
 0. Return to previous menu  
 Please Enter Your Choice =>1_
```

12. Check client list from “Protected Client” in RemotEye 4

The screenshot shows the RemotEye 4 Multi-Protocol UPS Manager interface. At the top, there's a navigation bar with a logo, the title "RemotEye® 4 Multi-Protocol UPS Manager", and user information "TOSHIBA Guest". Below the navigation bar, there are several tabs: DASHBOARD, UPS MONITORING (which is selected), UPS MANAGEMENT, EMD, and SETTINGS.

The main content area is divided into three panels:

- UPS MONITORING**: A sidebar with a list of monitoring options: UPS Data General, Input Parameter, Output Parameter, Battery Parameter, UPS Home Group, Protected Clients (which is highlighted with a red box), Alert Center, and History Logs.
- Protected Clients**: A table listing clients. The columns are Index, IP Address, Client Name, Shutdown Delay(Secs), Connected Time, and Test. One row is shown: Index 1, IP Address 10.1.1.201, Client Name Root, Shutdown Delay(Secs) 120, Connected Time 01-06-2016 03:08:51, and Test (checkbox). This row is also highlighted with a red box.
- Description**: A panel containing the text: "Number Index. This field shows the serialized index numbers of the RemotEye 4 registered clients that are running during the execution of the RemotEye 4 Shutdown application." It also includes a small navigation arrow at the bottom right.

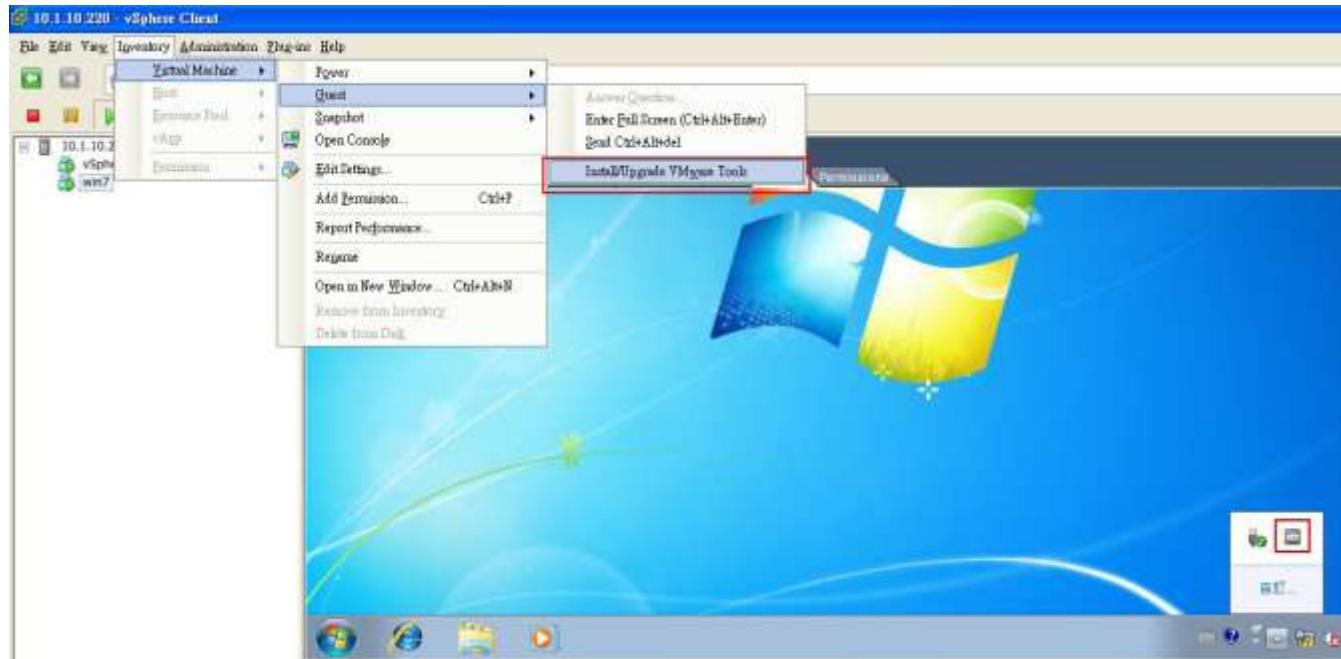
At the bottom of the main content area, it says "Number of Protected Clients: 1".

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13. Install VMware Tools to each client OS “Inventory > Virtual machine > Guest > Install/Upgrade VMware Tools”.



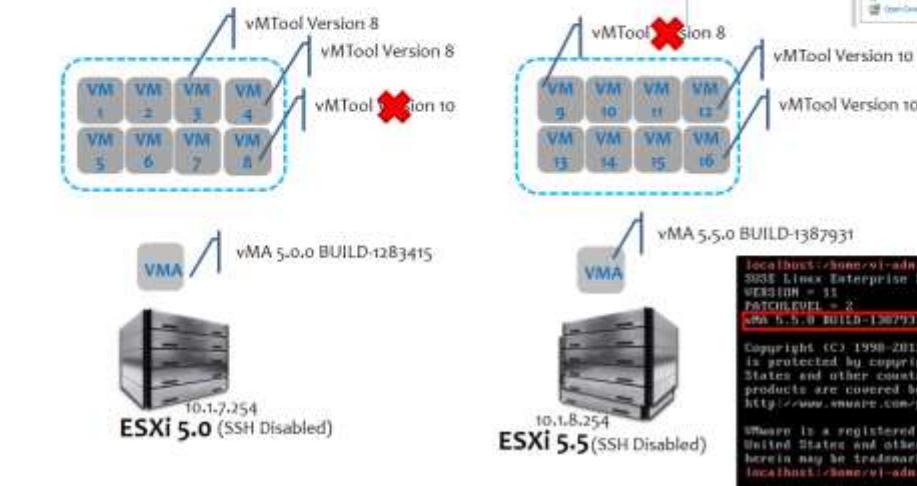
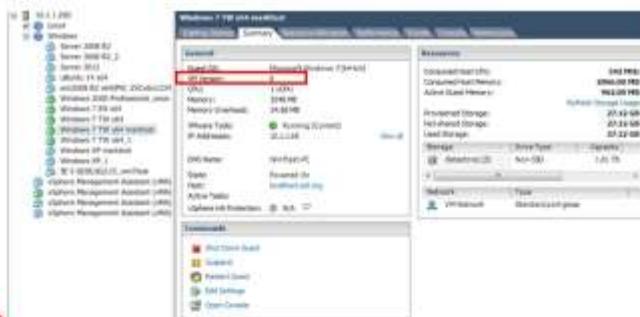
14. NOTE: VMware Tools and vMA version should match with ESXi Server. We suggest you should install the appropriate vMA version and VMware Tools version.

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ESXi/ESX version	Virtual hardware version
ESXi 6.0	11
ESXi 5.5	10
ESXi 5.1	9
ESXi 5.0	8
ESXi/ESX 4.1/4.0	7
ESXi/ESX 3.5	6



```
localhost:~#su -vi-admin & cat /etc/cent-release
3.0.0-143.el7.x86_64
VERSION = 7
PATCHLEVEL = 0
PRETTY_NAME="CentOS Linux Enterprise Server 7.3 (Maipo)"
```

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```
localhost:~#su -vi-admin &
```

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15. Setup finished. Now do a shutdown test on a non-production server via RemotEye 4 web interface. Go to “UPS MONITORING > Protected Clients” and select the “Test” check box and click on the “Send Shutdown” button below. NOTE: Please do this only to a NON-Production ESXi server!

RemotEye® 4 Multi-Protocol UPS Manager

DASHBOARD UPS MONITORING UPS MANAGEMENT EMD SETTINGS

TOSHIBA Guest

UPS MONITORING

- UPS Data General
- Input Parameter
- Output Parameter
- Battery Parameter
- UPS Home Group
- Protected Clients**
- Alert Center
- History Logs

Protected Clients					
Index	IP Address	Client Name	Shutdown Delay(Secs)	Connected Time	Test
1	10.1.1.201	Root	120	01-06-2016 03:08:51	<input checked="" type="checkbox"/>

Number of Protected Clients: 1

Description

Number Index

This field shows the serialized index numbers of the RemotEye 4 registered clients that are running during the execution of the RemotEye 4 Shutdown application.

```
+=====+  
|                      [ uGuard Main menu ]                  |  
+=====+  
  uGuard Version      : uGuard-0.9.0.b3  
  uGuard Status       : Running  
1. uGuard Configuration  
2. uGuard Control  
3. uGuard Status  
4. uGuard Log  
5. ESXi server List Configuration  
0. Exit  
Please Enter Your Choice =>  
  
*** Broadcast from uGuard.sh at Thu Jul  7 07:11:46 UTC 2016  
System will shutdown after 30 seconds
```

NOTE: If you want to return to uGuard main menu, please execute uGuard.sh that path is “/etc/uGuard/script”

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```
localhost:/home/vi-admin/SD/Sd_ESXi_HA_ISB # cd /etc/uGuard/script/  
localhost:/etc/uGuard/script # ls  
log  readme.txt  sys  uGuard.sh  usr  
localhost:/etc/uGuard/script # ./uGuard.sh -
```

```
+=====+  
| [ uGuard Main menu ] |  
+=====+  
    uGuard Version      : uGuard-0.9.0.b3  
    uGuard Status       : Running  
1. uGuard Configuration  
2. uGuard Control  
3. uGuard Status  
4. uGuard Log  
5. ESXi server List Configuration  
0. Exit  
Please Enter Your Choice =>_
```



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Help

The uGuard Service help manual displays all of the parameters that can be used. You can type </etc/uGuard -h> to show RemotEye Service help manual page.

```
localhost:/R48D/Sd_ESXi_HA_TSB # ./etc/uGuard/script/uGuard.sh -h
Usage : ./uGuard.sh [h][v][sS][uU][d][r][p][l][e][g][oO]
  h : This manual page .
  v : Show revision information.
  s : Start the program now.
  S : Start the program now, and restart at next boot up time.
  u : Unload program now.
  U : Unload program now, and don't restart at next boot time.
  d : Suspend program.
  r : Resume program.
  p : Probe the status.
  l : List configurations.
  e : Modify configurations.
  g : See log.
  o : Modify shutdown order configur file and enable function.
  O : Disable shutdown order function.
```

Uninstall

To uninstall uGuard, execute <./unin.sh>

```
localhost:/R48D/Sd_ESXi_HA_TSB # ls
install.sh oslist uGuard.tar.gz uninsh
localhost:/R48D/Sd_ESXi_HA_TSB # ./uninsh
Are you sure to uninstall now?(y/n)y
Unload previous installation ...
uGuard-0.9.0.b3
uGuard.sh stopping...
Do you want to remove log file?(y/n)y
Uninstall successfully.
localhost:/R48D/Sd_ESXi_HA_TSB # -
```

**Toshiba International Corporation
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ESXi client software support 1~5 ESXi servers, below is how to add ESXi Server:

1. Type <vifp addserver [server IP]> to add ESXi server in vMA.

```
localhost:~ # vifp addserver 10.1.5.205
root@10.1.5.205's password: _
```

2. Setting ESXi servers in uGuard main menu

```
+=====
|                               [ uGuard Main menu ]
+=====
uGuard Version      : uGuard-0.9.0.b3
uGuard Status       : Running
1. uGuard Configuration
2. uGuard Control
3. uGuard Status
4. uGuard Log
5. ESXi server List Configuration
0. Exit
Please Enter Your Choice =>No virtual machine found.
-
```

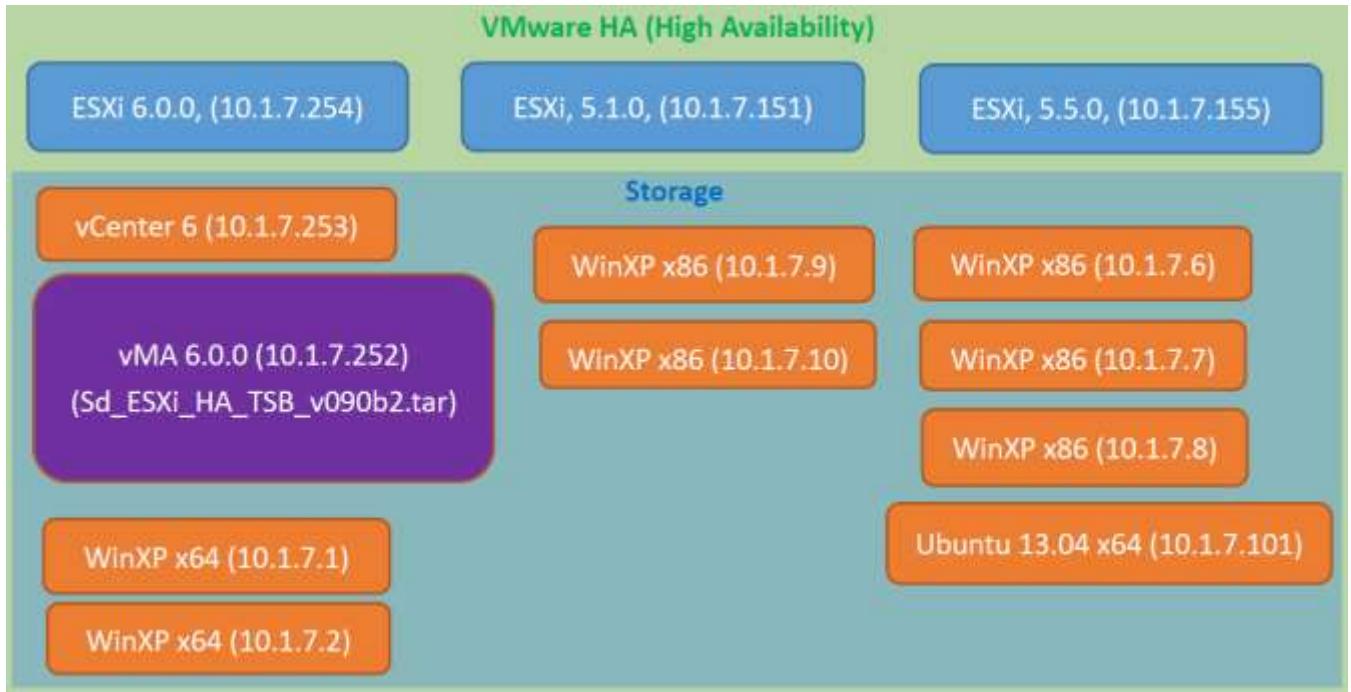
```
+=====
|                               [ ESXi Config Group Menu ]
+=====
uGuard Version      : uGuard-0.9.0.b3
uGuard Status       : Running
1. ESXi 1 setting
2. ESXi 2 setting
3. ESXi 3 setting
4. ESXi 4 setting
5. ESXi 5 setting
0. Return to previous menu
Please Enter Your Choice =>_
```



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For example, here are three ESXi servers. (ESXi 6.0.0, ESXi 5.1.0, and ESXi 5.5.0)



It need add 3 servers (10.1.7.254 , 10.1.7.151 , 10.1.7.155) in vMA(10.1.7.252) , and setting 1~3 ESXi servers in “ESXi Config Group Menu”.



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Guest OS Shutdown Order Setup Example

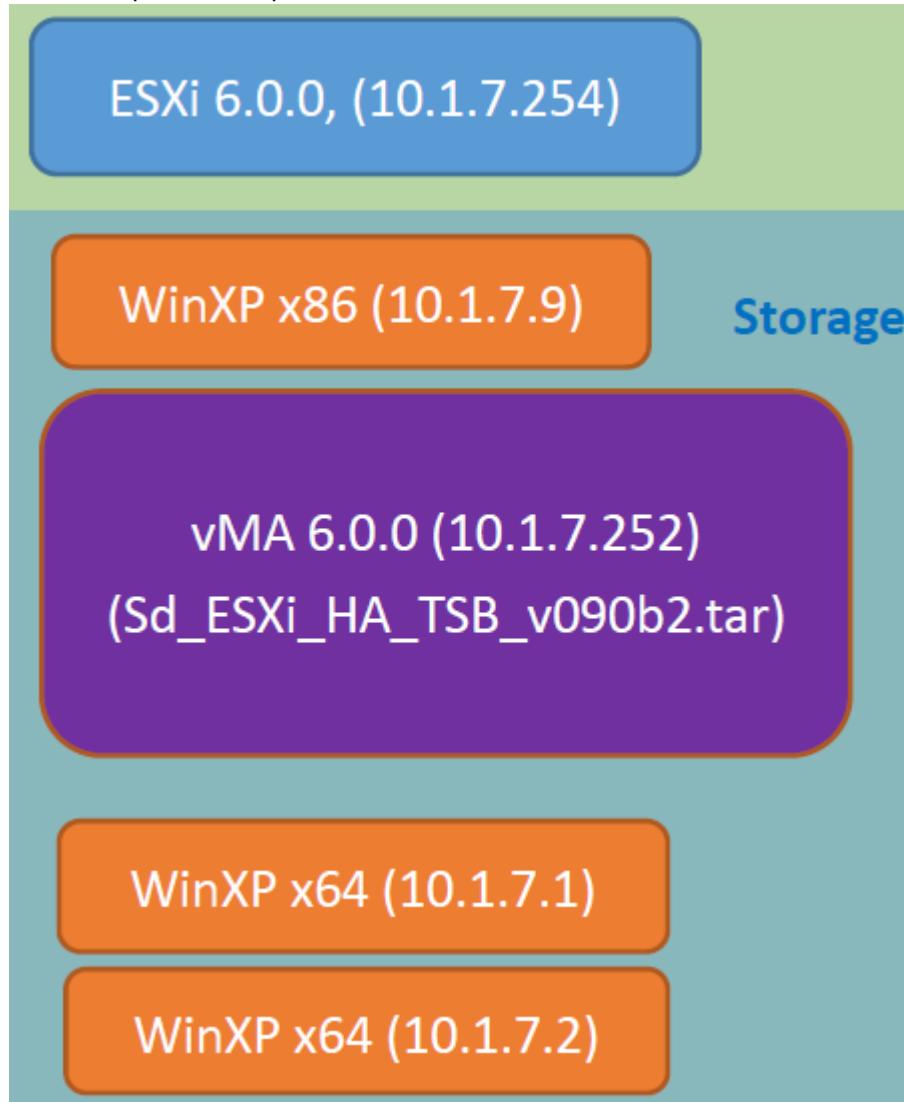
Guest OS Shutdown order setting example:

WinXP x64(10.1.7.1) ->

WinXP x64(10.1.7.2) ->

WinXP(10.1.7.9) ->

vMA6.0.0(10.1.7.252)



Type/etc/uGuard/script/uGuard.sh –o and edit VMs shutdown order (using vi editor commands)



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```
localhost:/R4SD/Sd_ESXi_HA_TSB # ./etc/uGuard/script/uGuard.sh -o_
```

```
:Please enter shutdown order, format flow "VMNIP=ip address"
:Please enter total shutdown order number for check.
TotalOrderNumber = 0
VM1IP = 0.0.0.0
VM2IP = 0.0.0.0
VM3IP = 0.0.0.0
VM4IP = 0.0.0.0
VM5IP = 0.0.0.0
```

```
<tc/uGuard/script/sys/uGuard_shutdownOrderList.conf" 8L, 215C 3,13
```

All

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```
:Please enter shutdown order, format flow "VMNIP=ip address"
:Please enter total shutdown order number for check.
TotalOrderNumber = 4
VM1IP = 10.1.7.1
VM2IP = 10.1.7.2
VM3IP = 10.1.7.9
VM4IP = 10.1.7.252
```

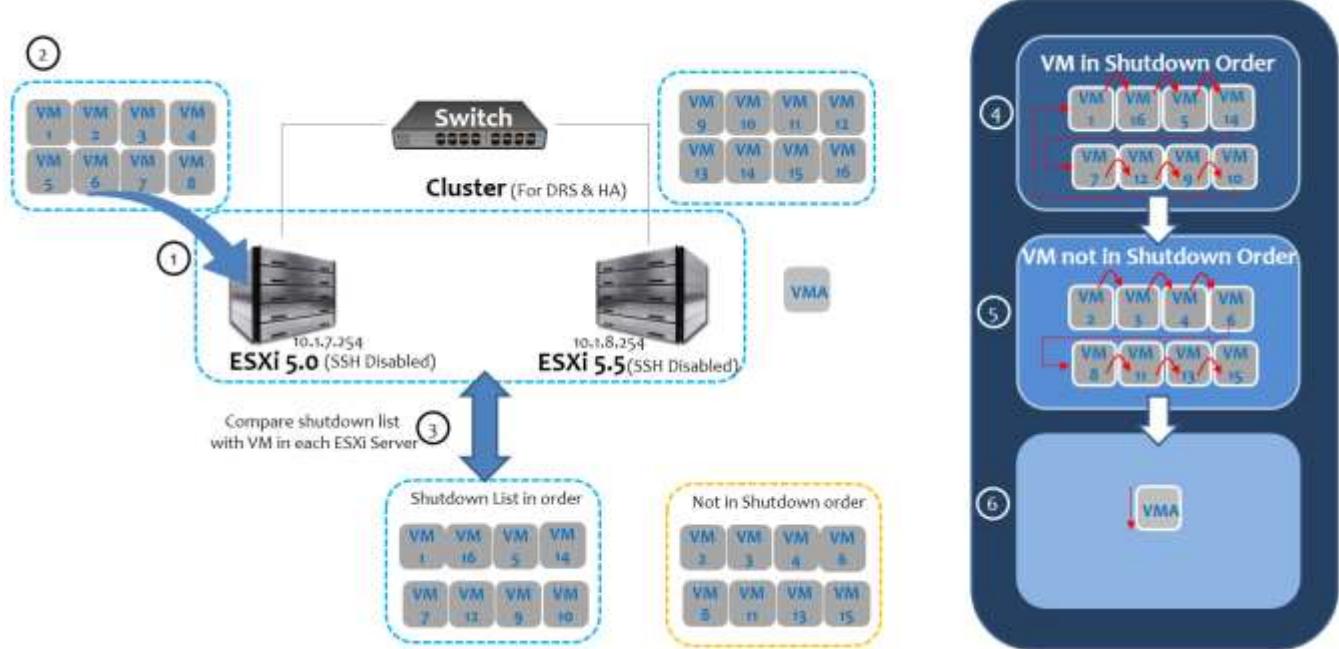
```
<tc/uGuard/script/sys/uGuard_shutdownorderList.conf" 7L, 207C 7,19
```

All

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Shutdown Flow Procedure

1. Access ESXi server
2. List how many VM in this ESXi server
3. Compare shutdown in order list with VM in each ESXi Server
4. Event Triggered then shutdown VM in list till all VM shutdown
5. In meantime shutdown all VM that not in shutdown order.
6. Last, shutdown VMA

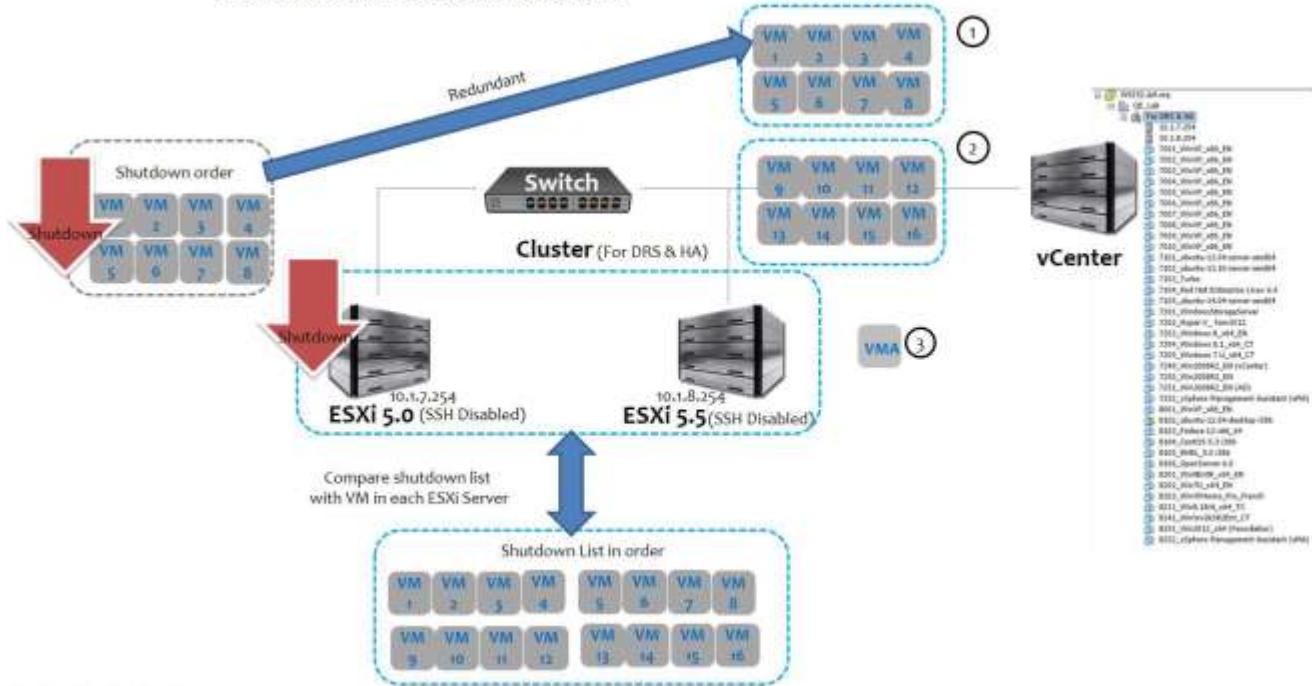


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One ESXi Server Shutdown Situation



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