

# ShutdownAgent 2012

# **User Manual**

Doc. Version 02.09 Date: 1/11/2024

# About this manual

This manual contains information on installation and operation of ShutdownAgent 2012 software.

#### **Please Save This Manual**

This manual contains instructions and warnings that should be followed during the installation, operation and storage of this product. Failure to heed these instructions and warnings will void the product warranty.

# Contents

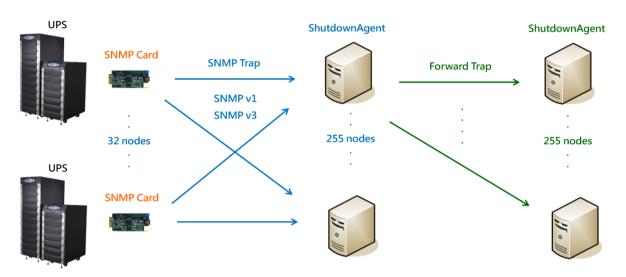
1.	Overview	. 2
	1.1 Features	3
	1.2 Supported OS	3
2.	Installation/ Uninstallation	
	2.1 For Windows System	4
	2.1.1 Installation Process	
	2.1.2 Uninstallation Process	7
	2.2 For Linux System	
	2.2.1 Installation Process	
	2.2.2 Uninstallation Process	
2	2.3 For IBM AIX System	
3.	Console Configuration	
	3.1 Console Menu	
4.	Operation in Windows	
	4.1 Web Monitor	
	4.2 Property	
	4.3 Show Countdown	
	4.4 Cancel Countdown	
_	4.5 Stop Service	
5.	Web Interface	
	5.1 Run a Web Browser	
	5.2 Monitor >> Information >> Summary	17
	5.2 Monitor >> Information >> Summary 5.3 Monitor >> Information >> Event Log	17 18
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li> <li>5.3 Monitor &gt;&gt; Information &gt;&gt; Event Log</li> <li>5.4 Monitor &gt;&gt; Information &gt;&gt; Log Configure</li> </ul>	17 18 19
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li> <li>5.3 Monitor &gt;&gt; Information &gt;&gt; Event Log</li></ul>	17 18 19 19
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	17 18 19 19 25
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	17 18 19 19 25 25
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	17 18 19 19 25 25 26
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>25</li> <li>26</li> <li>26</li> </ol>
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>25</li> <li>26</li> <li>26</li> <li>27</li> </ol>
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>25</li> <li>26</li> <li>27</li> <li>28</li> </ol>
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>26</li> <li>26</li> <li>27</li> <li>28</li> <li>29</li> </ol>
6.	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>26</li> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>31</li> </ol>
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>26</li> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>31</li> <li>32</li> </ol>
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>31</li> <li>32</li> <li>34</li> </ol>
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	<ol> <li>17</li> <li>18</li> <li>19</li> <li>25</li> <li>26</li> <li>26</li> <li>27</li> <li>28</li> <li>29</li> <li>31</li> <li>32</li> <li>34</li> </ol>
	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	17 18 19 25 25 26 26 26 27 28 29 31 <b>32</b> <b>34</b> 34 34
7.	<ul> <li>5.2 Monitor &gt;&gt; Information &gt;&gt; Summary</li></ul>	17 18 19 25 25 26 26 27 28 29 31 <b>32</b> <b>34</b> 34 34 35

8.2 Install VMware Tools for Guest OS	
8.3 Configure ShutdownAgent for ESXi4.1/ 5/ 6	
9. ShutdownAgent Shutdown VMWare ESXi 6.5 and Above .	39
9.1 ShutdownAgent Linux Edition	. 39
9.1.1 Test the esxcli command	
9.2 ShutdownAgent Windows Edition	. 41
9.2.1 Add the Windows shutdownagent account	
9.2.2 Install VMWare vCLI	
10. VMWare vCenter Shutdown	
10.1 Shutdown Individual ESXi Host	
10.1.1 VMWare ESXi Maintenance and Shutdown	
10.1.2 VMWare ESXi Shutdown	
10.1.3 VMWare ESXi v4 10.2 VMWare vCenter Shutdown Instructions	
10.2.1 Shutdown Steps	
11. Shutdown Scenarios	
11.1 Power Supply from One UPS	
11.1.1 Configure	
11.2 UPS Power Supply in Parallel	
11.2.1 Configure	
11.3 UPS Redundant Power Supply	
11.3.1 Configuration	
11.4 ESXi Host Shutdown Scenarios	
11.4.1 ShutdownAgent Runs Outside the ESXi Host	
11.4.2 ShutdownAgent Runs Inside ESXi Host	
11.5 vCenter Shutdown Scenarios	
11.5.1 ShutdownAgent Runs Outside vCenter	
11.5.2 ShutdownAgent Runs Inside vCenter	
12. Quickly deploy ShutdownAgent with vCLI OVA file	
12.1 Download the pre-made OVA file	
12.2 Import the OVA file to the ESXi host	
12.3 Connect to ShutdownAgent in vCLI	
13. XenServer Setup for ShutdownAgent	
13.1 Install PV driver for Guest OS	
13.2 Configure ShutdownAgent for Xen	
14. Linux KVM Setup for ShutdownAgent	
14.1 Install libvirt Tools for KVM	
14.2 Configure ShutdownAgent for KVM	
15. Work with the SNMP Card	63
15.1 Legacy Delta InsightPower SNMP Card	. 63
15.2 Delta InsightPower SNMP IPv6 Card	
15.3 New Delta InsightPower G3 Mini SNMP Card	. 68

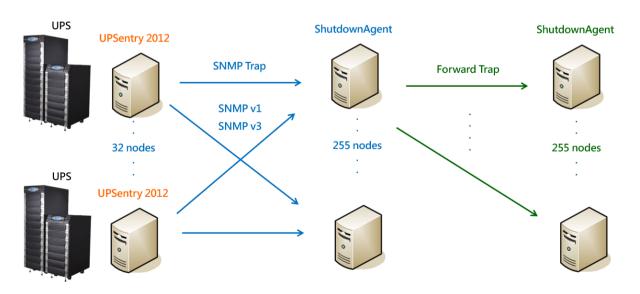
# 1. Overview

ShutdownAgent 2012 is a software that protects your operating system during input power fail. UPS provides stable power supply for your operating system. However, when power fail occurs, the UPS can only supply the output load for a period of time with battery power. It is required for you to plan and configure the settings of the software. With simply a Web Browser, you can easily view the current UPS events, shutdown strategy and countdown to shutdown information.

The following picture shows that the SNMP trap can be sent by SNMP card and forwarded to other ShutdownAgent that is installed on other servers.



The SNMP Trap sent by UPSentry 2012 can also be received and forwarded.



User Manual-Page 2-

## 1.1 Features

- 1. Support SNMPv1, v3 trap.
- 2. Support SNMPv1, v3 server access for monitoring ShutdownAgent status and configure shutdown parameters.
- 3. Provide web interface with HTTP and HTTPS.
- 4. Provide batch configuration that makes it easier to deploy.
- 5. Forward SNMP trap to extend protecting up to 255 servers.
- 6. Support up to 32 input trap sources for redundant (logical OR) and parallel (logical AND) application.
- 7. Provide console configuration for basic system parameters setup.
- 8. Support Windows 32/64 bits setup programs.

## 1.2 Supported OS

Windows 7, 8, 10, 11 Windows Server 2012, 2016, 2019, 2022 Windows Hyper-V Server Core 2016/2019 Redhat Linux Exterprise 6.8, 7.7, 8.3, 9.0 Orcale Linux 7.1 Linux OpenSUSE 11.4 Linux ubuntu 10.04, 12.04.5, 16.04, 20.04 Linux Fedora 3.1.9 CentOS 5.8, 6.5 VMWare ESXi 4.1, 5, 5.1, 5.5, 6, 7, 7.5, 8 (with essential license after version 5) Citrix XenServer 6.0.0 Linux KVM IBM AIX 7.1

# 2. Installation/ Uninstallation

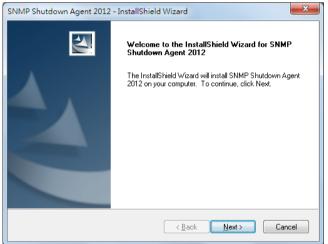
## 2.1 For Windows System

There are 2 setup programs: ShutdownAgent-2012-Setup(win32).exe and ShutdownAgent-2012-Setup(x64).exe. These are designed for different processors of servers.

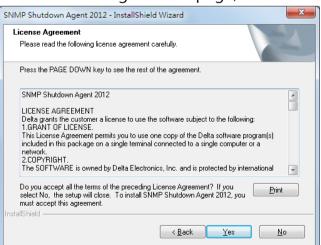
Before the installation, please log in to the Windows account with local administrator privilege.

## 2.1.1 Installation Process

Execute ShutdownAgent-2012-Setup(xxx).exe to run the setup program. On the welcome page, click **Next** to proceed.



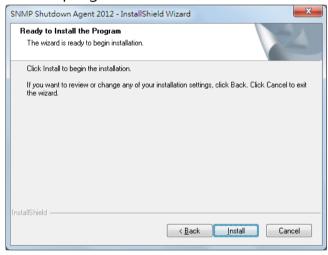
On the license agreement page, click Yes to proceed.



At this step, you can click Browse to change the destination location, or just click **Next** to install the software in the default path.

SNMP Shutdown Agent 2012 - InstallShield Wizard	×
Choose Destination Location Select folder where setup will install files.	
Setup will install SNMP Shutdown Agent 2012 in the follow	ing folder.
To install to this folder, click Next. To install to a different fo another folder.	older, click Browse and select
Destination Folder	
C:\\SNMP Shutdown Agent 2012\	Browse
InstallShield	K Next > Cancel

Now the setup program is ready for your confirmation to start copying the related program files. Click **Install** to start installation of the software.



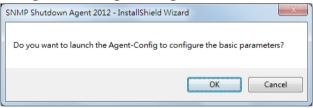
Now the setup program is copying files.

SNMP Shutdown Agent 2012 - InstallShield Wizard	×
Setup Status	No.
The InstallShield Wizard is installing SNMP Shutdown Agent 2012	
C:\\httpd\htdocs\en\device\dev_forward.asp	
InstallShield	
	Cancel

Click Finish to exit the installation process.

SNMP Shutdown Agent 2012	- InstallShield Wizard
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed SNMP Shutdown Agent 2012. Click Finish to exit the wizard.
	< Back Finish Cancel

When the installation is complete, ShutdownAgent will start the service program automatically and add a status icon in the desktop tool bar. Meanwhile, a dialog box will be popped up asking for launching the Agent-Config application. If you are not using a Windows server core operating system, please ignore it. Just press **No** to finish the installation. Press **Yes** to launch the Agent-Config in the shell mode. Please refer to Chapter 3 for details of Agent-Config settings.



ShutdownAgent software is comprised of two modules:

A Service module (Shutdown-Agent Service: Agent-Service.exe), which runs in the background as a Service and listen for the SNMP trap from the source IP addresses.

A **Status** module (**Agent-Status.exe**), which enables you to control and configure the software through drop down menus and dialog boxes. It also allows you to launch the web browser and login automatically to monitor, configure and control the software.

After the installation is complete, the setup program will create a **SNMP ShutdownAgent** association with the following shortcuts:

**Console Configure**: To launch the Agent-Config.exe for you to quickly configure the basic communication parameters.

**Uninstall**: To remove the **SNMP ShutdownAgent 2012** from your hard disk, the configuration data will still be kept in the installed directory.

User Manual: The user manual in pdf format.

**Web Monitor**: The major user interface of **ShutdownAgent**, used to monitor and configure the software.

## 2.1.2 Uninstallation Process

- Click Uninstall shortcut from the SNMP ShutdownAgent program folder to start the uninstallation process. Alternatively, you can start the SNMP ShutdownAgent uninstallation process from the Add/Remove Program of the Control Panel.
- 2. Click **OK** to confirm removing all of the application from the hard drive or **Cancel** to cancel the un-installation process.

Confirm Uninstall	×
Do you want to completely remove the select features?	cted application and all of its
	OK Cancel

3. Click **Finish** to complete the uninstallation process.

SNMP Shutdown Agent 2012	- InstallShield Wizard
	Uninstall Complete InstallShield Wizard has finished uninstalling SNMP Shutdown Agent 2012.
	< Back Finish Cancel

## 2.2 For Linux System

## 2.2.1 Installation Process

- 1. Please login to the Linux system and change to the root account: su root
- Copy the sa2012-linux.tar.gz to the /tmp directory: cp sa2012-linux.tar.gz /tmp
- Change your working directory to /tmp: cd /tmp
- 4. Uncompress the sa2012-linux.tar.gz: gunzip sa2012-linux.tar.gz
- 5. extract the sa2012-linux.tar: tar xvf sa2012-linux.tar
- 6. Run the install script:

#### ./install

```
+----+
| SNMP ShutdownAgent 2012 0.0.1 for Linux |
| Copyright (c) 2011 Delta Electronics, Inc. |
| All Rights Reserved. |
+----+
Do you want to install the ShutdownAgent? [y|n]
```

7. Press 'y' to proceed the installation process:

```
+-----+
| SNMP ShutdownAgent 2012 0.0.1 for Linux |
| Copyright (c) 2011 Delta Electronics, Inc. |
| All Rights Reserved. |
+-----+
The destination directory is /usr/local/upsagent.
Copying files ........
Install service link.
shutdownagent 0:off 1:off 2:off 3:on 4:off 5:on 6:off
Starting ShutdownAgent(upsagentd) ... done
Do you want to configure the ShutdownAgent right now? [y|n]
```

8. Now ShutdownAgent has been installed in the following directory /usr/local/upsagent/ and the service program starts up automatically.
Press 'y' to launch the /usr/local/upsagent/configure program to configure the basic networking parameters for ShutdownAgent or press 'n' to finish the install process.
Please see chapter 3 for more information if you want to configure the

Please see chapter 3 for more information if you want to configure the basic networking parameters.

## 2.2.2 Uninstallation Process

- 1. Please login to the Linux system and change to the root account: su root
- Change your working directory to /usr/local/upsagent: cd /usr/local/upsagent
- 3. Run the uninstall script to remove ShutdownAgent: ./uninstall
- 4. Press 'y' to start the uninstallation process.

# 2.3 For IBM AIX System

Both of the installation and uninstallation are the same with Linux system, please refer to the section 2.2.

# 3. Console Configuration

The configuration program is designed to configure ShutdownAgent in the shell mode. The software can be launched immediately when the installation process is complete. You can also go to the installation directory to launch it manually.

For Windows OS, it is located in C:\Program Files\SNMP Shutdown Agent 2012\Agent-Config.exe

For Linux system, it is installed in /usr/local/upsagent/configure

😣 🗖 🔲 root@jesse-ubun	tu64: /tmp
+=====================================	===+ /
+======================================	===+
Version: 03.00.22	
[1].SNMP Trap Port:	
<pre>[2].SNMP Server Port: [3].HTTP:</pre>	Enable
[4].HTTPS:	
[5].Force HTTPS:	
[6].HTTP Port:	80
[7].HTTPS Port:	443
[8].Manageable:	Enable
[9].Save	
[a].Set Firewall	
[b].Restart Shutdown-A	gent Service
[0].Exit	
Please Enter Your Choi	ce => []

## 3.1 Console Menu

No.	Function	Description	Default
1.	SNMP Trap Port	The UDP port to listen for the SNMP trap	162
2.	SNMP Server Port	The UDP port for replying get/set commands	161
3.	НТТР	Enable or disable the HTTP protocol	Enable
4.	HTTPS	Enable or disable the HTTPS protocol	Enable
5.	Force HTTPS	Force login via HTTPS	Enable
6.	HTTP Port	The TCP port for HTTP	80
7.	HTTPS Port	The TCP port for HTTPS	443
8.	Manageable	Allow the management software to manage ShutdownAgent	Enable
9.	Save	Save the configured parameters to agent.ini	
a.	Set Firewall	Insert or remove the firewall rule for ShutdownAgent. This option is provided for	

		quickly testing the network communication. The	
		firewall settings may be recovered after the OS	
		reboots.	
b.	Restart Shutdown-	Restart service program to apply the changes	
D.	Agent Service		
0.	Exit	Exit the configuration program	

# 4. Operation in Windows

When the installation is complete, an icon in the desktop toolbar will be appeared to indicate the status of the monitored UPS.

lcon	Description
Ś	Normal
Ś	Service stop
	UPS on battery mode
<b>60</b>	UPS battery low
Ś	UPS on bypass mode

To show the pop up menu, please move the mouse cursor over ShutdownAgent icon and click the mouse button to pop up the menu:

<u>W</u> eb Monitor <u>P</u> roperty	
Show Count <u>d</u> own <u>C</u> ancel Countdown <u>S</u> top Service	

## 4.1 Web Monitor

ShutdownAgent implements a web engine to provide web interface to interact with end users. You can monitor and configure the software through the web interface. Select **Web Monitor** from the menu to launch your web browser, if your login account in the Windows system belongs to the local Administrators group, ShutdownAgent will login to its web engine automatically with administrator privilege. If you log in from a remote PC, you have to key in the account and password.

For more detail information about Web Monitor, please refer to Chapter 5.

## 4.2 Property

Select **Property** from the menu, a Property dialog box will be popped up that provides another quick way to configure basic parameters of ShutdownAgent. You can see the software version number, IP addresses and host name.

Shutdown-Agent - Prope	erty		? ×
General			
System			
Shutdown-Agen	t	Language	:
00.00.01		English	•
Host Information			
IP Address=	fe80::a8c0:a2 172.16.182.75 fe80::2924:f8 169.254.120.1	e2:9c5d:78a	
Host Name=	jesse-zhuo-nb	1	
	Web WHTTP WHTTPS	Port= 80 Port= 44	
		OK	Cancel

#### Language:

Select the supported language from this option.

#### HTTP:

To enable/ disable the HTTP protocol, assign a different number of the Port number to change the HTTP connection through the other network port. The default value is 80.

If you have changed the HTTP port number from 80 then you have to key in the connection URL as the following:

#### http://192.168.1.100:8001

where 192.168.1.100 is the IP address of the PC which ShutdownAgent installed and the 8001 is the port number which you assigned.

**NOTE:** Please check the Windows firewall settings if the HTTP connection is refused.

HTTPS:

To enable/ disable support the HTTPS protocol, assign a different number of the Port number to change the HTTPS connection through the other network port. The default port is 443. If you have changed the HTTPS port number from 443 then you have to key in the connection URL as the following:

### https://192.168.1.100:4430

where 192.168.1.100 is the IP address of the PC which ShutdownAgent

installed and the 4430 is the port number which you assigned.

NOTE: Please check the Windows firewall setting if the HTTPS connection is refused.

### Login Account:

ShutdownAgent implements 3 levels of authentication for the web login as the following:

#### Administrator:

Has sole right to modify ShutdownAgent system settings.

#### Device Manager:

Is not permitted to change the system settings but has the ability to

configure the device settings.

### Read Only User:

Can observe the connected devices only.

The following is the default account and password list, please note that they are case-sensitive.

Please continue to modify all of the default passwords to ensure the system security.

	Account	Password
Administrator	admin	password
Device Manager	device	password
Read Only User	user	password

Web Login Account	×
Administrator	
Account:	admin
Password:	•••••
Device Manager	
Account:	device
Password:	•••••
Read Only User	
Account:	user
Password:	•••••
	Save

## 4.3 Show Countdown

Select the Show Countdown menu item to display the countdown windows when ShutdownAgent start to counting down the OS shutdown delay.



## 4.4 Cancel Countdown

Select the Cancel Countdown menu item during the counting down to stop the shutdown process. To resume the shutdown process, please de-select the Cancel Countdown menu item to counting down the OS shutdown delay. In addition to de-select the Cancel Countdown menu item to continue the countdown process, when the shutdown event changes the software will start a new countdown process.

## 4.5 Stop Service

Select the Stop Service menu item to stop ShutdownAgent service module. To start the service again please de-select the Stop Service menu item.

# 5. Web Interface

## 5.1 Run a Web Browser

To login Web Monitor with browser from the OS where ShutdownAgent is installed, select **Web Monitor** from the toolbar menu, ShutdownAgent will open your default web browser for login. If your Windows account belongs to local Administrators group, ShutdownAgent will login as an administrator for you automatically. ShutdownAgent allows up to 16 users login at the same time.

You can also login with web browser from a remote PC, please follow the steps:

- 1. Make sure that you have a **TCP/IP** network installed.
- 2. Open your web browser. Enter http://host\_name or http://ip\_address in the address bar for the plain text web transmission or https: //host\_name or https: //ip\_address for the encrypted web transmission. If you have changed the port number of HTTP or HTTPS then please enter http://host\_name:port\_number or http://ip\_address:port\_number in the address bar for the plain text web transmission or https://host\_name:port\_number or https://ip\_address:port\_number in the address bar for the plain text web transmission or https://host\_name:port\_number or https://ip\_address:port\_number in the address bar for the plain text web transmission or https://host\_name:port\_number or https://ip\_address:port\_number for the encrypted web transmission
- 3. Input your account and password for login. ShutdownAgent **Home Page** will appear on the screen when your account is successfully logged in.

Shutdown-Agent
The power behind competitiveness
User Name :
Password :
OK
Site IP: 172.16.186.90
Copyright ©, All rights reserved.

**Note:** ShutdownAgent will logout the user automatically if there is no any data transmission through HTTP/HTTPS for more than 30 minutes.

## 5.2 Monitor >> Information >> Summary

This web page includes the information of identification, shutdown status, source IP status and the last 5 event logs.

						合 Home	D Logout English	h 🔽
			SNMP Shu	JtdownA	aent 2012	2		
	-14						nind competitive	nes
Monitor	Device	System				System Time	: Thu 11/24/2011 PM 0	7:58:
Information	About	t						
Summary	0	Monitor » Informati	on » Summary					
Event Log	_							
Lvenit Log	0	Host				Shutdown		
Log Configure	0	Host Name: jes	se-zhuo-nb1 SN	MP Trap Port:	162	Shutdown Type:	Hibernate	
	- 1		crosoft Windows 7 Enter	prise Edition Serv	ice Pack 1	OS Countdown:		
		(bi	ild 7601), 64-bit				•	
		SNMP Trap	Source IP List	<b>D C D</b>				
			Source IP		dundant (Logical C UPS Health	Current I	Event	
		1	10 0 10 21	1	Normal	Guntin		
		2	172.16.186.162		Normal			
		▶ Last 5 Ever	it Log					
		Source IP	Date/Time	Event Level		Event Description		
	- II.	1 Local	11/24/2011 19:56:52	Information	Stop countdow	n shutdown		
	- II.	2 10.0.10.21	11/24/2011 19:56:52	Information	Power restore			
	- II.	3 Local	11/24/2011 19:56:45	Warning	Countdown to s	shutdown OS in 04:59 se	cond(s)	
	- 1	4 10.0.10.21	11/24/2011 19:56:45	Warning	Power fail			
	- II.	5 0.0.0.0	11/24/2011 19:55:23	System	Account admin	login from 127.0.0.1:504	36	
	_						Event Log	

#### Host:

Include the host name, the listen UDP port for SNMP trap and the description of operating system.

#### Shutdown:

Display the shutdown type (Shutdown, Power Off, Hibernate) and the countdown time to shut down the OS in second.

### SNMP Trap Source IP List:

ShutdownAgent is capable of receiving SNMP traps from multiple source hosts then decide to determine the event by logical OR for redundant application and logical AND for parallel application.

## Last 5 Event Logs:

Show the last 5 event logs, if you want to see more please visit the Event Log page.

## 5.3 Monitor >> Information >> Event Log

This web page lists all the events that have detected by the software. The existing logs are overwritten when the maximum number of entries (rows) has been reached. And the maximum number of event is 10,000. You can also download the software event log to a .csv format file.

### Log Page Buttons:

Press the "<<" button to go to the newest page and the ">>" button to go to the oldest page. Click on the page number buttons to observe the event log by page.

### Range of Date:

You can also filter the event log by assigning a period of date. Fill in the From and To text boxes then press the Apply button to request the event log by your assigned period of date.

### Download All:

Press the **Download All** button to export all of the event log to a .csv format of file.

http://1	L27.0.0.1/home.	350 0	- 🛛 C × 🚱 Insiah		□ @ ☆
	27.0.0.1/1101116.1	35p 72		ALPOWER SINIVIP IPVO FOF Q SINIVIP ShutdownAgent 20 X	ww
	LTA	SNN	IP Shutdow	The Home Cogout English	
		01		The power behind competitive	
Monitor Information	About	System		System Time : Thu 11/24/2011 PM 07	:58:31
information	About				
Summary	0	Ionitor » Information » Event I	.og » Page1		
Event Log	0				_
Event Log	v	Event Log			
Log Configure	0	Page << 1 2	3 4 5	>> Download All	
		© From 11/24/2011 (MI	M/DD/YYYY) To 11/24/20	011 (мм/ор/үүүү) Арріу	
		IP			
		Address Date	Time Level	Event Log	
		11/24/2011 1	9:56:52 Information	Stop countdown shutdown	
		10.0.10.21 11/24/2011 1	9:56:52 Information		
			9:56:45 Warning	Countdown to shutdown OS in 04:59 second(s)	
			9:56:45 Warning	Power fail	
			9:55:23 System	Account admin login from 127.0.0.1:50436	
			9:55:00 System	IPv4-Trap: OK, IPv6-Trap: OK IPv4-SNMP: OK. IPv6-SNMP: OK	
			9:55:00 System 9:54:55 System	IPv4-SNMP: OK, IPv6-SNMP: OK IPv4-HTTP: OK, IPv6-HTTP: OK, IPv4-HTTPS: OK, IPv6-HTTPS: OK	
			9:54:55 System 9:41:07 Information	Service program startup Stop countdown shutdown	
			9:41:06 Information		
			9:40:54 Warning	Countdown to shutdown OS in 04:54 second(s)	
			9:40:54 Warning	Power fail	
			9:38:34 System	Account admin login from 127.0.0.1:15735	
			9:36:05 System	IPv4-Trap: OK, IPv6-Trap: OK	
			9:36:05 System	IPv4-SNMP: OK, IPv6-SNMP: OK	
		11/24/2011 1	9:36:00 System	IPv4-HTTP: OK, IPv6-HTTP: OK, IPv4-HTTPS: OK, IPv6-HTTPS: OK	
			9:36:00 System	Service program startup	
			9:35:52 System	Service program is terminated	
			9:33:22 System	Account admin login from 127.0.0.1:46340	
			9:26:20 System	IPv4-Trap: OK, IPv6-Trap: OK	
			9:26:20 System	IPv4-SNMP: OK, IPv6-SNMP: OK	
			9:26:15 System	IPv4-HTTP: OK, IPv6-HTTP: OK, IPv4-HTTPS: OK, IPv6-HTTPS: OK	
			9:26:15 System	Service program startup	
		11/24/2011 1	9:23:53 System	IPv4-Trap: OK, IPv6-Trap: OK	
		44/04/0044 4	3.33.53 Ct.		
			9:23:53 System 9:23:48 System	IPv4-SNMP: OK, IPv6-SNMP: OK IPv4-HTTP: OK, IPv6-HTTP: OK, IPv4-HTTPS: OK, IPv6-HTTPS: OK	

# 5.4 Monitor >> Information >> Log Configure

This page lets the Device Manager clear event logs.

## **Clear Event Log:**

To clear all of the data log by clicking this button.

🔿 😋 http://127	7.0.0.1/home.a	isp	P-⊠c× (	InsightPower SNMP IPv6 for	SNMP ShutdownAge	nt 20 ×	6 🔂
	та	5	SNMP Shut	downAgent 2012	🔂 Home	Logout	English 💌
	.121				The power be	hind comp	etitiveness
Monitor	Device	System			System Time	: Thu 11/24/20	)11 PM 07:59:04
Information	About						
Summary	0	Monitor » Information » I	Log Configure				
Event Log	0	Event Log					
Log Configure	0	Maximum event log Clear Event Log	entry: 10000				
6			Copyrigh	at © 2011 Delta Electronics, Inc. Al	Il Rights Reserved.		

# 5.5 Device >> Host >> Configure

This page is used to configure the major functions, they are: Shutdown, Reaction and Source IP.

#### Shutdown:

Select the **Shutdown Type** to determine the way to shut down the operating system. There are **Shutdown**, **Power Off** and **Hibernate** types and the default value is Shutdown.

Now we should continue to determine the shutdown delay time for the following 5 power events: Power Fail, Battery Low, Overload, On Bypass and Smart Shutdown. If the power events recover during countdown then the operating system will not be shutdown.

Regarding to the virtual machine shutdown, please refer to the related chapters.

🏟 ShutdownAger	nt 2012	× +		~ -	
$\leftrightarrow$ $\rightarrow$ C $\blacktriangle$	▲ 不安全	192.168.56.101/home.asp		ic 🕁 😨 🗯	🗆 🚳 :
	LTA	Shutdov	wnAgent 2	the power behind competitiv	
Monitor	Devi	ce System		System Time : Mon 01/17/2022 PM	
Host	SNMP				
Configure	0	Device » Host » Configure			
Control	0	Shutdown		Source IP	
Forward Trap	•	Shutdown Type: Shutdown 🗸		Receive Trap Port: 162 Purpose:	
			utdown Delay seconds)	O For Parallel (Logical AND)	
<b>O</b>	$\mathbf{Z}$	1 Z Power Fail 300	second(s)	Source Trap IP: 0.0.0.0	
		2 Z Battery Low 30	second(s)	Community: public	
		3 V Overload 60	second(s)	SNMPv3 User:	
		4 On Bypass 300	second(s)	Note: Leave the community empty will accept any	
		5 Smart Shutdown 30	second(s)	community string. Leave the SNMPv3 User empty will accept all of the users in the SNMPv3 USM table.	
		Submit		· · · · · · · · · · · · · · · · · · ·	
				IP Address Community SNMPv3 User	
		Reaction		1 0.0.0.0 public	
		✓ Notify Message			
		Period: 60 second(s)			
		Execute Command File		Allow the ShutdownAgent to be managed by an authenticated manager.	
				Submit	

#### **Reaction:**

Enable the Notify Message to pops up a message box once

ShutdownAgent receives the SNMP traps from the source IP addresses. Assign the period value to report the message periodically, set a 0 to the Period will show the message only once. Enable the **Execute Command File** to run an assigned external file before shutdown. Set a value to the **Run Before Shutdown** to inform ShutdownAgent when to launch the assigned executable file.

#### Source IP:

Assign the **Receive Trap Port** to open the specific UDP port for receiving SNMP trap. Then select the Redundant (Logical OR) or Parallel (Logical AND) for the application purpose.

**Redundant (Logical OR):** Summarize the received power event by logical OR for all of the source IP addresses to determine whether the power event occurs or not. So if the power event occurs in one of the source IP addresses then the power event is tenable and ShutdownAgent starts to countdown accordingly. Only when the power event recovers from all of the source IP addresses the ShutdowAgent stops countdown and cancel the shutdown process.

**Parallel (Logical AND):** Summarize the received power event by logical AND for all of the source IP addresses to determine whether the power event occurs or not. So if the power event occurs in all of the source IP addresses then the power event is tenable and ShutdownAgent starts to countdown accordingly. Once the power event recovers from one of the source IP addresses the ShutdowAgent stops countdown and cancel the shutdown process.

**Source IP Address:** Assign the source IP address, ShutdownAgent will parse the SNMP trap only when the packet is received from the assigned IP addresses.

**Community:** If the value is not empty then only the received trap with the same community string will be accepted. If the value is empty then ShutdownAgent will accept any of the received community string. **SNMPv3 User:** This field is used for SNMPv3 packet. If the value is not empty then only the received trap with the same user defined in the SNMPv3 USM table will be accepted. If the value is empty then ShutdownAgent will accept the users which assigned in the SNMPv3 USM table.

#### Manageable:

Select the Allow ShutdownAgent to be managed by an authenticated manager option to let ShutdownAgent reply the query from any authenticated manager. The authenticated manager can be a SNMP card or a centralized management software. After collecting ShutdownAgent information, the authenticated manager can provide a comprehensive list of all of ShutdownAgent.

- 승 🕞 http://127.0.0.1/h	ome.asp 🔎 – 🗟 Ċ 🗙 🌚 SN	MP ShutdownAgent 2 ×	6 🔂 🕄
	SNMP Shutdo	ther wnAgent 2012	
		-	behind competitiveness
Monitor Dev	ice System	System Tir	me : Wed 01/11/2012 AM 09:36:17
Host SNMP SNMPv1 Access O SNMPv3 USM O	Device » SNMP » SNMPv3 USM   SNMPv3 USM  Context Name: cn1027  Auth Protocol: MD5  User Name: manager  Auth Password: *******  Permission: Read/Write v	ol: CBC-DES Security Level: Auth, Prin Priv Password: ******* Add	
	User Name Security Level 1 manager Auth, Priv	Auth Password Priv Password	I Permission Read/Write
	, Copyright © 20	11 Delta Electronics, Inc. All Rights Reserved.	

In fact, the authenticated manager communicate with ShutdownAgent through SNMPv3 with the first default account in the SNMPv3 USM list. If the **Allow ShutdownAgent to be managed by an authenticated manager** option is enabled then the permission of "manager" account changes to "Read/Write", otherwise the permission is "Disable".

The default setting of **Allow ShutdownAgent to be managed by an authenticated manager** option is "enabled".

۲	Ø	🊱 Sh	utdownA	gent 2012	:	× +							_	
$\leftarrow$	C	不安全	È   <del>ht</del>	t <del>ps</del> ://10.0	).10.39/hor	me.asp	Q AN	☆	U	ø	TJD	<₿	C	
			🕨 Vir	tual Machin	ie									
			En:	able Virtual N	lachine Shutdo	wn VMWare	ESXi Maintenance	e and Shutd	iown 🗸					
			🗹 Exi	t Maintenanc	e Mode when S	ShutdownAger	nt Startup. Delay T	ïme: 120	second(s	)				
			•Shutd	own Individ	ual ESXi Host									
						A Server IP A	Idress:							
			Note: P	ease add a spa	ce between the IP		ccount:	rs are assigne	ea.					
							sword:							
							Shutdown	guest OS(	es)					
						5	Submit Test Shu	utdown Hos	it .					
			•Shut	down VMWa	re vCenter	_								
				IP:	10.20.45.4									
				Account:	administrator(	@vsphere.loca	al							
				Password:										
				Host		ount: root								
					Host Pass				=					
				VM List:	VM Name			Add						
					Sequence		VM Name			Reorde	r	Delete		
					1		AlpineLinux3.	18	T	) † I	L L	x		
					2		KaliLinux2302_	_00	Ť	] [ ] [	1	X		
					Add Upda	te Delete	Test Shutdown	]						
			1	IP			ccount		Host Acco	unt	Numb	er of VM		
			1	10.20.45 10.20.45.1			or@vsphere.local or@vsphere.local		root root			2		
			<b></b>	10.20.40.		aanninoudu	- Grophare.iocal		1002			~		

#### Virtual Machine (Linux Version):

#### Enable Virtual Machine Shutdown:

Select this option when the virtual machine needs to be shut down by ShutdownAgent.

VMWare ESXi Maintenance and Shutdown: Perform a shutdown of the ESXi host and enter maintenance mode before shutting down the host. Select this shutdown option when ShutdownAgent is installed on a VM on this ESXi host.

VMWare ESXi Shutdown: Force to shut down the ESXi host.

VMWare ESXi v4: Shut down the host of ESXi v4.

Xen Server: Perform the shutdown of Xen server.

Linux KVM: Perform the shutdown of KVM server.

**Exit Maintenance Mode when ShutdownAgent Startup**: When this option is selected, ShutdownAgent will send a command to exit the maintenance mode when it is started, and restore the host that entered maintenance mode in previous shutdown process.

**Delay Time**: Delay sending the Exit Maintenance Mode command to vCenter, adjust the delay time to ensure vCenter is up and running before successfully sending the Exit Maintenance Mode command.

#### Shutdown Individual ESXi Host

VM Server IP Address: When you need to shut down the host individually, please enter the IP address of the host. When entering multiple IPs, please leave a blank between the two IP addresses. Note that shutting down multiple hosts refers to the hosts running independently of each other and not to a clustered architecture.

VM Account, Password: The account and password of the virtual host, when there are multiple virtual hosts, please unify the account and password into one.

**Shutdown Guest OS (es):** Whether to shut down the running Guest OS before shutting down the ESXi host. To run correctly please install VMWare Tools on each Guest OS. Be sure to select this option when ShutdownAgent is installed on a VM on this ESXi host.

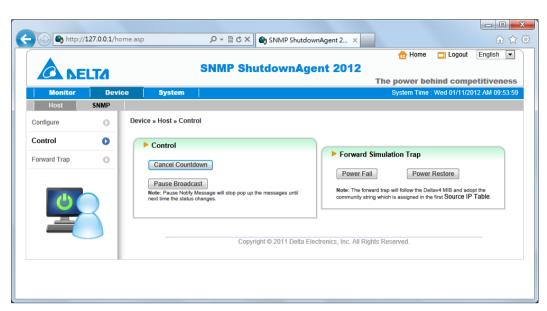
#### Shutdown VMWare vCenter

vCenter IP: IP address of vCenter.

vCenter Account, Password: vCenter account and password.

**ESXi Host Account, Password:** Please unify multiple hosts into one account and password.

VM List: VM name shutdown sequence list.



## 5.6 Device >> Host >> Control

#### Control:

Press **Cancel Countdown** during the countdown process to stop counting down. Press the button again to resume shutdown process.

If you enable **Notify Message** function from **Device**>>**Host**>>**Configure**, a popup message window will notify the user after receiving a power event. Press the **Pause Broadcast** button to stop message notifications.

### Forward Simulation Trap:

Press the **Power Fail** button to send the simulated power fail SNMP trap to the assigned forward target IP addresses.

Press the **Power Restore** button to send the simulated power restore SNMP trap to the assigned forward target IP addresses.

## 5.7 Device >> Host >> Forward Trap

**Forward Trap** function is used to forward the received SNMP trap to extend the size of protection OS shutdown gracefully. The original SNMP Trap is sent by the SNMP IPv6 card, but when the number of servers to be shut down exceeds the maximum number of 255 SNMP IPv6 cards, this mechanism can be used to continue to expand.

🔿 🗞 http://1	27.0.0.1/ho	me.asp		P - ⊠¢:	× 🔄 InsightPow	er SNMP IPv6 for	🔄 😋 SNN	/IP ShutdownAge	nt 20 ×	₩ 🗘
								合 Home	Logout	English 💌
	LT/			SNMP S	hutdown/	Agent 201				
							T	he power be		
Monitor	Dev	ice	System					System Time	: Thu 11/24/20	011 PM 08:00:09
Host	SNMP									
Configure	0	Devi	ce » Host » Forwar	d Trap						
Control	0		Target IP List							
Forward Trap	0			-	72.16.186.251					
				UDP Port: 16			_			
					Add	Update Dele	te			
					Target IP			UDI	P Port	
			1		172.16.186.251			1	162	
				Со	pyright © 2011 Del	ta Electronics, Inc.	All Rights I	Reserved.		

## 5.8 Device >> SNMP >> SNMP Access

ShutdownAgent supports SNMP protocol and SNMP NMS (Network Management System), which are commonly used to monitor network devices for conditions that call for administrative attention. To prevent unauthorized access, you can specify the NMS IP addresses that are allowed to access, their community strings and access levels. The maximum number of IP entries is 255.

🕞 😋 http://127.0.0.1/h	iome.asp	오 - 🗟 Ċ 🗙 🗞 Insi	ghtPower SNMP IPv6 for	SNMP ShutdownAge	nt 20 ×	6 🕁
		SNMP Shutdo	wnAgent 2012	🔁 Home	Logout	English 💌
			-	The power be	hind comp	etitiveness
Monitor De	vice System			System Time	: Thu 11/24/20	11 PM 08:00:39
Host SNMP						
SNMPv1 Access	Device » SNMP » SNM	/IPv1 Access				
SNMPv3 USM	SNMPv1 Acc	ess Table				
CO CO	SNMP Port: 161	Access IP: 0.0.0.0 Community: public Permission: Read Only	Add Update Delete			
		IP Address	Community	· · · ·	Permission	
	1	0.0.0.0	public		Read Only	
	2	10.0.10.21 172.16.186.162	public public		Read/Write Read Only	
			011 Delta Electronics, Inc. Al			

# 5.9 Device >> SNMP >> SNMPv3 USM

SNMPv3 offers features such as the encryption of packets and authentication to improve security. The SNMPv3 USM (User Session Management) allows you to

assign 32 User Names whose access is granted via SNMPv3 protocol. You can also define their respective Security Levels, Auth Passwords, Priv Passwords and Permission.

The first one account cannot be deleted, to disable it please go to the **Device** >> **Host** >> **Configure** web page then uncheck the manageable option.

	127.0.0.1/hor				IMP ShutdownAgent 2 ×	💼 Home	Logout	û ☆ English ▼
	LTA		SI	MP Shutdo	wnAgent 2012	The power be	hind comp	etitiveness
Monitor	Devic	e	System			System Time	Wed 01/11/20	12 AM 10:11:46
Host	SNMP							
SNMPv1 Access	0	Device »	SNMP » SNMPv3	JSM				
SNMPv3 USM	0	► S	NMPv3 USM					
Ċ	3	Auth I		a: jesse d: ******* A: Read Only 💌	Priv I Add Update Delete	rity Level: Auth, Priv Password: *******	•	
			User Name	Security Level	Auth Password	Priv Password	Permis	
		1	manager	Auth, Priv	******	*******	Read/W	
		2	lesse	Auth, Priv	2011 Delta Electronics, Inc. All F		Read C	יחוי

# 5.10 System >> Administration >> Information

System information including Installation Date, Location and Description can be recorded here.

Google			▼ 3 提尋 · 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	TA	5	Home Logout English SNMP ShutdownAgent 2012
Monitor	Devic	e System	System Time : Wed 12/07/2011 AM 11:23
Administration	0	System » Administration	» Information
Login User	0	► Information	
Web	0	System Na	ne: ShutdownAgent
Batch Configuration	0	System Contac	
	- 1	System Locat	on: RUBU Software
		Installation Da	ate: 12/06/2011 (MM/DD/YYYY)
e		Descript	on: ShutdownAgent @ jesse-win7
			Submit
	- 1		

## 5.11 System >> Administration >> Login User

You can manage the login authentication for web interface by assigning 3 different level of user' s account and password.

The access permission for the account types are listed as follows:

Administrator: Permitted to modify all settings.

Device Manager: Permitted to modify device-related settings.

Read Only User: Only permitted to observe ShutdownAgent status.

Enable Login Lock: When the user logs in more than the specified number of

times, the system will lock the user for a period of time.

Allow Retry: Lock after wrong number of logins.

**Lock Time:** Lock the account time, ignore the user login request during the lock time.

- > C (A)	121   ±≈	7.0.0.1/home.asp			☆ 0	
	-	s	hutdownAgent	2012	🔒 Home 🛛 Logout	English 🗸
CA NEL					he power behind com	petitiveness
Monitor	Device	System			System Time : Wed 12/09/2	2020 PM 05:23:32
Administration						
Information	O Sy	rstem » Administration » Logi	in User			
Login User	0	User Manager				
Web	0	Enable Login Lock: Allow	Retry: 5 Lock Time: 10	Minute(s)		
Batch Configuration	0	Privilege	Account N (32 chars r		Password (8~32 chars)	
	- 11	1 Administrator	admin			
		2 Device Manager	device			
C) (		3 Read Only User	user			
			Su	ubmit		

# 5.12 System >> Administration >> Web

The administrator can enable or disable HTTP/HTTPS communication protocols available in ShutdownAgent.

	ТЛ		ShutdownAger		
Monitor	Device	System			behind competitivene ne : Wed 05/27/2020 PM 03:22
Administration					
Information	0 5	System » Administration	» Web		
Login User	0	Configure Web		SSL Certificate	
Web	0	HTTP:	Enable      Disable	Certificate File (PEM format):	
Batch Configuration	0	HTTPS:	● Enable ○ Disable	瀏覽 Update the certificated file which is genera	
Daton configuration		Force to HTTPS:	● Enable ○ Disable	new SSL connections.	
		HTTP Port:	80		
6		HTTPS Port:	443	Submit	
		Web Refresh Period:	10 Seconds		

### HTTP:

Enable or disable HTTP communication of ShutdownAgent.

### HTTPS:

Enable or disable HTTPS communication of ShutdownAgent.

### Force to HTTPS:

Enable or disable forced HTTPS communication. When the user logs in with <a href="http://IP\_Address">http://IP\_Address</a> , the software will redirect the user to <a href="https://IP\_Address">https://IP\_Address</a> for a secure connection.

#### HTTP Port:

The user may configure HTTP protocol to use a port number other than standard HTTP port (80).

#### **HTTPS Port:**

The user may configure HTTPS protocol to use a port number other than standard HTTPS port (443).

#### Web Refresh Period:

The period of time to update the monitoring web pages. The range is 1~9999 seconds.

#### SSL Certificate:

To ensure connection security between ShutdownAgent and the connecting workstation, SSL certificate can be used to encrypt and secure the integrity of transmitting data.

**Certificate File:** This allows you to replace your own SSL certificate file. ShutdownAgent supports PEM format which is generated by OpenSSL. Click **Choose File** to upload a certificate file.

### \*How to generate a private SSL certificate file (in PEM format) for HTTPS?

To ensure connection security, you can create your own SSL certificate file. Please download and install OpenSSL Toolkit from http://www.openssl.org. Launch terminal mode and enter the following command to create your own certificate file:

openssl req -x509 -nodes -days 3650 -newkey rsa:2048 -keyout cert.pem -out cert.pem

1) Answer the prompted questions. Proceed with the given directions. Once it is completed, a file named **cert.pem** is created in the current working directory.

2) Upload cert.pem to the Web.

## 5.13 System >> Administration >> Batch Configuration

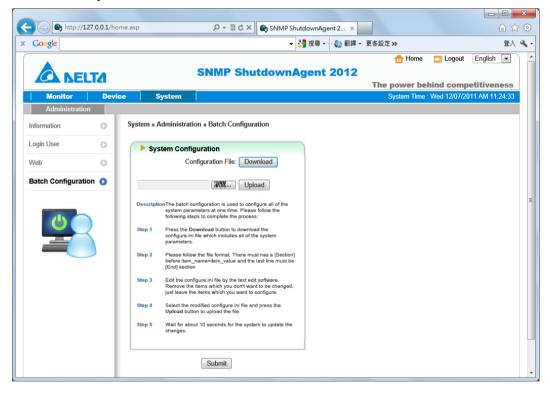
ShutdownAgent provides batch configuration to allow quick and effortless setup on multiple ShutdownAgent hosts. You can duplicate settings by downloading the configuration file from ShutdownAgent that you have successfully configured, and upload the configuration files on other hosts.

#### Download:

Download the agent.ini for you to store or edit the configuration file.

### Upload:

Upload the configuration file to ShutdownAgent to apply the change immediately.



# 6. 2008 Server Core Setup for ShutdownAgent

While installation ShutdownAgent in the 2008 server core, it requires the

following commands to transfer the file and add some rules for firewall.

1. Disable firewall:

netsh advfirewall set allprofiles state off

2. Enable firewall:

netsh advfirewall set allprofiles state on

3. Add a remotely shared directory:

net use e: \\<ip address>\e

4. Open the SNMP Trap UDP 162

netsh advfirewall firewall add rule name="SNMPTrap" protocol=UDP dir=in localport=162 action = allow

5. Open SNMP Server UDP 161

netsh advfirewall firewall add rule name="SNMPServer" protocol=UDP dir=in localport=161 action = allow

6. Open the HTTP TCP 80

netsh advfirewall firewall add rule name="HTTP" protocol=TCP dir=in localport=80 action = allow

7. Open HTTPS TCP 443

netsh advfirewall firewall add rule name="HTTPS" protocol=TCP dir=in localport=443 action = allow

First, put the Shutdown-Agent-2012-Setup(x64).exe setup file in the 2008 server directory. If there is no CD-ROM you can set the "Disable firewall" command,

"Add a remotely shared directory" command then copy the file from your PC to the 2008 server. Please remember to set the "Enable firewall" command when complete.

Secondly, follow the chapter 2 to install ShutdownAgent in the 2008 server. The last step is use the open HTTP/HTTPS, SNMP Trap/Server port commands to open the necessary which you want.

You can easily run the Agent-Config.exe to configure the basic networking

parameters for the web and SNMP network protocols after installation.

<pre>+======++++++++++++++++++++++++++++++</pre>			* III
l Shutdown Agent   +			
l Shutdown Agent   + [1].SNMP Trap Port: 162 [2].SNMP Server Port: 161			
l Shutdown Agent   +			
I Shutdown Agent I +			
l Shutdown Agent   +			
I Shutdown Agent I +			
l Shutdown Agent   +=============================== [1].SNMP Trap Port: 162 [2].SNMP Server Port: 161			
I Shutdown Agent I +			
++ [1].SNMP Trap Port: 162 [2].SNMP Server Port: 161			
++ [1].SNMP Trap Port: 162 [2].SNMP Server Port: 161			
[2].SNMP Server Port: 161			
[2] UTTD. Ench			
LƏJ.NIIF. Ellan	le		
[4].HTTPS: Enab	le		
[5].HTTP Port: 80			
[6].HTTPS Port: 443			
[7].Save			
[8].Set Firewall			
[9].Restart Shutdown-Agent	Service		
[0].Exit			
Please Enter Your Choice =>			-

Select [8] to help you to insert or remove a firewall rule for ShutdownAgent.

C:\Program Files\SNMP Shut	down Agent 2012\Agent-Config.exe					
		*				
		=				
+======================================	==+					
l Shutdown Agent	1					
+=====================================						
[1].SNMP Trap Port: [2].SNMP Server Port:						
	Enable					
[4].HTTPS:	Enable					
[5].HTTP Port:						
[6].HTTPS Port:	443					
[7].Save [8].Set Firewall						
[9].Restart Shutdown-Ag	ent Service					
[0].Exit						
Please Enter Your Choic						
We'll help to insert or remove the firewall rules of ShutdownAgent for you,						
	restore the firewall rules by yourselves if it wor r remove the firewall? [1]nsert, [R]emove	KS .				
Please Enter Your Choic		-				

## 7. VMWare ESXi 4.0 Setup for ShutdownAgent

Before installing ShutdownAgent in the ESXi4.0 server, please transmit ShutdownAgent setup file to the ESX server through SFTP by FileZilla FTP Client or other SFTP client then login to the ESX server by the local console or through your favorite SSH client (such as Putty).

Please continue to follow the section 2.2 For Linux Installation/ Uninstallation. To configure the basic networking parameters including the ESXi4.0 firewall, please see chapter 3 Console Configuration.

#### 7.1 Configure the Firewall for ESXi 4.0

Run the /usr/local/upsagent/configure

Select [8] to help you to insert or remove a firewall rule for ShutdownAgent.

C:\Program Files\SNMP Sh	nutdown Agent 2012\Agent-Config.exe	X
		*
		=
+======================================	====+	
l Shutdown Agent	1	
+======================================		
[1].SNMP Trap Port:		
[2].SNMP Server Port: [3].HTTP:	161 Enable	
	Enable	
[5].HTTP Port:	Enable 80	
	443	
[7].Save	442	
[8].Set Firewall		
[9].Restart Shutdown-1	Agent Sewuice	
[0].Exit		
Please Enter Your Cho:	ice => $8$	
	or remove the firewall rules of ShutdownAgent for you,	
	nd restore the firewall rules by yourselves if it works.	
	or remove the firewall? [I]nsert, [R]emove	
Please Enter Your Cho:		-

### 7.2 Install VMware Tools for Guest OS

To shut down the guest OS from ESXi server, it's better for you to install the

VMware tools for all of them so as to inform the guest OSes shutdown

smoothly.

For Windows operating system.

Select the following menu Guest → Install/Upgrade VMware Tools

#### 7.3 Configure ShutdownAgent for ESXi4.0

- 1. Login to the web interface of ShutdownAgent and the account level should greater than or equal to device manager.
- Go to: Device → Host → Configure web page to enable the Enable Virtual Machine Shutdown checkbox then select the VMWare ESXi4 option.

👼 🍘 🗖 🄄 ShutdownAge	nt 2012 × +	— C
← C ▲ 不安全   http:	://10.0.10.39/home.asp 🔍 A 🏠 🚺 🏟 🚾 🗘 🛱 🏠	~~ <b>∂</b> ?
	Virtual Machine Virtual Machine Shutdown VMWare ESXi Shutdown  Exit Maintenance Mode when ShutdownAgent Startup. Delay Time: 120 second(s)  -Shutdown Individual ESXI Host VM Server IP Address: Note: Please add a space between the IP addresses if more than one VM servers are assigned. Account Password: Password: Pip: 10.20.45.4 Account [administrator@vsphere.local Password: Host Account [root]	
	Host	
	IP Account Host Account Number of VM	
	1         10.20.45.4         administrator@vsphere.local         root         2           2         10.20.45.104         administrator@vsphere.local         root         0	

3. Press **Submit** to update your changes.

## 8. VMWare ESXi 4.1/5/6 Setup for

## ShutdownAgent

Before installing ShutdownAgent for the ESXi4.1/5/6, you have to install the vMA 5 (vSphere Management Assistant 5) or the above version and make sure the VMWare tools is installed in all of the guest OSes. Please then transmit ShutdownAgent setup file to the vMA server through SFTP by FileZilla FTP Client or other SFTP client then login to the vMA server by the local console or through your favorite SSH client (such as Putty).

Please continue to follow the section 2.2 For Linux Installation/ Uninstallation.

To configure the basic networking parameters including the vMA firewall, please see chapter 3 Console Configuration.

7 172.16.186.193 - vSphere Cl	ient						- • ×
<u>File Edit View</u> Inventory	<u>Administration</u> <u>Plu</u>	g-ins <u>H</u> elp					
🖸 💽 🔥 Home 🕨 👸	Inventory 🕨 🛐 I	Inventory					
<ul> <li>II</li> <li>IS</li> <li>IS</li> <li>IS</li> </ul>	a 🔉 🖻 🖬	» 📀 🗞					
172.16.186.193	24	5phere Managemer	nt Assistant (	vMA)			
VSphere Management	Assistant (vMA)	Getting Started Sum	nmary Resou	urce Allocation	Performance Events Conse	ole Permissions	
D XP							close tab 🛛
		What is a Virtua	al Machine	?			
		A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtual machine is called a guest operating system. Because every virtual machine is an isolated computing environment, you can use virtual machines as desktop or workstation environments, as testing environments, or to					
consolidate server applications. Virtual machines run on hosts. The same host can run many virtual machines.							
Recent Tasks	,				Name, Ta	rget or Status contains: +	Clear >
Name	Target	Status	Details	Initiated by	Requested Start Time	▽ Start Time	Completed Time
Power On virtual machine		- 📀 Completed		root	2012/7/6 下午 09:58:38	2012/7/6 下午 09:58:38	2012/7/6 下午 09:
Power On virtual machine	P XP	Completed		root	2012/7/6 下午 09:58:36	2012/7/6 下午 09:58:36	2012/7/6 下午 09:
							•
🚰 Tasks						Evaluation Mode:	60 days remaining root

### 8.1 Configure the Firewall for vMA

Run the /usr/local/upsagent/configure

Select [8] to help you to insert or remove a firewall rule for ShutdownAgent.

C:\Program Files\SNMP Sh	uutdown Agent 2012\Agent-Config.exe				
		*			
		Ξ			
+======================================	====+				
l Shutdown Agent	:				
+========================	====+				
[1].SNMP Trap Port:	162				
[2].SNMP Server Port:	161				
[3].HTTP:	Enable				
[4].HTTPS:	Enable				
[5].HTTP Port:	80				
[6].HTTPS Port:	443				
[7].Save					
[8].Set Firewall					
[9].Restart Shutdown-	Agent Service				
[0].Exit					
Please Enter Your Cho					
We'll help to insert or remove the firewall rules of ShutdownAgent for you,					
	nd restore the firewall rules by yourselves if it works.				
	or remove the firewall? [I]nsert, [R]emove				
Please Enter Your Cho:	ice =>	Ψ.			

### 8.2 Install VMware Tools for Guest OS

To shut down the guest OS from ESXi4.1/ 5/ 6 server, you have to install the

VMware tools for all of them so as to inform the guest OSes shutdown smoothly.

For Windows operating system.

Select the following menu Guest  $\rightarrow$  Install/Upgrade VMware Tools

#### 8.3 Configure ShutdownAgent for ESXi4.1/5/6

- 1. Login to the web interface of ShutdownAgent and the account level should greater than or equal to device manager.
- Goto the Device → Host → Configure web page to enable the Enable Virtual Machine Shutdown checkbox.
- 3. If ShutdownAgent installed on the guest OS of the same ESXi host, please choose the VMWare ESXi Shutdown option.
- If ShutdownAgent installed on an external PC, you can chose VMWare ESXi Maintenance and Shutdown or VMWare ESXi Shutdown option per your application.
- 5. Description: VMWare ESXi Maintenance and Shutdown option will let the ESXi host enter maintenance mode first, then shutdown the host. The VMWare ESXi Shutdown option shuts down the host directly.
- 6. Please continue to setup the followings.

VM Server IP Address: The ESXi server IP address. If there are more than 1

server IP addresses, please separate them by a space character.

Account: The root privilege for ESXi server.

Password: The password of the root account.

Submit: The button to update your changes.

# 9. ShutdownAgent Shutdown VMWare ESXi 6.5

## and Above

### 9.1 ShutdownAgent Linux Edition

Since the vMA is deprecated after version 6.5, you have to install one public Linux OS such as SUSE, CentOS or Ubuntu. Then install the vCLI in the management Linux OS. Please note that the network communication between the ESXi server and this management Linux must work normally.

Please refer to the VMWare web site for the detail instructions on how to installation vCLI.

### 9.1.1 Test the esxcli command

After installing the vCLI, please continue to test the esxcli command.

- 1. Login the system by the root account.
- Open the terminal shell, go to /usr/lib/vmware-vcli/bin/esxcli/ directory.
   Key in cd /usr/lib/vmware-vcli/bin/esxcli
- Test to get the guest OS running on each ESXi host. Please key in: esxcli -s 10.0.10.107 -u root -p 2wsx@WSX vm process list where 10.0.10.107 is the ESXi host IP address, root is the root account, 2wsx@WSX is the password for root. Please key in the correct information based on your environment. In a normal condition, the host should reply all of the running guest OS information, as follows:

delta@sa2012-vm:/usr/lib/vmware-vcli/bin\$ cd esxcli/
delta@sa2012-vm:/usr/lib/vmware-vcli/bin/esxcli\$ ./esxcliserver 10.0.10.107 -
-user rootpassword 2wsx@WSX vm process list
VSphere Management Assistant (VMA)
World ID: 35297
Process ID: 0
VMX Cartel ID: 35295
ULID: 56 4d 8a 60 30 e0 b5 5a-8d 75 20 5c 56 23 ba d5
Display Name: vSphere Management Assistant (vMA)
Config File: /vmfs/volumes/58c66588-8144e300-b5e2-6805ca39cd23/vSphere Manage
ment Assistant (vMA) 1/vSphere Management Assistant (vMA) 1.vmx
Merie Assestante (VIA)_1/VSpilere Hanagemerie Assestante (VIA)_1.VMA
Ubuntu-x86
World ID: 35298
Process ID: 0
VMX Cartel ID: 35294
UUID: 56 4d ff 28 88 44 d6 84-84 1a 66 ed a8 3b 6b cd
Display Name: Ubuntu-x86
Config File: /vmfs/volumes/58c66588-8144e300-b5e2-6805ca39cd23/Ubuntu-x86/Ubu
ntu-x86.vmx
delta@sa2012-vm:/usr/lib/vmware-vcli/bin/esxcliS

But if the version is old enough of the ESXi host, then you' II get the

certification error message as follows:

Certificate error. Server SHA-1 thumbprint:

04:82:AE:AE:67:C5:F6:DB:1D:0F:CE:5F:1A:92:34:4A:B9:EA:FE:CE (not trusted)

Now, you have to add the thumbprint code in the vCLI, please going

to the /usr/lib/vmware-vcli/apps/general directory.

First add the server IP:

./credstore\_admin.pl add --server 10.0.10.107 --username root --password

2wsx@WSX

Tehn add the thumbprint:

./credstore\_admin.pl add --server 10.0.10.107 --thumbprint

04:82:AE:AE:67:C5:F6:DB:1D:0F:CE:5F:1A:92:34:4A:B9:EA:FE:CE

Continue to get the guest OS information to complete the test,

Please test the ESXi hosts one by one.

Then, install ShutdownAgent in the management Linux and make sure the **VMWare tools** is installed in all of the guest OSes. Please then transmit ShutdownAgent setup file to the management Linux through SFTP by FileZilla or other SFTP client then login to the Linux by the local console or remote desktop.

Please continue to follow the section 2.2 For Linux Installation/ Uninstallation.

The other configuration, please refer to the chapter 8.

#### 9.2 ShutdownAgent Windows Edition

Please note, to shut down the ESXi host or cluster, you cannot install ShutdownAgent Windows Edition in the same cluster or host. This will cause ShutdownAgent to be turned off before sending the complete shutdown commands.

The installation of Windows ShutdownAgent, please refer to section 2.1.

#### 9.2.1 Add the Windows shutdownagent account

- Please add the Windows "shutdownagent" account. This account must be assigned as a local administrator, this account will be used to execute ShutdownAgent service program.
- 2. Please login to Windows system by ShutdownAgent account, select Start > Windows Administrative Tools > Services. Click on the Shutdown-Agent service then open its property dialog box and switch to the Log On page. Click on "This account" and key in ShutdownAgent account and password then press the OK button.

Shutdown-Agent P	roperties (	Local Compute	r)	×
General Log On	Recovery	Dependencies		
Log on as:				
O <u>L</u> ocal System a		t with desktop		
● This account:	.\s	nutdownagent		Browse
Password:	••	•••••	•	
<u>C</u> onfirm passw	ord:	•••••	•	
		01/	0	
		ОК	Cancel	<u>A</u> pply

#### 9.2.2 Install VMWare vCLI

You have to login to Windows system by ShutdownAgent account before the installation.

- 1. Install VMWare vCLI (vSphere CLI), please download the VMWare vCLI Windows setup file from the official VMWare web site then install it.
- 2. Install Strawberry Perl: please download the Strawberry Perl Windows setup file from the official web site then install it.

http://strawberryperl.com/

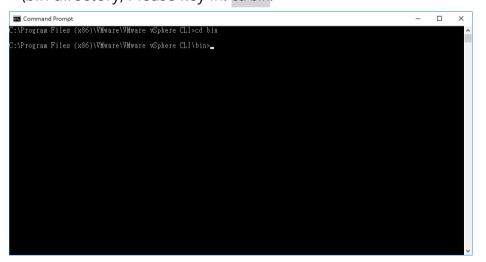
After installation, continue to download the Text::Template and UUID modules, as follows:

2.1 Select Windows Start > Strawberry Perl > CPAN Client

To install Text::Template Module, please key in: cpan> install Text::Template

To install UUID Module, please key in: cpan> install UUID

- 3. We' Il continue to test the esxcli command.
- 3.1 Select Windows Start > VMware > Command Prompt. Then enter the \bin directory, Please key in: cd bin.



3.2 Test to get the guest OS information from each ESXi host. Please key

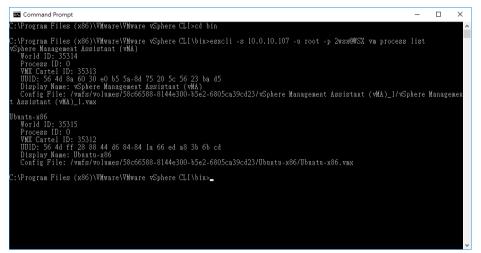
in:

esxcli -s 10.0.10.107 -u root -p 2wsx@WSX vm process list

where 10.0.10.107 is the ESXi host IP address, root is the root account,

2wsx@WSX is the password for root. Please key in the correct information based on your environment.

In a normal condition, the host should reply all of the running guest OS information, as follows:



But if the version is old enough of the ESXi host, then you' Il get the

certification error message as follows:

Certificate error. Server SHA-1 thumbprint:

04:82:AE:AE:67:C5:F6:DB:1D:0F:CE:5F:1A:92:34:4A:B9:EA:FE:CE (not trusted)

Now, you have to add the thumbprint code in the vCLI, please going

to the C:\Program Files (x86)\VMware\VMware vSphere

CLI\Perl\apps\general directory.

First add the server IP:

perl credstore\_admin.pl add --server 10.0.10.107 –username root –password

2wsx@WSX

Then add the thumbprint:

perl credstore\_admin.pl add --server 10.0.10.107 --thumbprint

04:82:AE:AE:67:C5:F6:DB:1D:0F:CE:5F:1A:92:34:4A:B9:EA:FE:CE

Continue to get the guest OS information to complete the test,

Please test the ESXi hosts one by one.

4. The other configuration, please refer to the chapter 8, Windows edition requires to provide the Installation directory of VMWare vCLI.

#### ShutdownAgent 2012

	LTA	ShutdownAgent 2	The power behind competitivene
Monitor	Devic	e System	System Time : Fri 10/08/2021 PM 06:0
Host	SNMP		
onfigure	0	Device » Host » Configure	
ontrol	0	► Shutdown	Source IP
orward Trap	0	Shutdown Type: Shutdown 🗸	Receive Trap Port: 162
		C Shutdaum Dalau	Purpose:      For Redundant (Logical OR)
	_	Enable Event OS Shutdown Delay (in seconds)	◯ For Parallel (Logical AND)
C) (		1 V Power Fail 300 second(s)	Submit
	$\prec$	2 Z Battery Low 30 second(s)	Source Trap IP: 10.0.10.54
		3 ✓ Overload 60 second(s)	Community:
			SNMPv3 User: jesse
		4 On Bypass 300 second(s)	Add Update Delete
		5 Smart Shutdown 30 second(s)	Note: Leave the community empty will accept any community string. Leave the SNMPv3 User empty will accept all of the users in the SNMPv3 USM table.
	- 1		IP Address Community SNMPv3 User
		Virtual Machine	1 10.0.10.54 jesse
	- 1	Enable Virtual Machine Shutdown     VMWare ESXi Shutdown	2 10.0.10.101 jesse
	- 1	VMWare vCLI Directory: C:\Program Files (x86)\VMv	► Reaction
			✓ Notify Message
	- 1	VM Server IP Address: 172.25.145.157 Note: Please add a space between the IP addresses if more than one VM servers are assigned.	Period: 60 second(s)
		Account: root	Execute Command File
		Password	
		Shutdown all guest OS(es)	File:
		Submit Test Shutdown Host	Run Before Shutdown: 120 second(s)
		VMWare Cluster Shutdown	Submit
		vCenter IP: 0.0.0.0	
		Account:	► Manageable
		Password	Allow the ShutdownAgent to be managed by an
		Cluster Name:	authenticated manager.
		Add	Submit
			Note: The authenticated manager can be a SNMP card or a centralized management software. Enable this option to integrate the ShutdownAgent in the power management environment.
		vCenter IP Account Password Cluster Name	
		1 0.0.0.0	

## 10. VMWare vCenter Shutdown

#### 10.1 Shutdown Individual ESXi Host

Turn on the "Enable Virtual Machine Shutdown" option and select the VMWare ESXi Maintenance and Shutdown, VMWare ESXi Shutdown, or VMWare ESXi v4 option to shut down one or more ESXi hosts. To shut down multiple ESXi hosts, you need to enter multiple IP addresses in the virtual host IP address field, leaving spaces between addresses, and set the ESXi host account and password to be consistent.

Note: ShutdownAgent cannot install VMWare Tools to avoid being shut down prematurely by the ESXi host.

Set the IP addresses of 2 virtual hosts, leaving spaces between the addresses.

Virtual Machine	Virtual Machine					
Enable Virtual Machine Shu	utdown VMWare ESXi Maintenance and Shutdown 🗸					
Exit Maintenance Mode wh	nen ShutdownAgent Startup. Delay Time: 120 second(s)					
•Shutdown Individual ESXi H	•Shutdown Individual ESXi Host					
	VM Server IP Address: 10.20.10.1 10.20.10.2					
Note: Please add a space between t	the IP addresses if more than one VM servers are assigned.					
	Account: root					
Password:						
Shutdown guest OS(es)						
	Submit Test Shutdown Host					

#### 10.1.1 VMWare ESXi Maintenance and Shutdown

Please select this shutdown option for VMWare ESXi version 6.5 or above or when ShutdownAgent is installed on the VM on this ESXi host.

#### ESXi Host Shutdown Steps:

- 1. Shut down the Guest OS that has VMWare Tools installed while it is running. (This step can be ignored if automatic guest operating system shutdown is not enabled).
- 2. The ESXi host enters maintenance mode.
- 3. Shut down the ESXi host.

If the ShutdownAgent is enabled to exit maintenance mode during startup, the ESXi host will be delayed for a period of time after startup to exit maintenance mode.

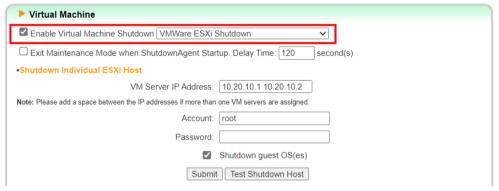
Virtual Machine							
Enable Virtual Machine Shutdown VMWare ESXi I	Maintenance and Shutdown 🗸						
Exit Maintenance Mode when ShutdownAgent Star	tup. Delay Time: 120 second(s)						
•Shutdown Individual ESXi Host							
VM Server IP Address:	VM Server IP Address: 10.20.10.1 10.20.10.2						
Note: Please add a space between the IP addresses if more than	one VM servers are assigned.						
Account:	root						
Password:							
Shutdown guest OS(es)							
Submit	Test Shutdown Host						

#### 10.1.2 VMWare ESXi Shutdown

Please select this shutdown option for VMWare ESXi version 4.1/5/6 or to force a shutdown of the ESXi host.

#### ESXi Host Shutdown Steps:

- 1. Shut down the Guest OS that has VMWare Tools installed while it is running (This step can be ignored if automatic guest operating system shutdown is not enabled).
- 2. Perform a forced shutdown on the ESXi host.



#### 10.1.3 VMWare ESXi v4

Please select this shutdown option for VMWare ESXi version 4.

#### ESXi Host Shutdown Steps:

1. Shut down the Guest OS that has VMWare Tools installed while it is running.

Virtual Machine	
C Enable Virtual Machine Shutdown VMWare ESXi v4	<b>~</b>
Exit Maintenance Mode when ShutdownAgent Startup.	. Delay Time: 120 second(s)
Shutdown Individual ESXi Host	
VM Server IP Address: 10	0.20.10.1 10.20.10.2
Note: Please add a space between the IP addresses if more than one	VM servers are assigned.
Account: roo	ot
Password:	
Shu	utdown guest OS(es)
Submit	Test Shutdown Host

#### 10.2 VMWare vCenter Shutdown Instructions

It is recommended to use VMWare ESXi version 8 or above.

Enable the "**Perform Virtual Shutdown**" option and perform one or more vCenter shutdown procedures. Please enter the vCenter IP, account and password, and VM list. Please set the ESXi host account and password to be consistent.

If the "Exit Maintenance Mode when ShutdownAgent Startup" option is enabled, the command will be sent after a period of time.

Virtual Machine	e			
🗹 Enable Virtual Ma	achine Shutdown VMW	are ESXi Maintenance and Shuto	lown 🗸	
Exit Maintenance	Mode when Shutdown	Agent Startup. Delay Time: 120	second(s)	
Shutdown Individu	al ESXi Host			
	VM Server I	P Address:		
Note: Please add a spac	e between the IP addresses	f more than one VM servers are assign	ed.	
		Account:		
		Password:		
		Shutdown guest OS	es)	
		Submit Test Shutdown Hos	it	
Shutdown VMWare	e vCenter			
IP:	10.20.45.4			
Account:	administrator@vsphere	local		
Password:				
Host:				
	Host Account: roo			
	Host Password:			
VM List	MANA			
	VM Name	Add		
	Sequence	VM Name	Reorder	Delete
	1	AlpineLinux3.18		1 X
	2	KaliLinux2302_00		×
Ĺ	Add Update Dele	te Test Shutdown		
	:		Hand Annual 1	No
IP 1 10.20.45.4	4 adminis	Account trator@vsphere.local	Host Account root	Number of VM 2
10.20.40.4		trator@vsphere.local	root	2

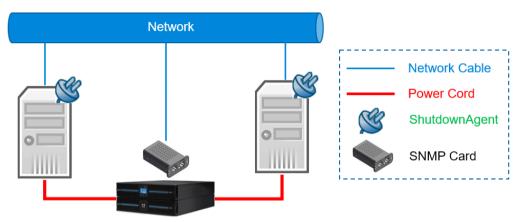
#### 10.2.1 Shutdown Steps

- 1. Shut down VMs in order according to the VM list.
- 2. Shut down the VM except ShutdownAgent and vCenter.
- 3. There is no ESXi Host running ShutdownAgent and vCenter.
  - 3.1 Enter maintenance mode
  - 3.2 Close the Host
- 4. Shut down vCenter and the ESXi Host where it is located.
- 5. Shut down the ESXi Host where the ShutdownAgent is located.

## **11. Shutdown Scenarios**

#### 11.1 Power Supply from One UPS

If there is only one UPS supplies power to multiple servers installed with ShutdownAgent 2012, when the power supply is interrupted, the UPS will send SNMP Traps to the ShutdownAgent through the SNMP Card to shut down, power off or hibernate the servers.



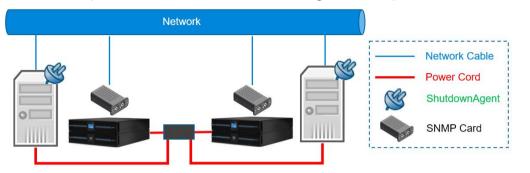
### 11.1.1 Configure

				ShutdownAgent				Home Dogout English V 12 The power behind competitiveness
Monitor	Devi	ce   S	System					System Time : Tue 01/09/2024 PM 11:33:18
Host Configure	SNMP	Device » H	lost » Col	nfigure				
Control	0	► Sh	utdown					► Source IP
Forward Trap	0	Shutdo	own Type:	Shutdown 🗸				Receive Trap Port: 162
6	3	1 2 3 4 5	Enable	Event Power Fail Battery Low Overload On Bypass Smart Shutdown Submit		ttdown Delay seconds) second(s) second(s) second(s) second(s) second(s)		Purpose:
			action	age				1         10.0.10.24         public           2         10.0.10.25         public

Add the UPS Trap source IP address and enable the input power interruption event, and then set the delay time according to the needs before executing the server shutdown, power off or hibernation. For detailed field description, please refer to <u>5.5 Device >> Host >> Configure</u>.

#### **11.2 UPS Power Supply in Parallel**

Suppose that there 2 UPSs connected in parallel to supply power to multiple servers installed with ShutdownAgent 2012, when the ShutdownAgent receives the power interruption SNMP Trap from one of the UPSs, the servers will be shut down, powered off, or hibernated (logical OR operation).



### 11.2.1 Configure

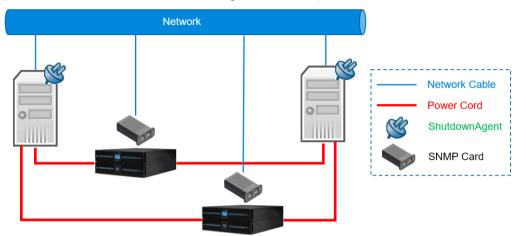
iontrol Shutdown	Monitor	Devi	ce 📔	System						System Time	e : Tue 01/09/20	24 PM 11
Shutdown       Shutdown Type:       Shutdown Ty	Host	SNMP										
orward Trap       Shutdown Type:       Shutdown N         Shutdown Type:       Shutdown N         Enable       Event       OS Shutdown Delay (in seconds)         1       Power Fail       300       second(s)         3       Overload       60       second(s)         4       On Bypass       300       second(s)         5       Smart Shutdown       30       second(s)         5       Smart Shutdown       30       second(s)	onfigure	0	Device »	Host » Co	onfigure							
Image: Structure       Image: Structure <td< td=""><td>ontrol</td><td>0</td><td>► SI</td><td>hutdown</td><td>I</td><td></td><td></td><td>► S</td><td>ource IP</td><td></td><td></td><td></td></td<>	ontrol	0	► SI	hutdown	I			► S	ource IP			
Image: Enable       Event       OS Shutdown Delay (in seconds)         Image: Image: Enable       Event       OS Shutdown Delay (in seconds)         Image:	orward Trap	0	Shuto	down Type	: Shutdown 🗸					162		
1       Image: Power Fail       300       second(s)         2       Image: Battery Low       30       second(s)         3       Image: Overload       60       second(s)         4       On Bypass       300       second(s)         5       Image: Smart Shutdown       30       second(s)         5       Image: Smart Shutdown       30       second(s)				Enable	Event			Purpo	ise:	O For Parallel		:)
3     ✓     Overload     60     second(s)       4     On Bypass     300     second(s)       5     ✓     Smart Shutdown     30         Note:     Leave the community empty will accept any community sting.         Leave the SNMP3 User empty will accept all of the users in the SNMP3 user.	C)		1	<ul> <li>Image: A set of the set of the</li></ul>	Power Fail	300	second(s)			Submit		_
3       Image: Constraint of the second		$\prec$	2	<b>v</b>	Battery Low	30	second(s)	So				
4     On Bypass     300     second(s)     Add     Update     Delete       5     Smart Shutdown     30     second(s)     Note: Leave the community empty will accept any community sting. Leave the SNMP/3 User empty will accept all of the users in the SNMP/3 USer     SNMP/3 User empty will accept all of the users in the SNMP/3 User			3	<b>~</b>	Overload	60	second(s)			<u> </u>		
Contract of address of the second contract of the second contra			4		On Bypass	300	second(s)		_		Delete	
			5	<b>v</b>		30	second(s)	Leave	the SNMPv3 L	munity empty will acce	pt all of the users in	ity stiling. h the
								1	10.0.10.24	public		
▶ Reaction 1 10.0.10.24 public			🗹 N	otify Mess	ade			2	10.0.10.25	public		

- 1. Add 2 UPS Source Trap source IP addresses.
- 2. Set the purpose to redundant use (logical OR) and enable the input power interruption event, and then set the delay time according to the requirements before executing the server shutdown, power off or hibernation.

For detailed field description, please refer to <u>5.5 Device >> Host >></u> <u>Configure</u>.

#### **11.3 UPS Redundant Power Supply**

Suppose that there are 2 UPSs provide redundant power to multiple servers installed with ShutdownAgent 2012, when the ShutdownAgent receives the power interruption SNMP Trap from the 2 UPSs, the servers will be shut down, powered off, or hibernated (logical AND operation).



### 11.3.1 Configuration

					🔂 Home 🔄 Logout English 🗸
	LTA		Shu	tdownAgent	
1					The power behind competitiveness
Monitor	Devic	e System	n		System Time : Tue 01/09/2024 PM 11:33:18
Host	SNMP				
Configure	0	Device » Host » (	Configure		
Control	0	► Shutdow	n		Source IP
Forward Trap	0	Shutdown Typ	e: Shutdown 🗸		Receive Trap Port: 162
		Enable	Event	OS Shutdown Delay (in seconds)	- Purpose: O For Redundant (Logical OR)
C		1 🔽	Power Fail	300 second(s)	
		2 🗹	Battery Low	30 second(s)	
		3 🔽	Overload	60 second(s)	Community: public
		4	On Bypass	300 second(s)	
		5 🔽	Smart Shutdown	30 second(s)	Leave the SNMPv3 User empty will accept all of the users in the
			Submit		SNMPv3 USM table.
					IP Address Community SNMPv3 User
		Reaction			1 10.0.10.24 public
		Notify Me	ssage		2 10.0.10.25 public
		Period	60 second(	5)	

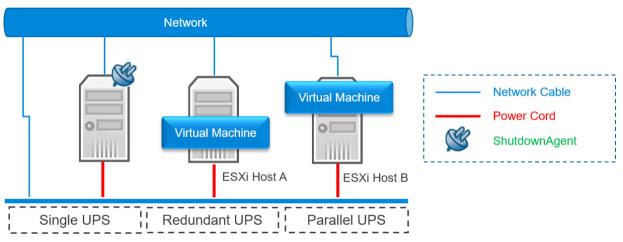
- 1. Add 2 UPS Trap source IP addresses.
- 2. Set the purpose to parallel use (logical AND) and enable the input power interruption event, and then set the delay time according to the requirements before executing the server shutdown, power off or hibernation.

For detailed field description, please refer to <u>5.5 Device >> Host >></u> <u>Configure</u>.

#### 11.4 ESXi Host Shutdown Scenarios

#### 11.4.1 ShutdownAgent Runs Outside the ESXi Host

If ShutdownAgent runs on an independent host outside the ESXi host, when it receives the power interruption SNMP Trap sent by the SNMP Card, the ShutdownAgent immediately shuts down multiple ESXi hosts and the servers where they are located, shuts down the power, or hibernates.



#### Settings:

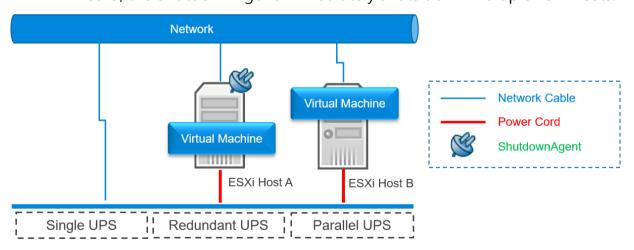
 Set the UPS Trap source, purpose, shutdown event and method. According to the UPS power supply mode, please refer to 11.1.1 Single UPS power supply setting, 11.2.1 UPS parallel power supply setting or 11.3.1 UPS redundant power supply setting.

ſ	► Virtual Machine
l	Enable Virtual Machine Shutdown VMWare ESXi Maintenance and Shutdown
l	Exit Maintenance Mode when ShutdownAgent Startup. Delay Time: 120 second(s)
L	Shutdown Individual ESXi Host
L	VM Server IP Address: 10.0.10.1 10.0.10.2
L	Note: Please add a space between the IP addresses if more than one VM servers are assigned.
l	Account: root
l	Password:
l	Shutdown guest OS(es)
l	Submit Test Shutdown Host

- Activate the "Enable Virtual Machine Shutdown" option and select VMWare ESXi Maintenance and Shutdown or VMWare ESXi Shutdown. Please refer to <u>10.1.1 VMWare ESXi Maintenance</u> and Shutdown option or <u>10.1.2 VMWare ESXi Shutdown option</u>.
- If the virtual shutdown option is "VMWare ESXi Maintenance and Shutdown", please activate the option "Exit Maintenance Mode when ShutdownAgent Startup".
- 4. Set the IP addresses of the 2 ESXi hosts. Please leave blank between the addresses.
- 5. Set the same account and password for the 2 ESXi hosts.
- 6. Enable "Shutdown guest OS(es)" .

#### 11.4.2 ShutdownAgent Runs Inside ESXi Host

If ShutdownAgent runs on a virtual machine in one of the ESXi hosts, when it receives the power interruption SNMP Trap sent by the SNMP Card, the ShutdownAgent immediately shuts down multiple ESXi hosts.



#### Settings:

 Set the UPS Trap source, purpose, shutdown event and method. According to the UPS power supply mode, please refer to <u>11.1.1</u> <u>Power Supply from One UPS</u>, <u>11.2.1 UPS Power Supply in Parallel</u> or <u>11.3.1 UPS Redundant Power Supply</u>.

Virtual Machine	
Enable Virtual Machine Shutdown VMWare ESXi SI	hutdown 🗸
Exit Maintenance Mode when ShutdownAgent Startu	up. Delay Time: 120 second(s)
•Shutdown Individual ESXi Host	
VM Server IP Address:	10.0.10.1 10.0.10.2
Note: Please add a space between the IP addresses if more than o	one VM servers are assigned.
Account:	root
Password:	
	Shutdown guest OS(es)
Submit	Test Shutdown Host

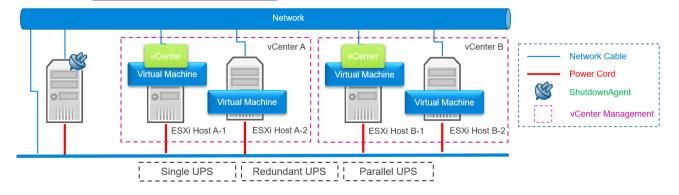
- Activate the "Enable Virtual Machine Shutdown" option and select "VMWare ESXi Shutdown". Please refer to <u>10.1.2</u> VMWare ESXi Shutdown.
- 3. Set the IP addresses of the 2 ESXi hosts. Please leave blank between the addresses.
- 4. Set the same account and password for the 2 ESXi hosts.
- 5. Enable "Shutdown guest OS(es)" .

#### 11.5 vCenter Shutdown Scenarios

It is recommended to use VMWare ESXi version 8 or above.

#### 11.5.1 ShutdownAgent Runs Outside vCenter

If ShutdownAgent runs on an independent host outside VMWare vCenter, when it receives the power interruption SNMP Trap sent by the SNMP Card, ShutdownAgent immediately performs VMWare vCenter shutdown steps on multiple vCenters (Please refer to <u>10.2.1 VMWare</u> vCenter Shutdown Steps) and the server where it is located.



#### Settings:

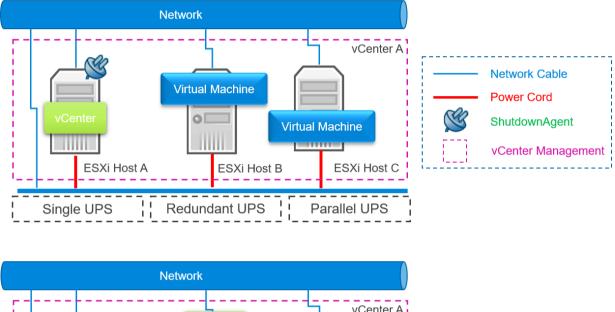
 Set the UPS Trap source, purpose, shutdown event and method. According to the UPS power supply mode, please refer to <u>11.1.1</u> <u>Power Supply from One UPS</u>, <u>11.2.1 UPS Power Supply in Parallel</u> or <u>11.3.1 UPS Redundant Power Supply</u>.

Virtual Machine
Enable Virtual Machine Shutdown VMWare ESXi Maintenance and Shutdown 🗸
Exit Maintenance Mode when ShutdownAgent Startup. Delay Time: 120 second(s)
Shutdown Individual ESXi Host
VM Server IP Address:
Note: Please add a space between the IP addresses if more than one VM servers are assigned.
Account:
Password:
Shutdown guest OS(es)
Submit Test Shutdown Host
Shutdown VMWare vCenter
IP: 10.20.45.4
Account: administrator@vsphere.local
Password
Host
Host Account: root
Host Password:
VM List
VM Name Add
Sequence VM Name Reorder Delete
1 AlpineLinux3.18 T T L L X
2 KaliLinux2302_00 ↑ ↓ ↓ X
Add Update Delete Test Shutdown
IP Account Host Account Number of VM
1 10.20.45.4 administrator@vsphere.local root 2
2 10.20.45.104 administrator@vsphere.local root 2

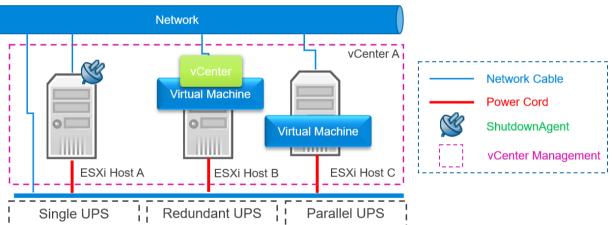
- Activate the "Enable Virtual Machine Shutdown" and "Exit Maintenance Mode when ShutdownAgent Startup".
- 3. In the Shutdown VMware VCenter settings, add two vCenter IP addresses, accounts, passwords, and VM shutdown order list. Please also set the consistent ESXi host accounts and passwords.

#### 11.5.2 ShutdownAgent Runs Inside vCenter

If ShutdownAgent runs on a virtual machine in VMWare vCenter, when it receives the power interruption SNMP Trap sent by the SNMP Card, it immediately performs the VMWare vCenter shutdown steps (Please refer to 10.2.1 VMWare vCenter Shutdown Steps).



Note: This scenario only supports one vCenter.



#### Settings:

 Set the UPS Trap source, purpose, shutdown event and method. According to the UPS power supply mode, please refer to <u>11.1.1</u> <u>Power Supply from One UPS</u>, <u>11.2.1 UPS Power Supply in Parallel</u> or <u>11.3.1 UPS Redundant Power Supply</u>.

► Virtual Machine
Enable Virtual Machine Shutdown VMWare ESXi Maintenance and Shutdown 🗸
Exit Maintenance Mode when ShutdownAgent Startup. Delay Time: 120 second(s)
•Shutdown Individual ESXi Host
VM Server IP Address:
Note: Please add a space between the IP addresses if more than one VM servers are assigned.
Account:
Password:
Shutdown guest OS(es)
Submit Test Shutdown Host
Shutdown VMWare vCenter
IP: 10.20.45.4
Account: administrator@vsphere.local
Password
Host
Host Account: root
Host Password:
VM List
VM Name Add
Sequence VM Name Reorder Delete
1 AlpineLinux3.18 T T L L X
2 KaliLinux2302_00 ↑ ↑ ↓ ↓ ×
Add Update Delete Test Shutdown
IP Account Host Account Number of VM
1 10.20.45.4 administrator@vsphere.local root 2

- Activate the "Enable Virtual Machine Shutdown" and "Exit Maintenance Mode when ShutdownAgent Startup".
- 3. In the Shutdown VMware VCenter settings, add the vCenter IP address, account, password, and VM shutdown order list. Please also set the consistent ESXi host accounts and passwords.

# 12. Quickly deploy ShutdownAgent with vCLI OVA file

Deploying ShutdownAgent in OVA mode is the fastest and most effective way. With Delta pre-made OVA file, customers can quickly start vCLI guest OS and execute ShutdownAgent. Since this vCLI is executed on the ESXi host, this method cannot be used to shut down the Cluster host but can perform the task of simply shutting down the ESXi host.

#### 12.1 Download the pre-made OVA file

Please go to Delta website to download the vCLI OVA file containing ShutdownAgent.

https://datacenter-softwarecenter.deltaww.com > UPS > Software >

ShutdownAgent 2012 > vCLI 6.0.0 or vCLI 6.7.0 file.

Unzip after download, the file name should be a .ova file.

#### 12.2 Import the OVA file to the ESXi host

- 1. In the vSphere Client, click on the file menu and choose to deploy the OVF template. Follow the prompts to select the unzipped OVA file to complete the deployment. At this time, the guest OS of uXXXX\_saXXXX\_vcli will appear.
- 2. Select the guest OS, then power on this guest OS.
- 3. The default IP address is dynamic, the account is delta and the password is 2wsx@WSX.
- 4. Please modify the IP address to a static, reboot this vCLI guest to apply the new settings.

### 12.3 Connect to ShutdownAgent in vCLI

Please find a client PC and open the web browser. Enter the vCLI IP address to connect. After entering the default ShutdownAgent account and password, go to the Device> Host> Configure page.

Please follow the instructions to set the SNMP card and source IP address and

other parameters.

	- 0
🔶 🕐 🛕 不安全   https://10.0.10.39/home.asp 🔍 A <sup>N</sup> ☆ 🚺 🎁 🔯 🗘   口 🗲 庙 🧌	~~ ~~
Vurtual Machine     Endob Virlual Machine     Externate adda appea balaase flore Balaxon gast Statup. Delay Time 120 second(s)     Subdown Marked Statup. Delay Time 120     Subdown Marked Statup. Delay Time 120     Subdown Marked Statup. Delay Time 120     Subdown Juste Virlaw as an adjusted     Account     Password     Password     Virlual Machine     Superson UV Inter      Virlual Machine     Superson UV Inter      Virlual Machine     Superson UV Inter      Virlau     Virlau	

The followings are the Virtual Machine options.

• VMWare ESXi Maintenance and Shutdown: Used for the ESXi host to enter the maintenance mode then shutdown. If ShutdownAgent is running on one of the VMs of the ESXi host, please select this option to shut down.

- VMWare ESXi Shutdown: Used to force shutdown the ESXi hosts.
- VMWare ESXi v4: Used to shut down the ESXi version 4. (Please ignore the "Exit Maintnenance Mode" option).
- Xen Server: Used to shut down the Xen server. (Please ignore the "Exit Maintenance Mode" option).

• Linux KVM: Used to shut down the KVM server. (Please ignore the "Exit Maintenance Mode" option).

## 13. XenServer Setup for ShutdownAgent

To install ShutdownAgent in theCitrix XenServer, please see 2.2 For Linux in

chapter 2 Installation/ Uninstallation.

To configure the basic networking parameters including the Xen firewall, please see chapter 3 Console Configuration.

#### 13.1 Install PV driver for Guest OS

To shut down the guest OS from XenServer, you need to install the PV driver for all of them so as to inform the guest OSes shutdown smoothly.

#### 13.2 Configure ShutdownAgent for Xen

- 1. Login to the web interface of ShutdownAgent and the account level should greater than or equal to device manager.
- Go to: Device → Host → Configure web page to enable the Enable Virtual Machine Shutdown checkbox then select the Xen Server option.

C	🛕 不到	安全   h	ttps://10.0.1	10.39/h	ome.asp	Q A		٦	<b>i</b>	TJD	3	-1-	-	٦.
					Shi	utdown	Agent 2	012		合 н	lome [	Logout	English	~
		ELTA			on		Agent L		т	he powe	er behir	nd compe	titivene	ess
1	Monitor	Dev	ice S	ystem						System	n Time : T	'hu 12/14/202	3 PM 09:0	1:24
	Host	SNMP												
С	onfigure	0	Device » Ho	ost » Conf	igure									
С	ontrol	0	Shu	itdown				🕨 🕨 Sou	rce IP					
F	orward Trap	0			Shutdown 🗸				Trap Port	162	7			
						OS Shutde	wn Delay	Purpose				(Logical OR)		
				nable	Event	(in sec	onds)			O For Pa	arallel (Lo	gical AND)		
	<b>O</b>		1	-	Power Fail	300	second(s)							
			2	_	Battery Low	30	second(s)		e Trap IP ommunity					
			3	_	Overload	60	second(s)		IPv3 User			_		
			4	_	On Bypass	300	second(s)	Note: Les	we the com		dd	t any community	v string	
			2	<b>V</b>	Smart Shutdow		second(s)	Leave the	USM table.	Jser empty wi	ill accept all	l of the users in t	the	
					Submit									
			► Rea	ction					Address		munity	SNMPv3	User	
				fy Messag	e			1	0.0.0.0	pu	iblic			
				Period: 60	secon	d(s)		Man	ageable					)
				cute Comr	nand File						nt to be ma	anaged by an	1	1
			0.2.0					authenti	cated ma		bmit			
				ile:		1		Note: The	authentica			NMP card or a s option to integ		
					e Shutdown: 12	20 seco	nd(s)	Shutdown	d managen Agent in th	e power mana	. Enable this agement en	s option to integr ivironment.	rate the	
					Submit			L						1
			Virt	ual Mach	ine									
			🗹 Ena	ble Virtual	Machine Shutd	iown Xen Ser	/er		Ý	)				
							nt Startup. Dela	iy Time: 120	) sec	cond(s)				
			•Shutdo	own Indivi	dual ESXi Hos		11							
			Note: Pla	ase add a 🖘		/M Server IP A	ddress:	ervers are assic	aned.					
			HOLD. FIE		ourself the		ccount:			1				
						Pa	ssword:			j				
									S(es)					

3. Press Submit button to update your changes.

## 14. Linux KVM Setup for ShutdownAgent

To install ShutdownAgent in the Linux server, please see 2.2 For Linux in chapter 2 Installation/ Uninstallation.

To configure the basic networking parameters including the firewall, please see chapter 3 Console Configuration.

#### 14.1 Install libvirt Tools for KVM

To shut down the guest OS from Linux server, you have to install the libvirt.

ShutdownAgent calls the virsh to shut down the running guest OSes.

#### 14.2 Configure ShutdownAgent for KVM

- 1. Login to the web interface of ShutdownAgent and the account level should greater than or equal to device manager.
- Go to: Device → Host → Configure web page to enable the Enable Virtual Machine Shutdown checkbox then select the Linux KVM option.

ô	🗖 🚭 Shutdow	nAgent 2012 × +	- 1	
← C	▲ 不安全	##ps://10.0.10.39/home.asp ର୍ A 🏠 🤂 🍪 🚾 🗘 🗈 🎓	~~	
	Monitor De Host SNMP Configure O	Configure		
	Control O Forward Trap O	Shutdown Type: Shutdown v Enable Event O'S Shutdown Delay (in seconds) Prover Fail 300 second(s) Overload 60 second(s) Overload 60 second(s) Submit Submit Source Trap IP: 0.0.0 Submit Source Trap IP: 0.0.0 Submit Source Trap IP: 0.0.0 Community string. Submit Source Trap IP: 0.0.0 Community string. Submit Source Trap IP: 0.0.0 Submit Source Trap IP: 0.0.0 Community string. Source Trap IP: 0.0.0 Community string. Submit Source Trap IP: 0.0.0 Source Trap IP: 0.0.0 Community string. Source Trap IP: 0.0.0 Community string. Source Trap IP: 0.0.0 Doto the users in the source and other source and other source and the users in the source of the		

3. Press **Submit** button to update your changes.

## 15. Work with the SNMP Card

#### 15.1 Legacy Delta InsightPower SNMP Card

- 1. Open a web browser and connect to the InsightPower SNMP Card.
- 2. Record the IP address and SNMP Trap Port in the System Configuration web

page.



3. Add the SNMP IP address and the trap port to ShutdownAgent as the

following to receive the SNMP trap from the InsightPower SNMP Card.

Monitor	Device	System		The power behind competitiveness System Time : Mon 02/25/2013 AM 11:51:29	
Host	SNMP				
Configure	<b>D</b>	Device » Host » Configure			
ontrol	0	Shutdown		Source IP	
orward Trap	0	Shutdown Type: Shutdown 💌	]	Receive Trap Port 162	
		Enable Event	OS Shutdown Delay (in seconds)	Purpose: For Redundant (Logical OR)  For Parallel (Logical AND)	
6		1 V Power Fail	300 second(s)	Submit	
	$\leq$	2 🛛 Battery Low	30 second(s)	Source Trap IP: 10.0.10.33	=
		3 V Overload	60 second(s)	Community: public	
		4 🔲 On Bypass	300 second(s)	SNMPv3 User: Add Update Delete	
		5 📝 Smart Shutdo	wn 30 second(s)	Note: Leave the community empty will accept any community string. Leave the SNMPv3 User empty will accept all of the users in the	
		Subm	it	SNMPV3 USM table.	
				IP Address Community SNMPv3 User	
		► Reaction		1 10.0.10.33 public	
		Notify Message		2 172.16.182.78 public	
		Period: 60 secon	d(s)	Manageable	
		Execute Command File			
			*	Allow the ShutdownAgent to be managed by an authenticated manager.	

4. Get ShutdownAgent IP address form the property dialog box.

ſ	Shutdown-Agent - Property
	General
	System Shutdown-Agent 00.00.01 English
	Host Information IP Address= fe80::a8c0:a23a:54a2:62e5%10 172.16.182.75 1680::2924:18e2:9c5d:78ac%26 169.254.120.172 Host Name= jesse-zhuo-nb1
	Web  Web  WHTTP Port= 80  HTTPS Port= 443  Login Account
	OK Cancel

5. Add ShutdownAgent IP address to the SNMP Trap table in the InsightPower SNMP Card. Please select the "Information" for the Event Level and DeltaV4 as the Trap MIB Type.

InsightPower			System Time: 1	1/21/2007 V	/ednesday 1	6:16:09	
UPS Information Web	Back to H	lome					
Menu	Netwo	rk >> SNMP Trap	5				
•UPS Information •UPS Properties			SNMP Trap Tab	le			
Battery Parameters     In/Out Parameters	Index	Target IP	Community (12 bytes max.)		rel Trap Typ	pe	
<ul> <li>Identification</li> </ul>	- 1	172.16.182.75	public	Information	✓ DeltaV4		
Status Indication     UPS Management	2	172.16.186.119	public	Information	✓ DeltaV4	✓	
•Configure	3	172.16.186.240	private	Information	<ul> <li>RFC1628</li> </ul>	~	
Control     Weekly Schedule	4	0.0.0.0		None	✓ DeltaV4	~	
Specific Schedule	5	0.0.0.0		None	✓ DeltaV4	~	
Network •User Manager	6	0.0.0.0		None	✓ DeltaV4	<b>~</b>	
System Configuration	7	0.0.0.0		None	✓ DeltaV4	~	
SNMPv1 Access Control     SNMP Trap	8	0.0.0.0		None	✓ DeltaV4	~	
• Time Server • Mail Server			Submit See event	level			

#### 15.2 Delta InsightPower SNMP IPv6 Card

- 1. Open a web browser and connect to the InsightPower SNMP IPv6 Card.
- 2. Record the IP address in the System Configuration web page. The SNMP

Trap is assigned in the SNMP Trap web page individually.

	TA The	power behind competitiveness	Power SNMP IPv6 for UP	B Home D Logo	
Monitor	Devic	e System		ujuun niiter niiter	
Administration		Notification			
User Manager	0	System » Administration » TCP/IP			
TCP/IP	0	▶ ТСР/ІР	► System		
Web	0	TCP/IP Settings for IPv4		System	E
Console	0	DHCP Client 💿 Enable 🔘 [	Disable Host	Name: INSIGHTPOWER	
	-	IP Address 10.0.10.33	System Co	ntactor.	
FTP	0	Subnet Mask: 255.255.255.0	System L	ocation:	
Time Server	0	Gateway IP: 10.0.10.254			
Syslog	0	DNS IP: 10.0.10.254	- II	Link	
		Search Domain: deltaww.com	Auto-Neg	otiation: 🔽 Enable	
Batch Configuration	0			Speed: 💿 100M 🔘 10M	
Upgrade	0	TCP/IP Settings for IPv6		Duplex: 💿 Full 🔘 Half	
		DHCP Client:    Enable	Disable Change the parame SNMP card to restar	ters in the Link group will cause the t.	
		IP Address: fe80::230:abff:fe2	26:		
		Prefix Length: 64		Submit	
		Gateway V6IP:	<b>T</b>	- Submit	-

3. Login to ShutdownAgent web and add the SNMP IP address and the trap

port as the following to receive the SNMP trap from the SNMP Card.

Monitor	ELTA Device	Home Logout English  ShutdownAgent 2012 The power behind competitiveness
Host Configure	SNMP	Device » Host » Configure
Control	3	Shutdown Type: Shutdown Type: Shutdown Type: Shutdown Type: Shutdown Type: Shutdown Delay (in seconds) Enable Event OS Shutdown Delay (in seconds) Prover Fail 300 second(s) Submit Source IP Receive Trap Port: 162 Purpose: I For Parallel (Logical OR) For Parallel (Logical AND) Submit Source Trap IP: 10.0.10.33 Community: public SNMPv3 User Submit Note: Leave the community entry will accept any community string. Leave the community and will accept any community string. Leave the community and will accept any community string. Leave the community and will accept any community string. Leave the community and will accept any community string. Leave the community and will accept any community string. Leave the source of the SMMPv3 User 1 10.0.10.33 public
		Image: Period:       60       second(s)         Image: Period:       60       second(s)         Image: Period:       60       second(s)         Image: Period:       //usr/local/upsagent/       Allow the ShutdownAgent to be managed by an authenticated manager.         Image: Priod:       Image: Period:       Submit         Run Before Shutdown:       120       second(s)         Image: Submit       Submit       Note: The authenticated manager can be a SNMP card or a certralized management environment.

4. Open ShutdownAgent property from Windows task bar to get the IP

address of the server.

Shutdown-Agent - Prope	erty 🤋 🗙
General	
System Shutdown-Ager	Language:
00.00.01	English
- Host Information -	
IP Address=	fe80::a8c0:a23a:54a2:62e5%10  10.0.10.14
	fe80::2924:f8e2:9c5d:78ac%26
Host Name=	jesse-zhuo-nb1
	Web
C	HTTP Port= 80
	✓ HTTPS Port= 443
	Login Account
	OK Cancel

5. Back to the InsightPower SNMP IPv6 card web page, add the IP address ofShutdownAgent to the SNMP Trap table. Please select the "ShutdownAgent2012" for the Event Level and UPSV4 or UPSv5 as the Trap MIB.

	TA The	e power behind competitiven	Insight	Powe	r SNMF	P IPv6 fo	or UPS Web			
								System Tir	ne : Thu 01/01/1	970 PM 0
Monitor	Device									
Administrati		Notification System » Notification »	SNMP Trap							
SNMPv3 USM	0	SNMP Trap Tar	net List							
SNMP Trap	0		got Liot							
Mail Oracia		Т	arget IP: 10.0.1	10.14			Community String:	public		
Mail Server	0	Tr	ap Type: SNM	Pv1 ▼			MIB:	UPSv4	•	
Wake On LAN	0	SNMPv3 Use	r Name:				Trap Port:	162		
		The User Name mus <u>SNMPv3 USM</u> table		e same fiel	d in the		Event Level:	Shutdown	Agent 2012 🔻	
		SIVMEVS USM LADIE				SNMP Por	t for ShutdownAgent:	161		í
				ĺ	Add Up		ete			
		Target IP	Community	Port	MIB	Туре	Event Level		SNMPv3 Use	r
		1 10.0.10.39	public	162	UPSv4	v1	ShutdownAgent 2	012		
		2 10.0.10.14	public	162	UPSv4	v1	ShutdownAgent 2			
		3 10.0.10.24	public	162	UPSv4	v1	ShutdownAgent 2			
		4 10.0.10.25	public	162	UPSv4	v1	ShutdownAgent 2	012		J

6. If you enable the manageable option in ShutdownAgent then you can observe all of the shutdown status, countdown timer and shutdown reason from the InsightPower SNMP IPv6 card. The web page is on the Monitor >> Information >> ShutdownAgent.

A NEL	The I	nower behind	competitiveness	InsightPower SNMP IPv6 for UPS		Home C	Logout Er	nglish
Monitor					Sy	stem Time :	Thu 01/12/2012	AM 11:2
Information	Device His		ystem About					
JPS Properties	0		Information » S	hutdownAgent				
attery Parameters	0	► sr	utdownAgent					
n/Out Parameters	0							
dentification	0		IP Address	OS	Countdown (sec)	Reason	Last Touch (sec)	
Status Indication	0	@ 1	10.0.10.39 jesse-opensuse	Linux, 2.6.37.1-1.2-desktop, #1 SMP PREEMPT 2011- 02-21 10:34:10 +0100, i686		None	6	
ShutdownAgent	0	<b>2</b>	10.0.10.14 jesse-zhuo-nb1	Microsoft Windows 7 Enterprise Edition Service Pack 1 (build 7601), 64-bit		None	6	
Power Module	0	<b>@</b> 3	10.0.10.24 Invalid	Invalid		None	566	
		<b>4</b>	10.0.10.25 jesse-ubuntu	Linux, 2.6.32-24-generic, #39-Ubuntu SMP Wed Jul 28 06:07:29 UTC 2010, i686		None	2	
	- 1							
				Copyright © 2011 Delta Electronics, Inc. All Ri	ghts Reserved.			

#### 15.3 New Delta InsightPower G3 Mini SNMP Card

- 1. Open a web browser and connect to the InsightPower G3 Mini SNMP Card.
- 2. Record the IP address in the System Configuration web page. The SNMP

Trap is assigned in the SNMP Trap web page individually.

				💿 Global   English 🏾 🌀	♠ (> ^
A NELTA			In	sightPower G3 Mini SN	
MONITOR DEVICE	SYSTEM			Mon 08/23/2021	PM 06:25:53
SYSTEM	System » Ethernet » If	Pv4			
Ethernet			TCP/IP		
Host		Status		Settings	
IPv4	DHCP Client :	Enable	DHCP Client :	Enable  Disable	
IPv6	IP Address :	10.144.7.127	IP Address :	10.144.7.127	
Service	Subnet Mask :	255.255.255.0	Subnet Mask :	255.255.255.0	
Notification	Gateway IP :	10.144.7.254	Gateway IP :	10.144.7.254	
User FW Update	DNS 1 :	10.141.156.1	DNS 1 :	10.141.156.1	
1 W Opdate	DNS 2 :	10.136.156.1	DNS 2 :	10.136.156.1	
	Search Domain :	delta.corp	Search Domain :		
				Submit	

3. Login to ShutdownAgent web and add the SNMP IP address and the trap

port as the following to receive the SNMP trap from the SNMP Card.

ShutdownAgent 2	012 ×		🔒 Home 🗖 Logout English 🗸
	LTA	ShutdownAgent	
Monitor	Devid	e System	System Time : Mon 08/23/2021 PM 06:30:19
Host	SNMP		
Configure	0	Device » Host » Configure	
Control	0	Shutdown	Source IP
Forward Trap	0	Shutdown Type: Shutdown 🗸	Receive Trap Port 162 Purpose:
		Enable Event OS Shutdown Delay (in seconds)	Purpose:      For Redundant (Logical OR)     For Parallel (Logical AND)
(1)		1 ✓ Power Fail 300 second(s)	Submit
	<	2 Sattery Low 120 second(s)	Source Trap IP: 10.144.7.127
		3 V Overload 60 second(s)	Community: public
		4 On Bypass 300 second(s)	SNMPv3 User:
		5 Smart Shutdown 30 second(s)	Add         Update         Delete           Note: Leave the community empty will accept any community string.
		Submit	Leave the SNMPv3 User empty will accept all of the users in the SNMPv3 USM table.
		Virtual Machine	IP Address Community SNMPv3 User
		Enable Virtual Machine Shutdown	1 10.144.7.127 p <mark>ublic</mark>
		VMWare ESXi 6.5 V	▶ Reaction
		VMWare vCLI Directory: C:\Program Files (x86)\V	Notify Message
			I Notity Message

User Manual-Page 68 -

4. Open ShutdownAgent property from Windows task bar to get the IP address of the server. Or find the OS IP address which ShutdownAgent installed.

SI	hutdown-Agent - Prope	rty		?	×
C	General				
	System ShutdownAgent 02.00.13	2012	Language: English		~
	Host Information IP Address=	fe80::7954:9e 192.168.94.12	9		
	Host Name=	10.144.7.50 DESKTOP-N1RC		,	
	U	Web HTTP HTTPS Log	Port= 80 Port= 443 in Account	}	]
			ОК	Can	cel

4. Go back to the InsightPower G3 Mini SNMP card web page, add the IP address of ShutdownAgent to the SNMP Trap table.

Please select the "ShutdownAgent 2012" for the Event Level and UPSV4 or UPSv5 as the Trap MIB.

MONITOR DEVICE	SYSTEM Mon 08/23/2021 PM
SYSTEM	System » Notification » SNMP Trap
Ethernet	INFORM Configuration
Service Notification SNMP Trap Mail Server Syslog	Timeout:     10     Seconds       Retry:     5     INFORMs are simply acknowledged TRAP notifications. When an entity receives an INFORM, it sends back a RESPONSE to indicate it received it. If the appropriate RESPONSE To indicate it received it. If the appropriate RESPONSE message does not receive during the assigned Timeout then the card will retry the assigned Retry times to send the INFORM again.
User FW Update	SNMP Trap Target List
	Target IP:         10.144.7.50         Event Level:         ShutdownAgent 2012         Image: ShutdownAgent 2012 <thimage: 2012<="" shutdownagent="" th="">         Image: Sh</thimage:>
	Add Update Delete
	* click one row of fields if you want to modify it  V 32 rules max.
	IP Level Type Port MIB Community SNMPv3 User