NetAtlas

(NetAtlas Workgroup)

Ethernet Switch

Support Notes

<u>Version 1.00</u> <u>March 2006</u>



Introduction of SNMPc and NetAtlas

With the number of network device increase, the demand to detect and respond to the network failure or external event in a very short time posts a great challenge to network administrator. How to easily manage and monitor network devices across networks becomes more and more important in network management.

Figure 1 presents main elements of the system architecture. Element Management System (EMS), NetAtlas provides a centralized remote management platform and acts as SNMPc manager to perform network configuration, system management, event/alarm management, performance management and security for all ZyXEL's Ethernet Switch solutions. SNMPc is network management software produced by Castle Rock that constantly probe the network element (NE) and collect information of those NE for EMS. Underneath the EMS is Postgres SQL, the enterprise relational database system, provides query for EMS



Figure 1 System Architecture

Installation of Netatlas workgroup

1. Double click the installation file located on the Netatlas CD.



2. Read the license information, if you agree with the license, click "yes" to continue.



At this time, if SNMPc does not exist in your PC, the Netatlas installation program will install SNMPc for you.

Inform	ation 🔀
٩	SNMPc does not exist on this computer, start installing SNMPc.
	確定



3. Choose "Server" and then click "Next"

SNMPc Netwo	rk Manager Setup 🛛 🔀
Select Component Select the SNMPc 6.0 (component you would like to install.
Server Insta Cons	sgroup/Enterprise Base System Il once on your management server. Includes SNMPc Server, Local ole and Local Poller.
Console Insta in to	prise Remote Console II on one or more LAN-connected systems so multiple users can log the SNMPc server at the same time.
Poller Insta SNM	prise Remote Poller II on one or more WAN/LAN connected computers to distribute the Pc polling load.
InstallShield	
	< <u>B</u> ack <u>N</u> ext> Cancel

4. Choose the location that you want to install Netatlas, then click "Next"

SNMPc Network Manager Setup	X
Choose Destination Location Select folder where Setup will install files.	
Setup will install SNMPc Basic System in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
Destination Folder C:\Program Files\SNMPc Network Manager Browse	
Install5hield < <u>B</u> ack Canc	el

5. Netatlas comes with a feature called "Auto Discovery", if you are not going to use this "Auto Discovery" at this time, check the box "Start with Discovery off". Then click "Next"

Discovery Seed	
	You must enter the IP address, subnet mask and community name of an SNMP device on your network. SNMPc will use this as a starting point for Discovery. Discovery Seed IP Address: Subnet Mask: Community: Startup Discovery is unrestricted on initial startup and can quickly discover a very large map. Unrestricted device and TCP port discovery is sometimes viewed as a a security intrusion. Start with Discovery off
	< <u>B</u> ack <u>N</u> ext > Cancel

6. Here it shows the default program folder that Netatlas is going to install. Click "Next" to continue.

SNMPc Network Manager Setup			
Select Program Folder Image: Select a program folder.			
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.			
Program Folders:			
Existing Folders: ACD Systems Alcohol 120% Broadcom Ethereal GlobalSCAPE InstallShield Java 2 Runtime Environment Java Web Start			
InstallShield			
Information	×		
Your SNMPc Network Manager components have been successfully installed	d.		

At this moment, the installation of SNMPc is completed.

7. If PostgreSQL does not exist in your PC, the Netatlas installation program will also install it for you.

InstallF	PostgreSQL 🔀
i	PostgreSQL does not exist on this computer, start installing PostgreSQL.
	確定

8. Please select Postgresql Install Path. Then click "Next"

NetAtlas Workgroup Setup	×
Choose Destination Location Select folder where Setup will install files.	
Please select the destination path to install PostgreSQL.	
Destination Folder	
C:\Postgresql	se
InstallShield	
< <u>B</u> ack <u>Next</u> >	Cancel

9. It is NOT recommend changing the default account/password here. Just click "Apply" to continue.

PostgreS	QL	×
Window accor	unt for installinf PostGreSQL:	
Account	PostgreSQLDB	
Password	****	
	Apply	

10. When the installation of PostgreSQL is done, it will pop up the following message.

Inform	ation 🔀
i)	Your PostgreSQL components have been successfully installed.
	確定

11. When everything is set, the installation program will start to install Netatlas Workgroup. Finally, click "finish" to complete the whole installation process.

NetAtlas Workgroup Setup			
	InstallShield Wizard Complete Setup has finished installing NetAtlas Workgoup on your computer.		
	< <u>B</u> ack Finish Cancel		

Overview of SNMPc

The following diagram shows the main elements of SNMPc. SNMPc includes the following function

- Main Button Bar: Button and controls to execute commands quickly
- Edit Button Bar: Button to quickly insert map element
- Event Log Tool: Button display filtered event log entries
- View Window Area: Map View, Mib Tables and Mib Graph windows are displayed here.
- View Window Area: Map View, Mib Tables and Mib Graph windows.

Figure 2 Main elements of SNMPc



Overview of EMS

The following diagram illustrates the main elements in EMS. EMS contains the four main functions.

- Menu Shortcut Bar: The buttons execute common commands
- **Device Panel**: This is a graphical device display.
- Device List Panel: View devices in a tree structure. The colors of the device

indicate the status of the devices. Green is working and Rd is no response from the device.

 System message Panel: View the alarm Status and port status of the selected switch.

Figure 3 Overview of EMS



Configuration of adding a new device via SNMPc

In the following example, we will illustrate how to get started with SNMPc and Netatlas with adding a new device. Follow the procedures from Step 1 to Step 11.

Step 1: In the edit button bar shown in the Figure 4 where you may select the icon to insert a new element.





Step 2: In the map object properties, give the label name and enter the IP address of the selected device. In this example, we configure 172.23.3.11 as its IP address of ES-2108 as shown in Figure 5

Figure 5 Map Object Properties

Map Object P	roperties				×
General	Access Attributes Depe	ndencies]			
<u>L</u> abel:	ES-2108	<u>T</u> ype: []	Device	•	
<u>A</u> ddress:	172.23.3.11	Icon:	uto.ico	>>	1
<u>G</u> roup:	000=Unknown			▼ >>	1
Descr:					
	確?	te l	取消	說明	
	HL.				

Step 4: In the map object properties, select **Access** tab to set the parameters of Read Access Mode to SNMP V2c shown in Figure 6. Change the value of Read Access Mode to SNMP V2c.

Figure 6 Read Access mode

Map Object Properties 🛛 🔀							
General Access Attributes Dependencies							
Name:	Read Access Mode	Read Access Mode					
<u>V</u> alue:	SNMP V2c		V >>				
<u>A</u> ttrib:	Name Read Access Mode Read/Write Access Mode Read/Write Community Read/Write Community Trap Community V3 Engineid V3 Context Name V3 No-Auth Security Name V3 Auth/Priv Security Name V3 Auth/Priv Security Name V3 Auth Passwd V3 Priv Passwd	Value SNMP V2c public netman public <auto> <not set=""> <not set=""> <not set=""> <not set=""> <not set=""></not></not></not></not></not></auto>					
	確定	取消	説明				

Step 5: In the map object properties, select **Access** tab to set the parameters of Read /Write Access Mode to SNMP V2c shown in Figure 7. Change the value of Read/write Access Mode to SNMP V2c.



Figure 7 Read/Write Access Mode

Step 6: In the map object properties, select **Access** tab to set the parameters of Read community to public as shown in Figure 8.

Figure 8 Read Community

Map Object	Properties		×						
General	General Access Attributes Dependencies								
Name:	Read Community								
<u>V</u> alue:	public		▼ >>						
<u>A</u> ttrib:	Name Read Access Mode Read/Write Access Mode Read/Write Community Read/Write Community V3 Engineid V3 Context Name V3 No-Auth Security Name V3 Auth/Priv Security Name V3 Auth/Priv Security Name V3 Auth Passwd V3 Priv Passwd	Value SNMP V2c public public <auto> <not set=""> <not set=""> <not set=""> <not set=""> <not set=""></not></not></not></not></not></auto>							
	確定	取消	説明						

In the map object propeies, select **Access** tab to set the parameters of Read community to public in Figure 9. Change the value of Read//write Community to Public.

Figure 9 Read/write Community

Map Object I	Properties		×
General	Access Attributes Dependence	ies	
Name:	Read/Write Community		
<u>V</u> alue:	public		▼ >>
<u>A</u> ttrib:	Name Read Access Mode Read/Write Access Mode Read Community Read/Write Community Read/Write Community Read/Write Community V3 Engineid V3 Engineid V3 Context Name V3 Context Name V3 No-Auth Security Name V3 Auth/Priv Security Name V3 Auth/Priv Security Name V3 Auth Passwd V3 Priv Passwd	Value SNMP V2c public public vauto> <not set=""> <not set=""> <not set=""> <not set=""> <not set=""> <not set=""></not></not></not></not></not></not>	
	確定	取消	

Step 7: On the SNMPc main window. Select SNMPc->Config->MIB Database menu function. You need to add (and compile) the following Mib files **in order**:

- ✓ rfc2674.mib
- ✓ rfc2925.mib
- ✓ rfc3291.mib
- ✓ rfc3621.mib
- ✓ OSPF-MIB.mib
- ✓ zyxel-ES3124.mib
- ✓ zyxel-ES3124PWR.mib
- ✓ zyxel-ES2024A.mib
- ✓ zyxel-GS2024.mib
- ✓ zyxel-GS4024.mib
- ✓ zyxel-GS4012F.mib
- ✓ zyxel-ES2108.mib
- ✓ zyxel-ES2108G.mib

Step 8: In the Selection tool menu, Click ES-2108 to manage the device.

Figure 10 Device Selection

🚟 SNMPc Management Console - [Root Subne	t]			_ 8 ×
🔀 File Edit View Insert Manage Too	ls <u>C</u> onfig <u>W</u> indow <u>H</u> elp			_ <u>-</u> 8 ×
🏘 🖆 🎒 🚇 🕺 🔁 🔎 1:1	戶 ← → 🗈 🖓 🖽-2	108 Dot1dStpPortEntry		
Root Subnet ⊕ Discovered Objects ⊕ 192.168.1 • E8:2108 • GS-4024	Discovered Objects	192.1681.1	2000 2000 2020 100	
Normal 12/27/2005 13:	53:39 localhost	User Administrator at 127.0.0	9.1 Login OK	
 Normal 12/27/2005 13: 	53:40 ES-2108	Device Responding to Poll		
Major 12/27/2005 13:	53:44 192.168.1.54	No Response to Device Poll		
Major 12/2//2005 13: Major 12/27/2005 13:	53:44 192.168.1.1 53:44 192 168 1 66	No Response to Device Poll		
Normal 12/27/2005 13:	53:49 tw1972	Smtn Service Un		

Step 9: After the selection, a pop-up menu will display the NetAtlas switch manager diagram. Click the **Switch Manager** to enter the EMS Mapping shown in Figure 11

Figure 11 Device Selection



Step 10: In the EMS mapping, it display a logical hierarchy for the device. In the device list, you may see the devices are added in the Rootmap shown in Figure 12.

Figure 12 Rootmap

Map View Template Provisio I 🗙 🔀 📪 🖾 🚊 🎕	ming Performance	Fault Maintenance	Tool Help	
Device	IPAddress	Descriptions		CRI MAJ MIN INF
Rootmap Switch-4406	172.23.15.115 172.23.3.11	Rootmap		
Alarm Status Port Status				,

Step 11: Click the ES-2108 to configure the device shown in Figure 13.

Map View Template Provisi	oning Performance	Fault Maintenance	Tool	Help					
S 🗙 💫 📑 🖾 🗎 🖄									
Device	IPAddress	Descriptions				RI MAJ MIN IN	F		
☐ A Rootmap ☐ Switch-4406 ☐ Switch-4504	172.23.15.115 172.23.3.11	Rootmap							
					Z	Сонзон Сонзон Сонзон			
Port Status									
Port View					- Port Sta	tus			
					Port	LinkSpeed	State	LACP	PD
					1	0 Mbps	STOP	Disabled	N/A
01	- 12				2	0 Mbps	STOP	Disabled	N/A
					3	100 Mbps	FORWARDING	Disabled	N/A
					4	adam U	STUP	Disabled	N/A

Figure 13 Device mapping

VLAN Configuration via EMS

In this section, we will give an example to illustrate how to use EMS to create a VLAN2 in GS-4024. Here are the procedures.

Step 1: In the device panel list shown in Figure 12, right-click **Configuration**, **Switch Configuration** and then **Switch Setup** tab as shown in Figure 12 and Figure 13.

Step 2: Define the VLAN type, there are two types of VLAN, one is **802.1Q** and the other is **Port-based VLAN**. Select **802.1Q** as the VLAN type and click Apply in the Figure 14.

Map View Template Provisioning Performance Fault Maintenance Tool Help ් 🗙 💫 🐺 🖾 🚊 😭 CRI MAJ MIN INF Device IPAddress Descriptions Rootmap 172.23.15.115 Switch-4504 ZyXEL - 부분부분 부분부분 분부! Alarm Status Port Status 뢍 ALARM TEMP FAN VOL

Figure 12 Device panel list

Figure 13 Switch Configuration

Map View Template Provision	ning Performance Fault	Maintenance Tool Help	
Device	IPAddress D	escriptions	ICRI MAI MIN INF
B Cootmap - III Switch-4406 - III Switch-4504	Ro Properties Configuration Configuration Save	System Configuration Switch Configuration VLAN Configuration Ethemet Port Configuration Multicast Configuration IP Configuration	
Alarm Status Port Status			
ALARM TEMP	FAN VOL		

Figure 14 Selecting a VLAN Type

Switch Configuration	×
Device Name IP Address	Copy to Timeout (seconds) 60 Apply Filtering Mac Forwarding Mirroring Switch Setup Priority Queue STP Conf. Link Aggregation
	VLAN Type : 802.10 MAC Address Aging Time : seconds Queuing Method Method :
	Active Control Active Control STP Configuration Link Aggregation Bandwidth control Broadcast storm control
	Mirroring 802.1x Port Security 802.1q Ingress Check 902.1 a Port Isolation
	Apply
	Close

After the VLAN type selection, a pop-up window indicates that you have finished the configuration. Then after we have defined the VLAN type to be the 802.1Q, go back to click the Configuration and then VLAN configuration in Figure 15.

Figure 15 VLAN Configuration

Map View 7	emplate Provisio	ning Perfo	rmance Fault Maintenanc	e Tool Help	
3 🗙 🔕	🦻 🔝 🚊 🔯				
Device		IPAddre	ess Descriptions	3	CRI MAJ MIN INF
S	nap Vitro-2406 vitr Properties Configurati Configurati	177 73 15 on ► on Save	Rootmap 115 System Configuration Switch Configuration VLAN Configuration Ethemet Port Configuration IP Configuration	ion	
Alarm Status	Port Status				
	J				
ALARM	TEMP	FAN	VOL		

Click the New button to create a new VLAN ID in Figure 16.

Figure 16 Creating a new VLAN ID

V1	AN Configuration (Switch-67	/18 : 172.23.3.75)						×
Γ								
	Device Name	IP Address		Name		Status	1	1
	Switch-6718	172 23 3 75	1	1		Active		-
			5			Active		
				16				
			New		Delete Modify		oad Template	
	Port List							
	1 2 3 4 5	6 7 8 9 10 11	12 13 1	4 15	16 17 18 19 20 21	22 23 24 2	5 26 27 28	
H								
			С	lose				

Selecting Egress ports and defines them to be tagged or untagged in Figure 17

Figure 17 Selecting the ports



Modify VLAN Dialog (Switch	-6267 : 172.23.3.44 : VLAN	1 ID=2)	×		
	entity ctive I ID : 2 I Name : Test	(1 ~ 4094)			
Static VLAN					
Port 02 Port 03 Port 04 Port 05 Port 06 Port 07 Port 09 Port 10 Port 11	 Port 01 Port 02 Port 03 Port 04 Port 05 Port 06 Port 07 Port 08 Port 09 Port 10 	Ports Port 01 Port 01 Port 02 Port 03 Port 04 Port 05 Port 06 Port 06 Port 07 Port 08 Port 09 Port 10	×		
-VLAN Status Previ	ew				
	<u> 5 6 7 8 9</u> U U U U U	<u> 10 11 12 13 14 15 16</u> U			
	ОК	Cancel			

For more information, reference the user guide of NetAtlas.

Troubleshooting

Question: SNMPc, EMS and/or PostgreSQL will not install properly.

Answer:

• Make sure that the computer on which you want to install the SNMPc, EMS and PostgreSQL meets the minimum hardware and software requirements.

- To install PostgreSQL, make sure your computer is using NTFS file system.
- Shut down any running services or applications which may affect the installation.
- Remove any previous versions of PostgreSQL and SNMP software from your computer.
- Re-install SNMPc and EMS in that order.

Question: I cannot find my device in the SNMPc Management screen.

Answer:

• Check that you have added and compiled the MIBs correctly. Make sure that the orders are followed exactly.

- · Check that you have enabled auto-discovery;
- Check that the map object properties are correct for initial installation; Make sure the IP address entered is the IP address of the switch you want to manage via the EMS.
- Check that the ODBC driver is correctly configured;
- Make sure that PostgreSQL is running.
- Make sure that the computer you have installed the EMS on, is connected to the network where the switch is located.
- Make sure your computer's Ethernet card is working properly.
- If the problem still persists, uninstall and re-install the EMS software.

Appendix – Comparison of NetAtlas Enterprise & NetAtlas WorkGroup

Feature	Netatlas Enterprise	Netatlas WorkGroup
Management Architecture	Distributed Architecture(Client-Server)	Local
Remote Management	Yes	No
Multiple User Access	Yes(concurrent 10 users)	Single User
Database	OBDC support (SNMPc)	Text only (SNMPc)
Trend Reporting	Yes	No
SNMPc Online 2005 advanced reporting engine	Yes	No
Live / Standby Backup Server Option	Yes	No
Device Support	Up to 25,000 Network Devices	Up to 1,000 Network Devices