
WhatsUp Gold

Software Version 8

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Ipswitch (Ipswitch, Inc.)

Ipswitch

Distributor

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IMail, WhatsUp, WhatsUp logo, WS_FTP, WS_FTP logo, Ipswitch,
Ipswitch, Inc.

Ipswitch logo

Ipswitch

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가 (Preface)

WhatsUp Gold (multi-protocol networks) graphical . WhatsUp Gold , 가 가 (visual and audible alarms) . (beeper) , (pager) , . WhatsUp Gold Intel Windows 95, Windows 98, Windows NT(6), Windows 2000(2), Windows ME, Windows XP .

(What This Package Includes)

- WhatsUp Gold . :
- WhatsUp Gold CD
- License agreement
- WhatsUp Gold User's Guide ()

Ipswitch (The Ipswitch Products)

Ipswitch . :

WS_FTP™ Pro FTP Client

WS_FTP Pro 가 . WS_FTP Pro Find Utility Scripting Utility, Synchronize Utility .

WS_FTP Server

WS_FTP Server Windows NT FTP .

WS_FTP Server FTP . WS_FTP Server interrupt , .

IMail Server

IMail Server . IMail Server
 SMTP(Simple Mail Transfer Protocol) , TCP/IP
 가 . IMail Server POP3(Post Office Protocol,
 Version3) , IMAP4(Internet Message Access Protocol 4)
 (Web Messaging)
 . IMail Server
 Windows NT, Windows 2000 .

WS_Ping ProPack™

WS_Ping ProPack (tool) . WS_Ping ProPack
 ,
 ,
 Info, Time, HTML, Ping, TraceRoute, Lookup, Finger, Whois, LDAP, Quote, Scan,
 SNMP, WinNet, , Throughput . WS_Ping ProPack
 Windows 95, Windows 98, Windows NT, Windows 2000
 .

1 (Introduction)

WhatsUp Gold

NT

WhatsUp Gold

Note

, *WhatsUp.txt*

Release Notes

Programs->WhatsUp Gold->WhatsUp Gold Release Note

WhatsUp Gold ? (What is WhatsUp Gold?)

WhatsUp Gold

가

. WhatsUp Gold

가

-

(

:

,

,

)

.

(automated discovery option)

(

:

,

)

-

(TCP/IP, SNMP, NetBIOS, IPX)

. WhatsUp Gold

(

)

(polling)

가

- WhatsUp Gold

“ ”

. SNMP

가

- WhapsUp Gold

(beeper),

(pager),

, WinPopup,

가

WhatsUp Gold

WhatsUp Gold , high-end , 가

Overview of Basic Features

WhatsUp Gold , ,
 , (notification) , .

(Using the Web interface)

WhatsUp Gold

WhatsUp Gold
 80 .

WhatsUp Gold .(
 .): Top View, Detail View, Map View, Summary View, Device View, Activity
 Log, Statistics View, Outage Report, Statistics Report .
 WhatsUp Gold

“Chapter11:Working from a Web Browser” .

(Mapping the Network)

WhatsUp Gold “discover and map” , 가
 . .:

- Windows .
- SNMP , .
- .
- IP .
- IP hosts .

가

“discovery and map” TCP/IP, NetBIOS, IPX

()

(가 , ,)

가 , “discover and map”

가 top-level

“discover and map” “active discovery”

가

가 , “ 2 : ”

(Monitoring the Network)

, WhatsUp Gold



“ (poll)”

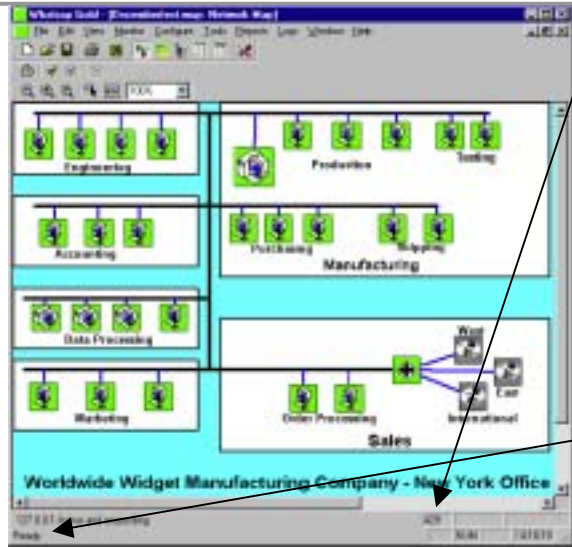
(poll)

“ (check)” WhatsUp Gold 가

(check) (action) 가

, WhatsUp Gold

-  active scan
-  scan
- Active discovery indicator
- Map Properties-> Network
- “Active discovery”
- 가



status bar

status bar

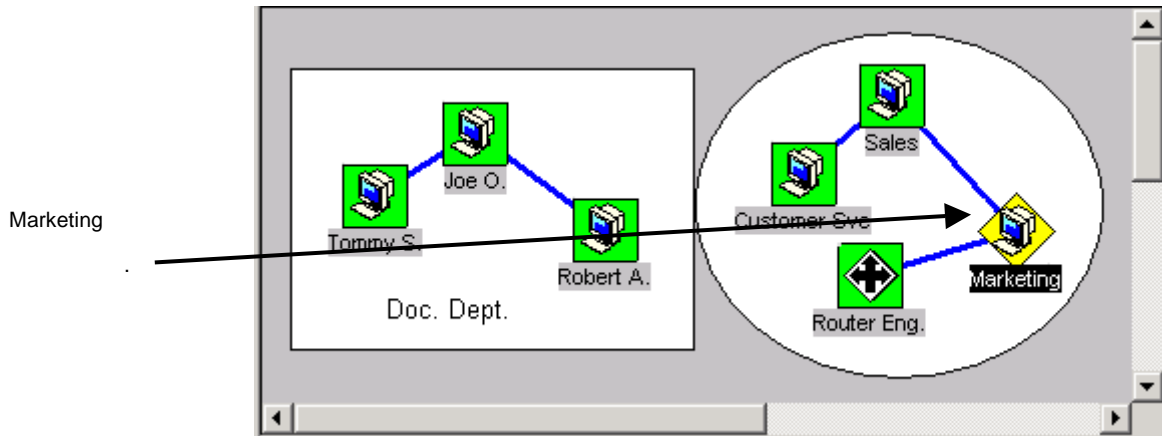
Note

가

WhatsUp Gold Monitor Mode Edit Mode . Monitor Mode
 WhatsUp Gold 가 . Edit Mode
 ; Edit Mode
 가 , , ,
 , “Chapter 4: Editing Network Maps”

(Getting information from the Network Map)

가
 가 가
 (highlight)



(Setting Map Colors)”

(Application and Map State Icons)

가
 가
 가
 가

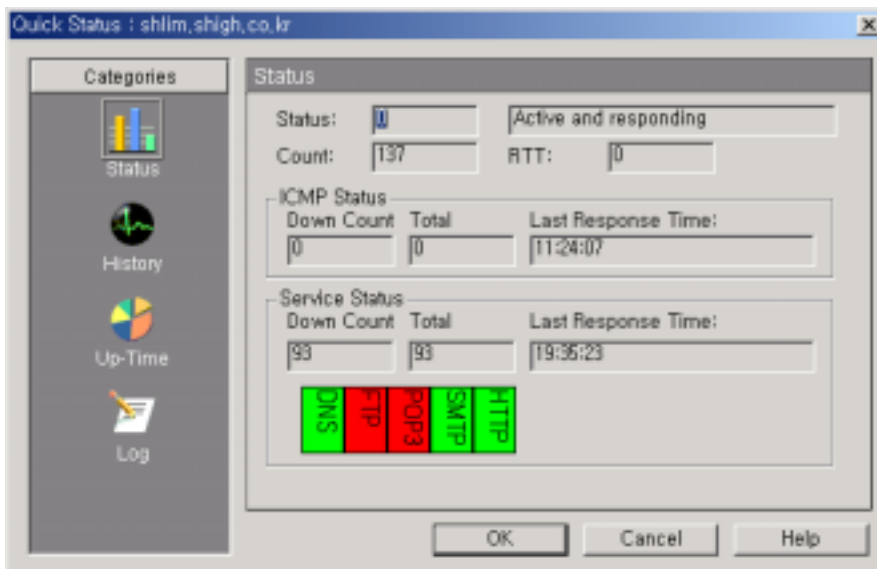
“Application and Map State Icons”

(Getting status for a device)

Quick Status
 to-the-minute status)

Status

(up-



(Getting Information via Notifications)

Notification 가 , 가 (pooling) 가 , WhatsUp Gold (beeper), (pager) , NT , Windows (, , IP ,) . “ notification (recurring notification)” “Chapter 8:Setting Up Notifications”

(Logs and Reports)

WhatsUp Gold 가 :

- 가 가
-

IP ,

WhatsUp Gold (report) . **Report** ,

Performance Graphs. 가

Outage Reports. / , / , WhatsUp Gold .

Statistics Reports. “ 10
 Logs and Reports” .

가 (Additional Features)

- 가 가 .:

 - SNMP –

WhatsUp Gold SNMP . SNMP view

, MIB . MIB threshold

MIB . “SNMP Viewer”
 - Customer Services - TCP UDP communicate

가 .

, ,

. 가 가

WhatsUp Gold .

“Defining a Customer TCP/IP Service” .
 - 가 가 (Customizable device type) – (Auto Discovery) 가 가 (Auto Discovery) custom

VDevice . “Customizing Device Types” .
 - Extensibility() – WhatsUp Gold COM

가 “add-in” (가 non-TCP/IP

가) .

Note

“Custom Service API” .

8.0 (What’s New in Version 8.0?)

WhatsUp Gold Version 8 .:

- WhatsUp Gold 가 . NT (, SNMP Trap, Syslog 가 .
- WhatsUp Gold : 8.0 “event” Event Report Event Log Event Report “Outage Report” Event Log “Activity Log” .
- ASCII ASCII ASCII ASCII (30 ,) ASCII
- TCP/UDP 가 . Flow Control “error” “success” .
- Active Discovery New Map Discovery
- SMS Notification ‘ , SMS 가 TAP UCP
- NT () NT
- SNMP performance Report: WhatsUp Gold SNMP 가 NT
- 가 : cstartp

(System Requirements)

WhatsUp Gold

- Intel Pentium
- 30MB (100MB)
- 64MB RAM(256MB)
- Windows NT 4.0(SP6), Windows 2000(SP2), Windows 98, Windows ME, Windows XP
- TCP/IP
- (WhatsUp Gold .)
- Performance Graphs Microsoft Open Database Connectivity (ODBC) ODBC

WhatsUp Gold ODBC
 가
 ODBC 가 Microsoft ODBC
 .:

http://www.microsoft.com/Data/download_250rtm.htm.

ODBC . WhatsUp Gold 가
 ODBC , Performance Graphs (DSN)
 . wugstats.log (WhatsUp), Microsoft .txt

- IPX , WhatsUp Gold 가
 Microsoft NWLink IPX/SPX Compatible Transport 가
 Windows NT **Microsoft**
IPX/SPX-compatible Transport , Microsoft
 Windows 2000 XP Microsoft
IPX/SPX-compatible Transport ,
Import devices from your registry Discover Devices from your
Network Neighborhood IPX

(Upgrading)

- WhatsUp Gold WhatsUp
- ..:
- WhatsUp Gold 가
WhatsUp Gold 가 , WhatsUp Gold 가
30
 , WhatsUp Gold Windows
 - . (WhatsUp .db, WhatsUp Gold
.wup, .ini, .xml) WhatsUp Gold .db
.wup .wup 가
.wup WhatsUp Gold
 - , WhatsUp Gold 가 traps.txt, mib.txt
MIB.NEW TRAPS.NEW

(Installation)

- WhatsUp Gold , ,:
- 1
- WhatsUp Gold CD , CD_ROM CD
 . AutoRun.exe CD
d: AutoRun.exe
 - WhatsUp Gold , (wugoldec.exe)
- 가 Plug-In . Plug-in Ipswitch
 : <http://www.ipswitch.com/Support/whatsup/plugins.html>
- 2 WhatsUp Gold , world.wup
- WhatsUp Gold Microsoft's Open Database Connectivity(ODBC) ODBC
Performance Graphs

- Performance Graphs , ODBC , ODBC
- ODBC , Performance Graphs .
- 1 **NO** .
 - 2 ODBC (ODBC “ (System Requirement)”).
 - 3 WhatsUp Gold .



(Trying WhatsUp Gold on Your Network)

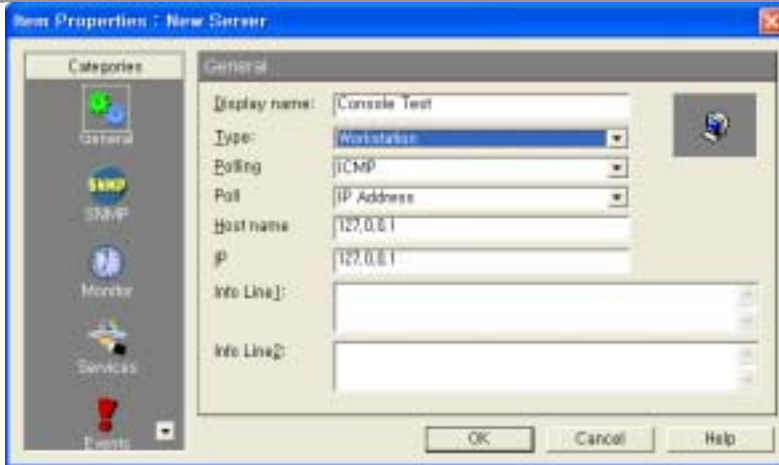
WhatsUp Gold

가 ,

(Creating a New Network Map)

, :

- 1 **File** **New Map Wizard** .
- 2 **Create a blank map** . WhatsUp Gold
- 3  **Edit tab** , WhatsUp Gold **Edit Mode** (toolbar)
- 4  (Device pool) **Workstation**
- 5 **Workstation** button



6 General **Display Name**

ConsoleTest , WhatsUp Gold

IP Address 127.0.0.1 () .(" (loopback)"

Note 가 IP


7 Monitor **Monitor This Device**

8 Alerts **Enable alerts** **Add**

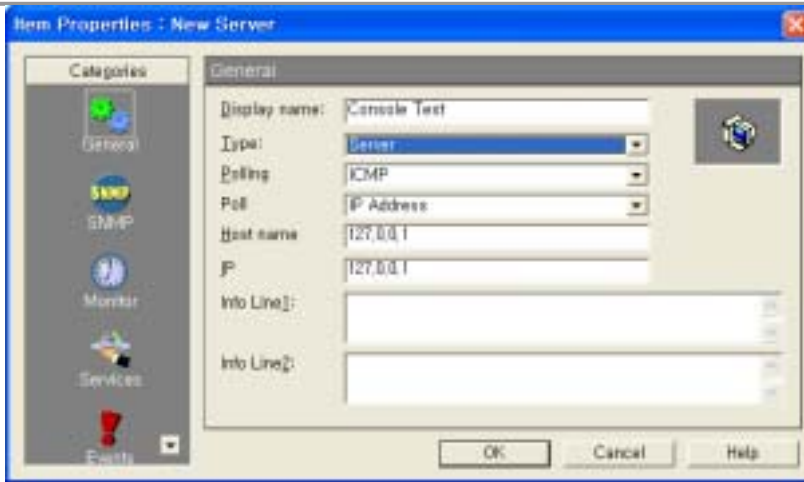
"Sound" "Default" . OK

OK 가

가 (Adding a File Server)

 1
 Server tool

2



3 **General** , **Display Name** *Server*

4 **IP Address** IP , **Host Name**

Note , (stack) Domain
 Name Server 가

5 **Monitor** **Monitor This Device**

6 **Alerts** , **Enable alerts** , **Add**
 "Sound" "Default" . **OK**
 OK 가

7 **File** **Save As** . *MyTestMap.wup*

(Initiating Monitoring)

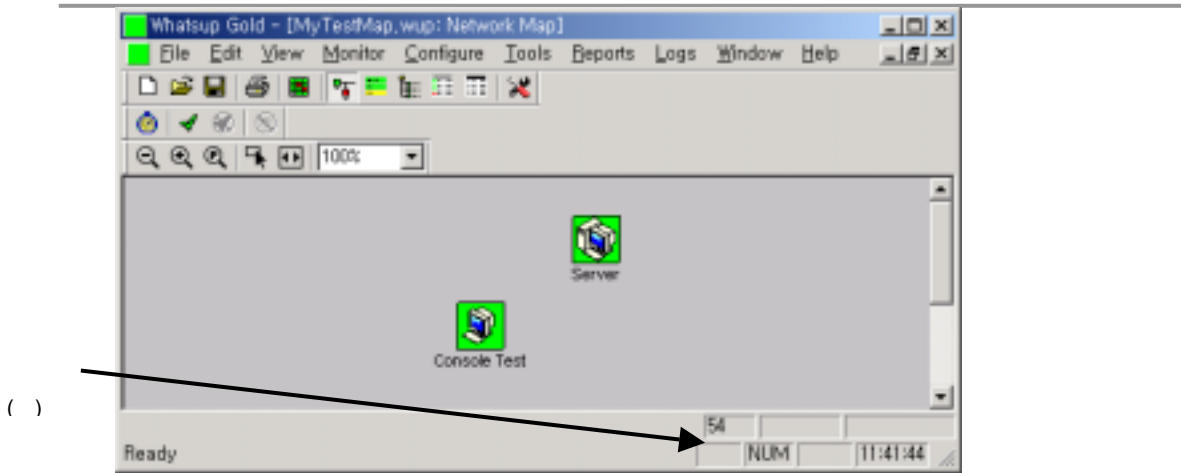
가



Map tab 1 **Map tab** , Edit Mode Monitor Mode



2 **Check**
 Click button



NT WhatsUp Gold (Running WhatsUp Gold as an NT Service)

Windows NT 4.0

WhatsUp Gold

- WhatsUp Gold (web interface) 가

NT

- NT , WhatsUp Gold Windows NT 가

1. WhatsUp Gold
2. NT "Setting Up to Run as an NT Service "
3. NT "Starting and Stopping the NT Service"

NT (Setting Up to Run as an NT Service)

Windows NT

(normal operating mode)

.(Configure

Program Options

.) NT

User's Guide

2 3

가 .

Startup (Configure -> Program Options -> Startup) **Map**

Names , 가

. Open maps on startup **Map Names**

가 **Add** , **Map**

Names **Delete** 가

/ **Map Directory(Configure->**

Web Server->General)

Note 가 .

(Configure ->Web Server-> Users). Enable Web Server

“ 11 Working From a Web Browser”

WhatsUp Gold 가 NT normal operating mode ,

(permission) (General Users),

NT .

Users **Automatically save user changes from web interface** ,

NT (Starting and Stopping the NT Service)

WhatsUp Gold wugsvc.exe .

WhatsUp Gold NT , , , .

NT WhatsUp Gold ,

1. DOS .
2. WhatsUp Gold .
3. .:

wugsvc -install

NT WhatsUp Gold , DOS

..:

1. DOS WhatsUp Gold

2. : wugsvc -remove

Note WhatsUp Gold

.; NT

2

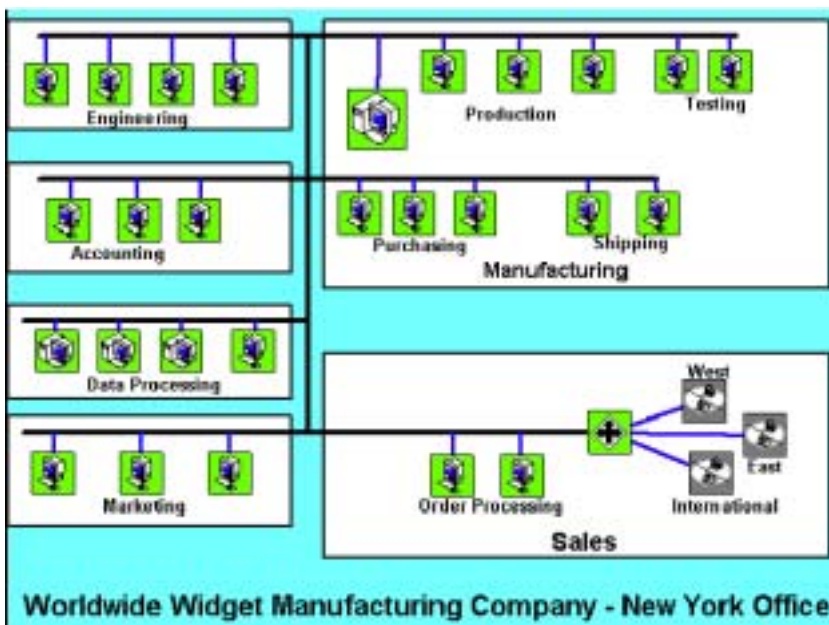
(Creating Network Maps)

WhatsUp Gold 가 가 ; , WhatsUp Gold 가

, WhatsUp Gold 가
 , customization

- WhatsUp
- (, , ,)
-
- Edit Mode

(Way to Map Your Network)



“ (subnet)”, (container), 가 , , LAN , ,

WhatsUp Gold 가 가

- **Discover and Map network devices -**
 . WhatsUp Gold (Information Source)
 (Wizard)
 “discover”

- **SmartScan -** SNMP 가 (parent map)

- **Discover your network using ICMP -** IP Scan IP FTP HTTP

- **Discover devices from your 'Network Neighborhood' -** 가 Windows

- **Import devices from a hosts file -** host

- **Traceroute** (mapping)

- **File -> New Map Wizard** create a blank map (Edit) 가

Map Edit

. Map Edit 가

WhatsUp Gold

(Discover and Map Network Devices)

Discover and Map

가

Discover and Map

IP

Scanning

SNMP

Discover and Map

1 **File**

New Map Wizard

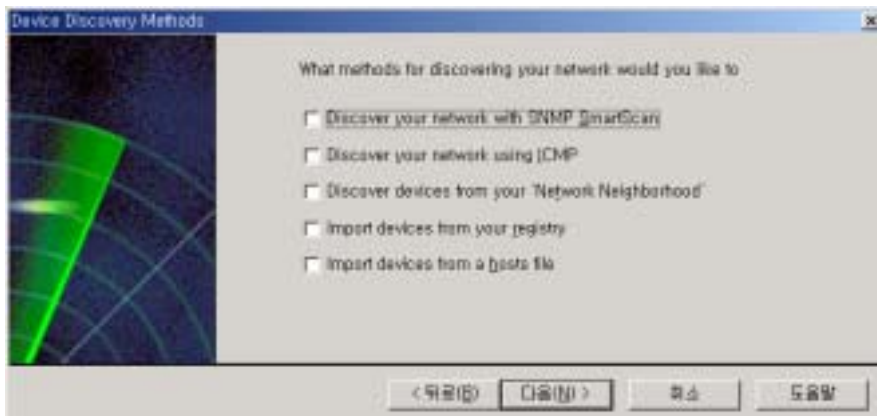
가



2 **Discover and map network devices**

Discover

Devices



3

Discover your network with SNMP SmartScan.

SNMP

(subnet)

SNMP

Discover Device

(wizard)

SNMP Scanning 가 .

Note SmartScan . SmartScan discovery

Discover your network using ICMP. IP Internet Control Message Protocol(ICMP)

가 . (

.) Discover Devices

가

Discover devices from your Network Neighborhood. 가 Microsoft

Windows Network , WhatsUp Gold

.(

.)

Import devices from your registry. TCP/IP, Microsoft Internet Explorer, Netscape Navigator Windows Registry

가 .

Import devices from hosts file.

. ASCII 가 IP

, Windows

4 Discover , WhatsUp Gold

- **Discover your network with SNMP SmartScan** , “SNMP SmartScan” SNMP SmartScan

, “Mapping a Hierarchical Network”

Note , Scan Depth Limit
 scan to IP class of root device , SNMP Community

가

- **Discover your network using ICMP**

“IP Address Scan”

“Mapping a Flat Network”

- **Discover devices from your Network Neighborhood** , “Network Neighborhood Scan”

- **Import devices from a hosts file** “Host File Import” 가

- **Import devices from your registry** , “TCP/IP Service Scan” 가

- , “Scan Results” 가

5 **File** **Save** **Save As** . “Tips for Making a Map Easier to Read”

(Mapping a Hierarchical Network - SNMP)

SNMP agent 가 가 , SmartScan

. SmartScan

(,) SNMP

SmartScan

, **Scan Depth** **Limit**

scan to IP address of root device

, **SNMP**

Community

Note

!

(Custom Devices Type)

“Customizing Device Types”

SmartScan FTP, HTTP, SMTP

SmartScan (Using SmartScan)

SmartScan
 가 , SmartScan (top-level)
 (parent map)
 (link)
 가

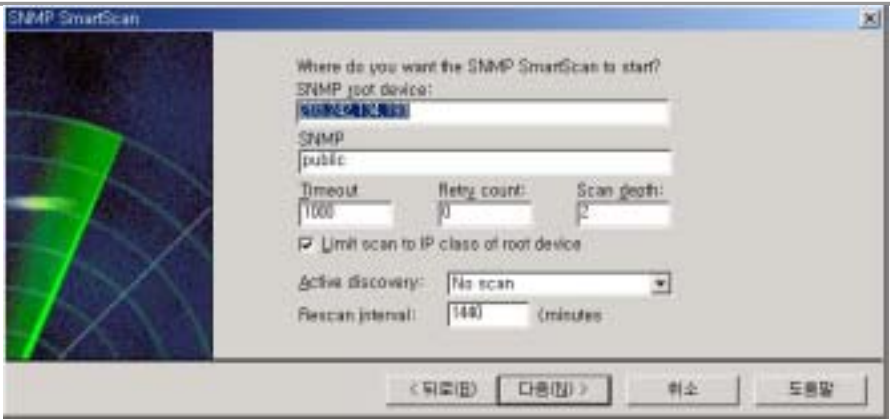
SmartScan , :

1 “SNMP SmartScan”

- , File **New Map Wizard** . New
 Map **Discover and Map Network Devices**
Discover your network with SNMP SmartScan
- 가 , **Tools**
Discover Devices **Discover your network with**
SNMP SmartScan

Note SNMP SmartScan

2 **SmartScan**



3

4 **Filter by Device Type**

Active discovery
 Active Discovery Active discovery 가

5



6

7 **File Save Save As**

Note

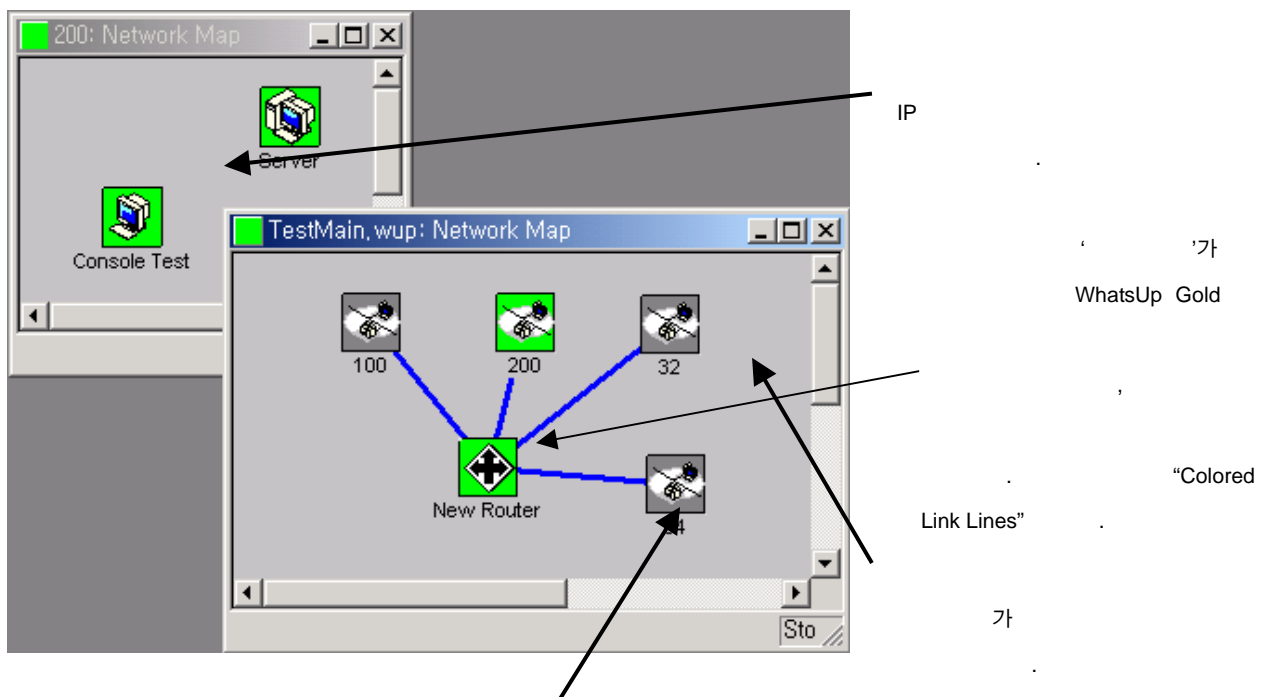
. WhatsUp Gold

(topology)

“Active Discovery of Devices”

SmartScan (Results of the SmartScan)

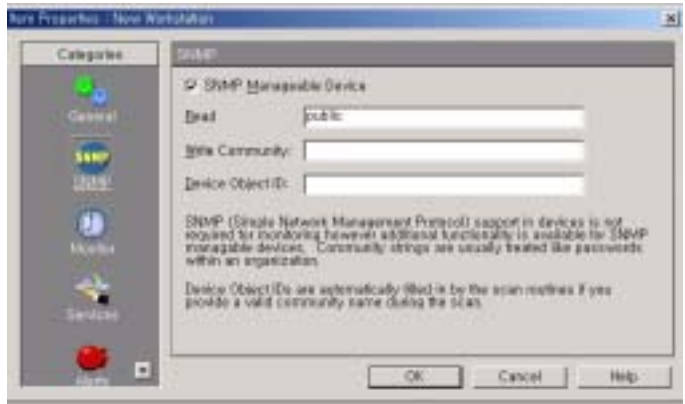
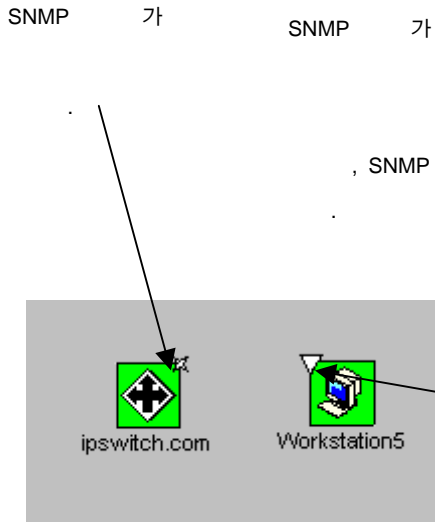
SmartScan



Note SmartScan

“Scanning and Mapping a Device”

SNMP 가 (SNMP Manageable Devices)



가 가
 . SNMP

“Chapter 7: Monitoring Events”

Flat Network (Mapping a Flat Network)

ICMP

Scan IP

가 IP , WhatsUp Gold
 (polling) . WhatsUp Gold 가
 , Scan

Scan

“Customizing Device Type”

Scan

(FTP, HTTP, SMTP)

Scan

1

- , File **New Map Wizard** . New Map

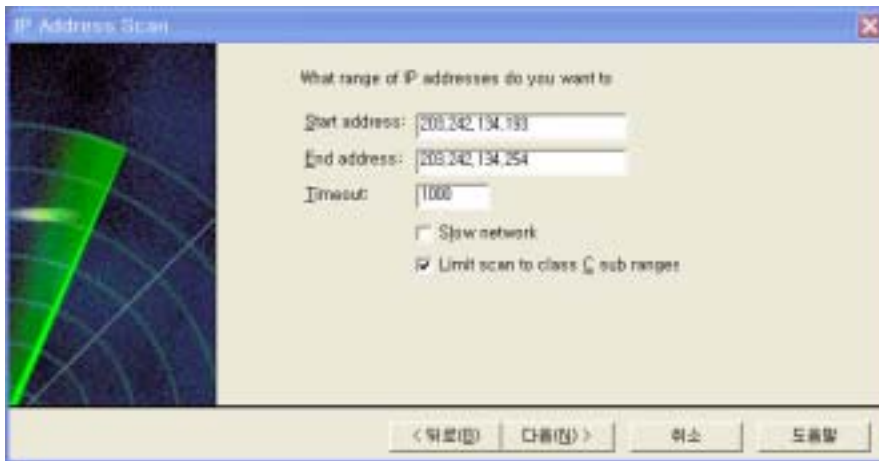
Discover and Map Network Device

Discover your network using ICMP

- 가 , Tools
 Discover Devices , Discover your network using
 ICMP

2 IP

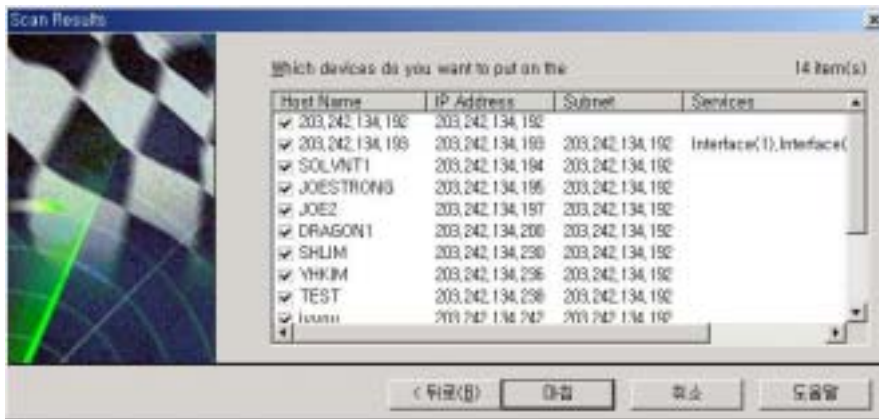
Start Address End Address
 , 245.245.1.50 Start Address , 245.245.10.60 End
 Address , Scan 245.245.1 245.245.10
 50~60



3

4

wizard

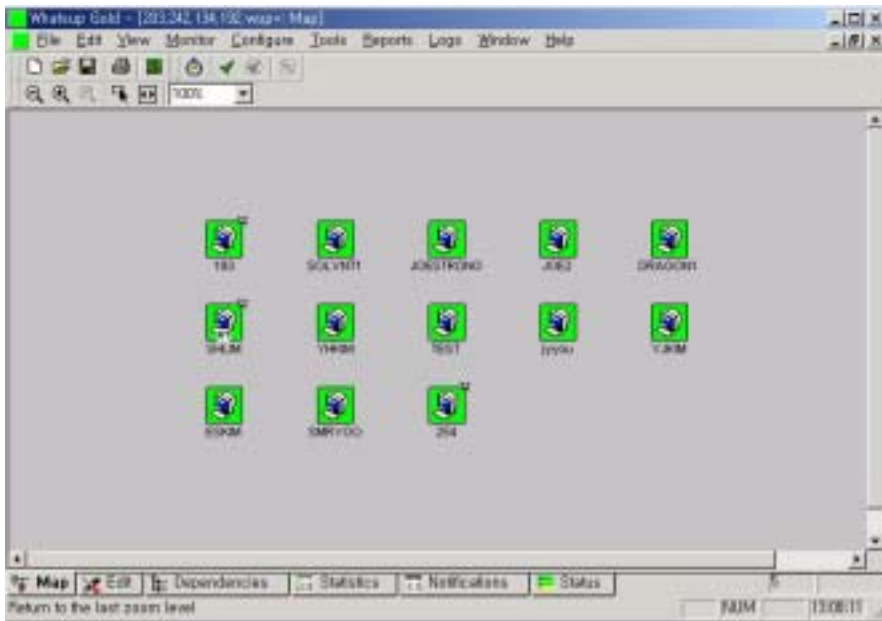


5 File Save Save As

“Active Discovery of Devices”

(Results of the Scan)

Scan , WhatsUp Gold IP
 (active) IP



Discover devices from Network Neighborhood

Discover devices from your Network Neighborhood 가
 Windows

1

- File New Map Wizard Discover and Map Network devices Discover devices from your Network Neighborhood Discover
- Tools Discover Devices Discover devices from your Network Discover

Neighborhood

2

3

4 **Service**



5

WhatsUp Gold Windows

Note Network Neighborhood NetWare

6 **File Save Save As**

“Active Discovery of Devices”

(Loading a Hosts File)

(IP 가) WhatsUp Gold 가

1

File New Map Wizard

**Discover and Map Network devices
 devices from a Hosts File**

Import

- **Tools** **Discover**
Import devices from a Hosts File

Note

IP . ASCII Windows host

2 . WhatsUp Gold 가

(Manually Drawing a Map)

Edit Mode

1



Edit Mode tab

Edit tab

File

Open

2

map

Blank map

Edit mode

. Edit Toolbar 가

, **File**

New Map Wizard

. **Create a blank**

3

Draw Toolbar
 a Network Map”

“ 4 Editing

4

File

Save

Save As

“Active Discovery of Devices”

(Reading a Network Map)

WhatsUp Gold

Monitor Mode

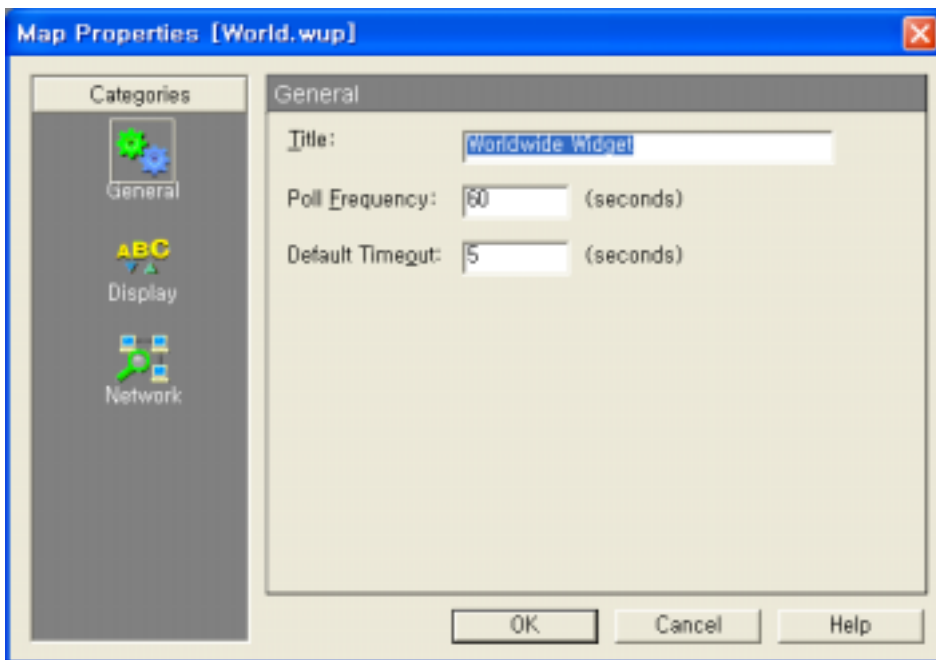
(polling)

(가 trap)가
 (highlight)
 “Getting Information from the Network Map”
 가 가
 Status, Activity Log
 ; 가 “ 9 Working from the
 Console”
 가 notification
 “ 8 Setting Up Notifications”

(Setting Map Polling Properties)

Properties

Network General



Title. Title

Title . Activity Statistics
 [title.wui] . Status, dependencies, Statistics,

Notification	Title		
Poll Frequency.		10	3600
	가		
1	:	가 1	
Default Timeout.		()	
	가	1	30

(Saving and Naming a Network Map)

File Save
 WhatsUp1.wup
 WhatsUp2.wup, WhatsUp3.wup...WhatsUpn.wup

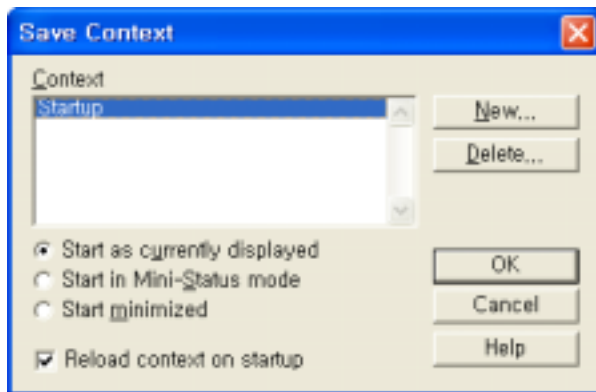
Save As

(Saving a Context)

Save Context

Save Context

- File Save Context** 가 **New**
Context Name , **OK**



2. :

Start as currently displayed.

Start in Mini Status mode.

. Mini Status

Mini Status

()

“Using the Mini Status View”

Start Minimized.

.()

3. **Reload Context on Startup**

WhatsUp Gold

가

4. **OK**

:

1. **File** **Open Context**

“Open Context”

가

2.

3. **OK**

3

(Additional Mapping Techniques)

가

?

가 (Getting New Data into an Existing Map)

가

Active Discovery

WhatsUp Gold 가

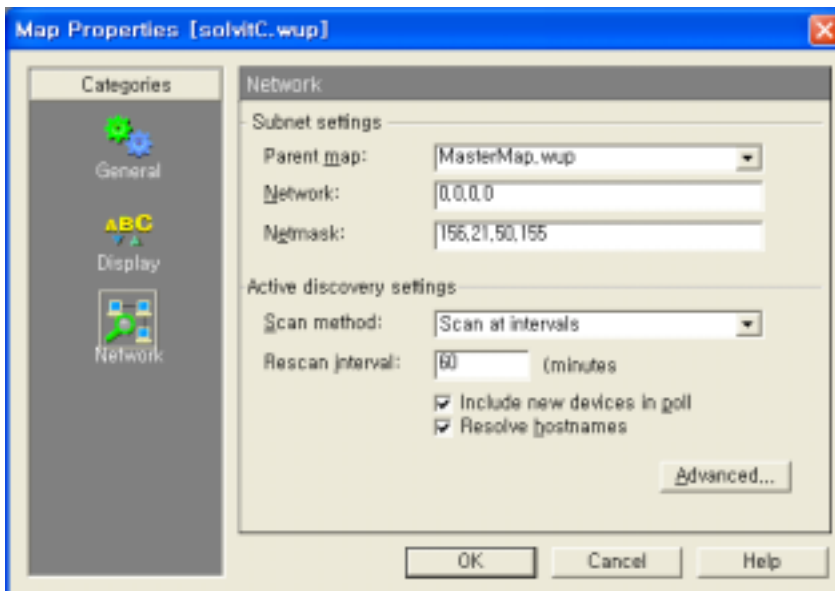
“Getting In and Out of Edit Mode”

WhatsUp Gold 가

“Exporting and Importing Map Data”

(Active Discovery of Devices)

Active Discovery



Scan method

Note	가	“Using the Right
Mouse Menu”	Lock Position	.

No scan. active discovery

Scan at intervals. active discovery

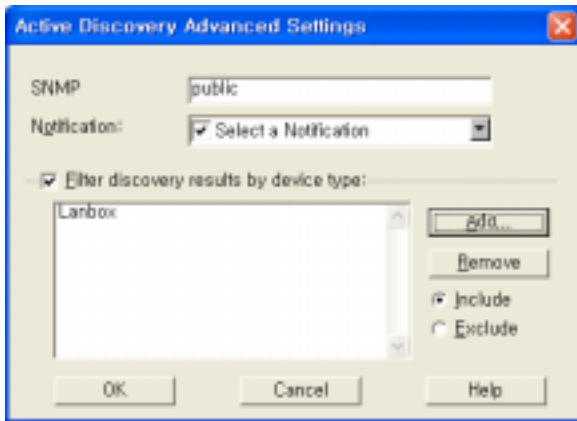
Scan at distributed intervals. active discovery

Rescan interval. WhatsUp Gold ()

Include new devices in poll.

Resolve Hostnames.
 , (IP) IP
 “looking up”

Advanced Active Discovery Advanced Setting



SNMP community. SNMP Community

Notification.

Filter discovery results by device type. active discovery

가 (Exporting and Importing Map Data)

가 / WhatsUp Gold 가
 가
 가 ; .wup
 가 .ini
 ASCII .ini WhatsUp Gold

Exporting a File

1. File Export
 (.INI, XML, WUP)
- 2.

Importing a File

1. File Import 가
 (INI, XML, WUP)
2. WhatsUp Gold 가

Note WhatsUp Gold C DLL C/C++
 WhatsUp Gold 가 /
 (<http://www.ipswitch.com/Support/whatsup/plugins.html>) SDK
 . Ipswitch
 C/C++ Ipswitch
 . OEM Ipswitch Business Development

Save As

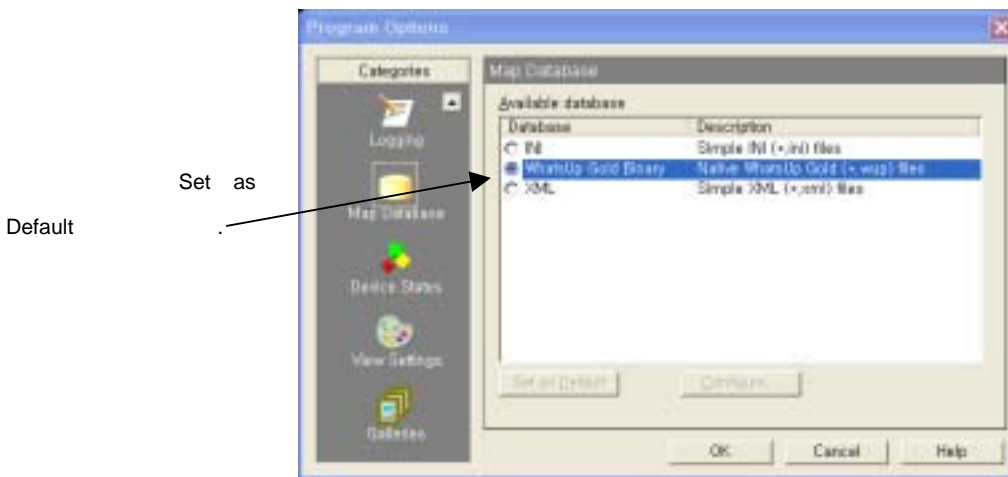
File Save As
 WhatsUp Gold (.wup)
 Simple INI (.ini)
 Simple XML (.xml)

(Changing the Map Database Format)

WhatsUp Gold .wup 가
 ASCII 8.0
 WhatsUp Gold ASCII
 .(INI XML).

Configure->Program Options

가 **Map Database**



Set as Default.

WhatsUp Gold 가
 가

Set as Default

. XML INI ASCII

Note (File->Open) (File->Save As)
 WhatsUp Gold () , .wup
 File->Save As WhatsUp Gold .wup
 .(INI)

Configure.

가
 Help

(Traceroute Mapping)

Traceroute , 가 IP
 () . WhatsUp Gold
 , .
 Traceroute “Tracing a Route (TraceRoute Tool)” .

Link Line (Mapping Link Lines)

Link Line ()
 . SNMP SmartScan
 stub connected line “ ” stub
 connected line .

Link Line 가 .
 • “Link to” .
 (“Disconnect link”) Edit .
 • SNMP SmartScan

Note “ ” 가 .
 • (Service) “Auto Discover” .

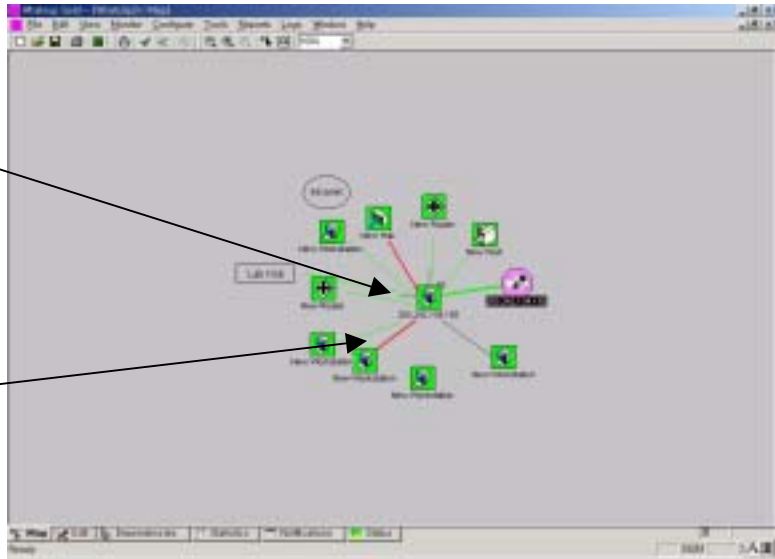
Link Line : stub connected line
 • stub 가 ,
 . (12) stub
 • Connected line 가 .
 가 .

	“System A”	“System B”
	“Systeme A”	가

Note Link line “attaching lines” “Attached Lines”

Link Line

“stub”
 Map Properties→
 Display
 “connected like line”



가

-
-
-

Colored link line

-
-

stub 가

stubs

stubs

가

Note

multi-select

- 가 (,)
 가 (disconnect)
 / "Attach to" "Disconnect"

(Using Custom Devices)

WhatsUp Gold (workstation, router, printer) 가
 (NT workstation, Ascend Pipeline) 가
 "Customizing Device Types"

(Creating a Subnet)

WhatsUp Gold Subnet (segments)
 ,
 (parent network map)가 ,
 2 , ;
 2 , " (subnet)" .

Note SNMP 가 , SmartScan
 "Mapping a Hierarchical Network"

WhatsUp Gold
 가 ,
 가 ,
 가 ,
 (가 가) , :
 1 가 .

2

3



Edit Mode tab

4 **Edit Mode tab**



Subnet icon

5 **Subnet**

6

Properties

General

7

Display Name

(Map Title

).

Note

(child map)

(parent map)

8

Map Name

“child map”

Note

.wup extension

extension off

9

Monitor

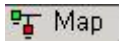
Monitor This Item

10

OK

11

Map tab



Map

, WhatsUp Gold

(Configure

, Program Options -> General

, Automatically load subnets when opening maps

.)

Load Subnet

가

View Subnet

;

1

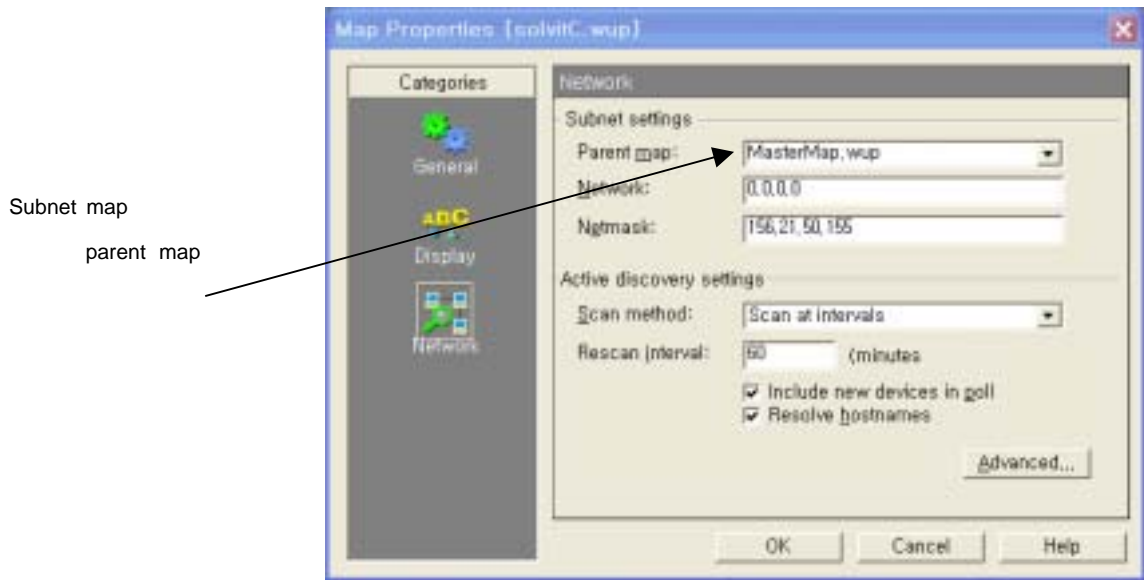
, **Properties**

, **Network**

2 Parent Map

3 OK

Note , View Parent Map 가
 Parent Map



Note View Parent Map View parent map

Subnet setting. (parent map) SmartScan

(entry) 가

View parent

map , View Parent map

가

(segment)

Network Netmask 가 Scan

Scan

Network. (segment)

IP

Netmask. (segment) Netmask . Netmask IP

(Master Switches and Misc. Settings)

가 . active
discovery 가

Configure->Program Options->General

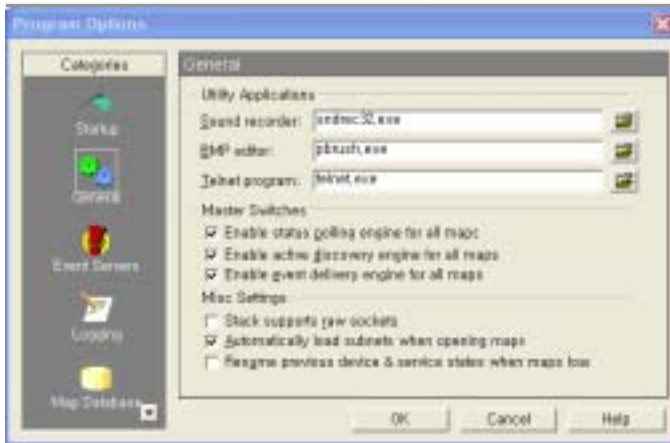
가

- **Enable status polling engine for all maps.** 가

- **Enable active discovery engine for all maps.** Active discovery
active discovery 가
discovery properties
active discovery 가
Active Discovery "Active Discovery of Devices"

- **Enable event delivery engine for all maps.**

가



“ 7 : Monitoring Events”

- **Stack supports raw sockets**
 - Windows raw sockets
 - Microsoft 32-bit stack
- Raw socket 32-bit
- Windows NT 4.0
 - Traceroute NT 4.0
- **Automatically load subnets wen opening maps.**
- **Resume previous device & service states when maps load.**
 - WhatsUp Gold
 - 가
 - :
 - WhatsUp Gold
 -) WhatsUp Gold 가
 - 가
 - (

4

(Editing a Network Map)

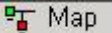
Edit Mode . Edit Mode

- 가 .
- - , , .
- (graphical) , , .

(Getting In and Out of Edit Mode)

 Edit Mode 가 ,
 Edit Mode tab Edit Mode tab .

Note WhatsUp Gold Edit Mode , Active Discovery
 . Edit Mode , discovery 가 WhatsUp Gold 가
 /discovery box 가 .

Map View tab
 Map Edit Mode Monitor Mode 가 , **Map** view tab .

(Tips for Making a Map Easier to Read)

- 가 , Discover and Map , SNMP, IP , Network Neighborhood , 가 .
- **Properties** , **Display** , **Clip Names** , **Wrap Names** .
- 가

Monitor Monitor This Device

Note subnet container

Properties Monitor

 Edit Mode tab

- Edit Mode tab “ 4
 Editing a Network Map”

- , Edit Mode tab **Arrange**
Arrange Icons

Properties General Type

Monitor Map tab 

(Draw Toolbar)



Draw Toolbar
 가

(Keeping Tools Active)

Edit Mode
 () 가

(Drawing)

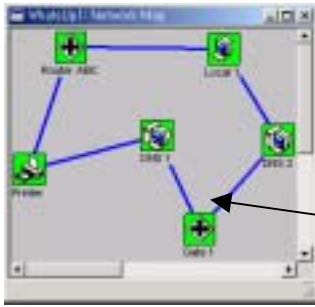
(, , , 3D) (drag)

Properties

(Attached Lines)

(free hand)

(attached lines)



1

2 **Attach to**

가

3

1 ()

2 **Disconnect**

(Setting the Map Display)

, **Edit**

Properties

Properties

. **Display**



Use these setting as default for new maps.

, WhatsUp Gold

Auto Resize.

. 가 ,

가

가

가

Device Name.

Change Font

. "Sample Label"

Clip Names

(space)

, 가

)

Display Name

. **Wrap Names**

가

wrap(

Display unconnected link lines as stubs.

. "Mapping Link Lines"

"stub"

"connecting line"

(Setting Map Colors and Views)

1 **Configure Program Options**
View Settings



Note 가

2 **Colors**

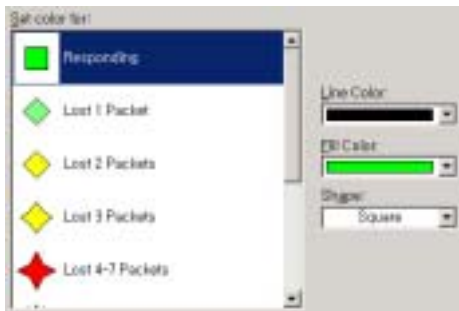
3 **Current Item Color**

(Optional Map Views)

status) tab (dependencies, statistics, notifications, tab
View

Note 7.0 (dependencies, statistics, notification), view 가 . 7.0
(map view) 가 :
view tab() **View** (map view)

(Device States)



Configure Program Options
Device States
Set color
for

Responding. (poll) 가
(solid bright green)

Note "Responding" , Monitor Mode 가 WhatsUp Gold

Lost 1 pkt.

(solid light green)

Lost 2 pkt.

(solid yellow)

Lost 3 pkt.

(solid yellow)

Lost 4-7 pkt. 4-7

(solid light red)

Lost 8+ pkt. 8

(solid dark red)

Service down.

(solid purple)

Inactive.

(solid dark grey)

(Creating Text Captions)

(segment)

360

(가),

가 :

1 **Edit Mode tab**



2 **Text**

가

Text tool

3 **Text Properties**

가

. **Text**

, Sample Text

4

Transparent.

(Background Color)

Font. Change Font

Rotation. (degree) 0~360

가

5 OK

Dependency Arrow (Using Dependency Arrows)

Dependency

Edit

dependency

dependency arrow

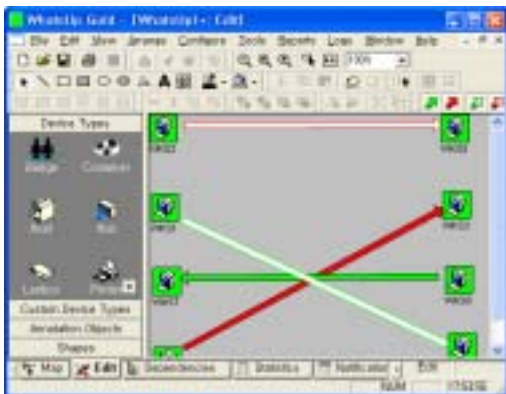
dependency arrow

Dependency

dependency

“Viewing and Changing Dependencies”

Edit
dependency arrow



Map

dependency

가



- “Up Dependent”
- “Down Dependent”
- “Invalid Up Dependent”
- “Invalid Down Dependent”

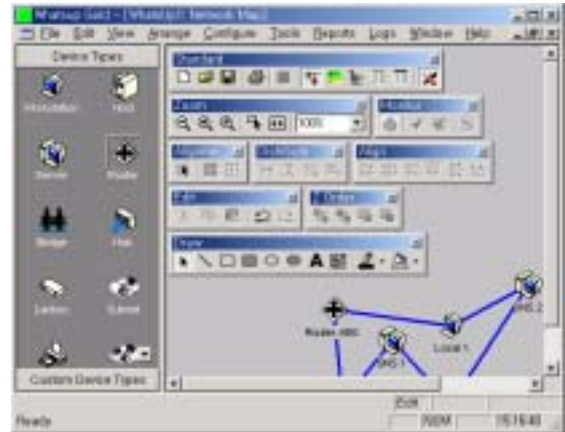
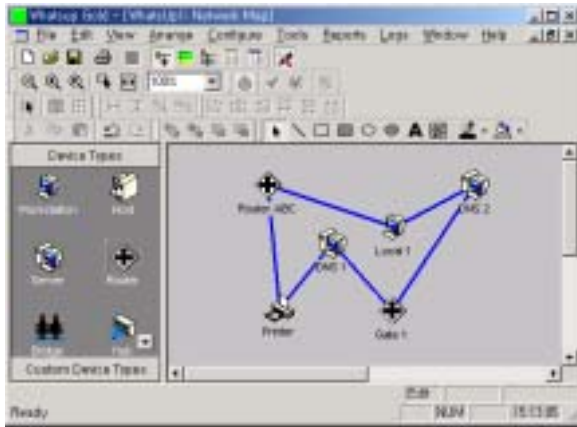
가

가

Invalid Dependency “Viewing and Changing Dependencies”

(Arranging the Toolbars)

Edit Mode , WhatsUp Gold



(drag)

(toolbar backdrop)

(toolbar backdrop)

(Galleries)

Galleries

가

가 Edit Mode

Configure

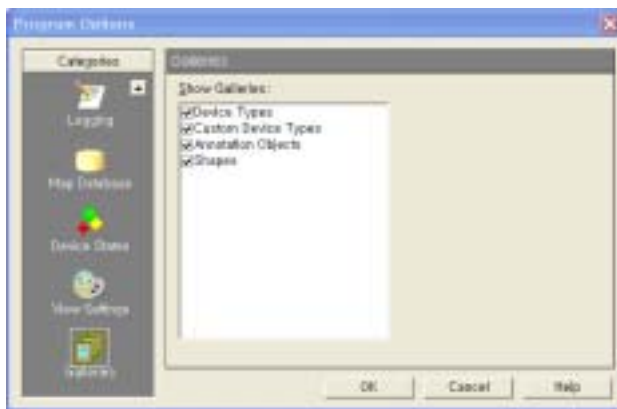
Program Options

Galleries 가

, **Galleries**

가

Properties



Show Galleries box

가 . ()
가 가 .

5

(Working with Devices)

WhatsUp Gold 가 ,
 . “Discover and Map” , WhatsUp Gold ,
 , IP . WhatsUp
 Gold 가 가 .

(The Polling Method)

WhatsUp Gold TCP/IP , IPX for IPX , NetBIOS
 ICMP . **General**

- **ICMP** ((echo)가) (track) .
- **TCP/IP** ICMP ()
 . **TCP/IP** TCP UDP 가 .
- **NetBIOS** Windows .
- **IPX** Novell NetWare .

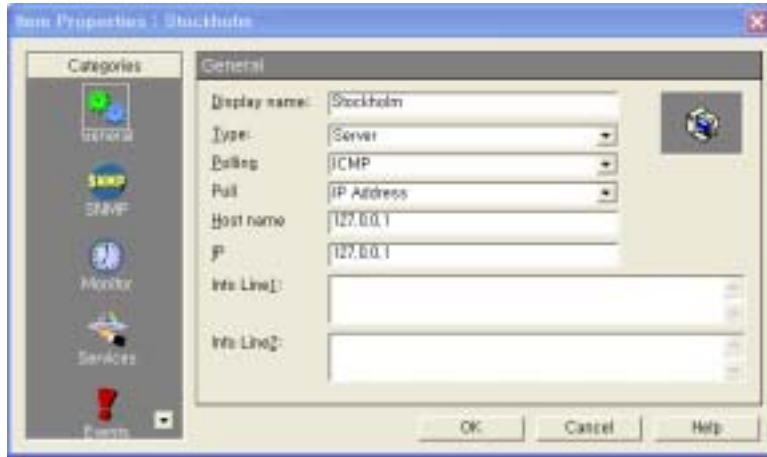
Note IPX , WhatsUp Gold 가 Microsoft
 NWLink IPX/SPX Transport 가 “System
 Requirements” .

NetBIOS IPX , TCP/IP

General (Defining General Properties)

General , ,
 WhatsUp Gold 가 ,
 . ;

- 1 **General** , pop-up **Properties**



2 **Display Name**

3 **Type**

Note (subnet) (parent map) "Creating a Subnet"

4 **Polling Method** "The Polling Method"

5 **Poll Using** **IP Address** **Host Name**

Note Host Name IP Address toggle

6 **Host Name.** ICMP Services only , 5
 IP , IP
 host , DNS
 NetBIOS IPX , NetBIOS IPX

7 **IP Address** IP

ICMP TCP/IP , 5 **Host Name** ,
 , WhatsUp Gold **Host Name** IP
 .
 NetBIOS IPX , . : WhatsUp
 Gold (poll) Ethernet

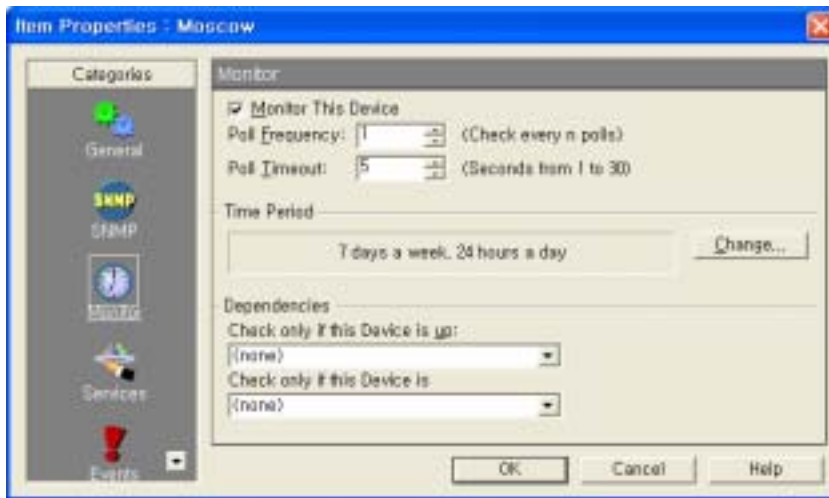
8 **Info Line1** **Info Line2** , 가
 , “point of contact”
 Host Summary

9 **OK** , .

(Setting Up Monitoring)

Monitor , On Off , ,
 () , up, down dependencies .

1 **Monitor** .



2 **Monitor This Device** .

3 **Poll Frequency** ,
 . **Poll Frequency** (poll) (=1), (=2), (=3)
 (=1) ,

4 **Poll Timeout**

1~30

5

2

()

10

Note

Poll Timeout

Poll Frequency

“Setting Map Polling Properties”

5 **Time Period**

Change

(7 days a week, 24 hours a day)

Day of Week week

; 7 days a week 가

. 7 days a

Time of Day

24 hours a day

Between

. **Not between**

Note Between

Not Between

24

(0000

2400)

OK

6

(A)

(B)

“up dependency”

(A

B 가 up

), **Check only if this**

device is up

B

7

(A)

(B)

“down dependency”

(A

B 가 down

), **Check only if**

this device is down

B

8

OK

(Using the Right Mouse Menu)



(pop-up) 가 Edit Mode ,
 ; Monitor Mode
 가
 “Adding a Command to the Right Mouse Menu”
 (Edit Mode)
 ::

Cut, Copy, Paste, Delete (, , ,)

New 가 .

Attach to .
 “Attached Lines”

Set Dependencies up, down .

Lock Position active discovery 가 가
 ‘lock position’

Quick Status. Status, History, Up-Time Log History
 Quick Status .

Properties .

Quick Status (Using Quick Status)

Quick Status , **Status** .

Note “ ” “tool tip”
 가

- **History**() , 30 **Quick Status** **History**
 가
- **Up-Time**(**Time**) , **Quick Status** **Up-**
- **Log** (**Quick Status** “up”
Log), Alerts **Enable**
 “down” Logging (**Alerts** **Properties** Alerts).

가 (Adding a Command to the Right Mouse

Menu)

가 Menu

가 :

- 1 **Properties** , Menu
- 2 **Add** **Edit Menu Item** 가
- 3 **Menu Name** 가
- 4 **Command** ,
 가 ,

[telnet] - telnet.exe

[ping] - Ping

[trace] - Traceroute

[browse] - IP URL

5

Custom Menus 가(Adding Custom Menus to a Group of Devices)

Add Custom Menu to Selected Devices

가

Note

tri-state

가

가

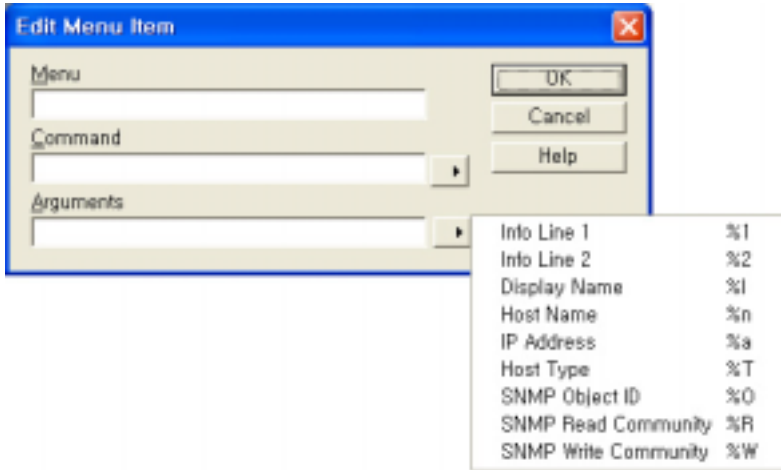
- (ALL) 가
- (SOME) 가
- toggle ,
- 가
- 가 가

(Program Variables)

WhatsUp Gold

- (“Adding a Command to the Right Mouse Menu” .).
- (custom device icon) (“Creating a Custom

Device Type”).



(Customizing Device Types)

, SmartScan Scan

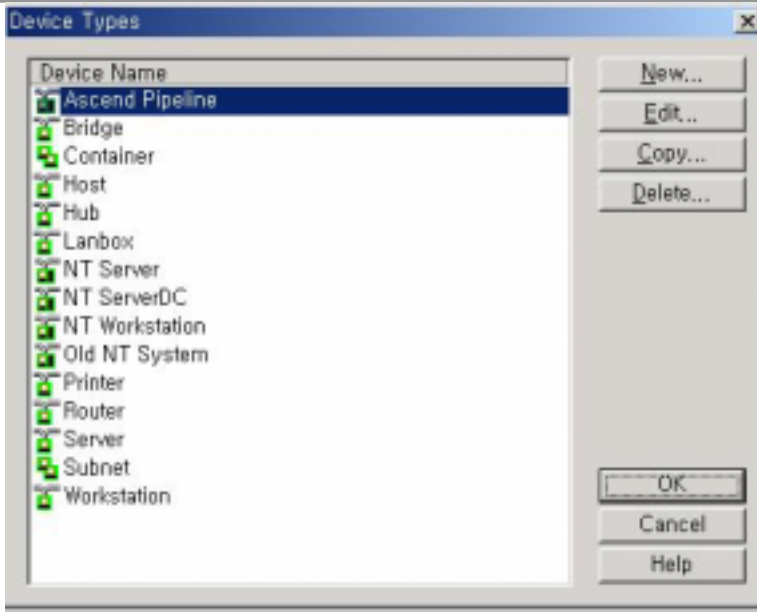
(Creating a Device Type)

(Device pool)

, LAN (container),
 가

- 1 SmartScan Scan 가
 , MIB 가 (vendor-provided identifiers)
 가 . “Setting Up the MIB Identifies” . SmartScan
 SNMP Object ID

- 2 **Configure** **Device Types**

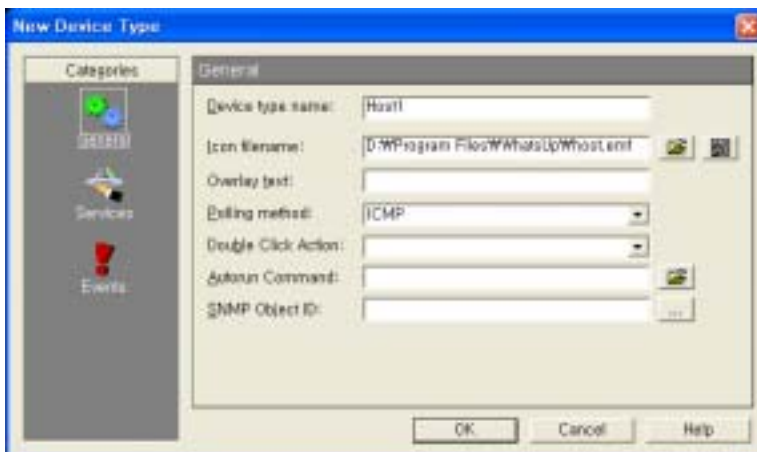


Device Types

가

- **New.** **New**
- **Edit.** , **Edit**
- **Copy.** **Copy**
- **Delete.** 가 가 ,
- **Delete** 가

3 **New**



4 **General**

Device Type Name

5 Icon Filename

.emf WhatsUp Gold

 VDevice . "To change one of
 the Standard Icons" . VDevice
 VDevice

Note VDevice . WhatsUp Gold

6 Overlay Text

, "HP Laser"

7 Polling Method . Polling method 가 Service only

.(
 .) "The Polling Method"

8 DbIClk Action . "Changing the Double-Click Action for
 Customized Devices"

9 AutoRun Cmd . "Running a script or program
 for customized devices"

10 () SNMP Object , (vendor) SNMP
 (identifier) ();
 (Vender) , MIB "private -> enterprise"

SmartScan Scan SNMP
 . SNMP 가 ,
 Community Scan **Identity via**
SNMP
 (identifier) , Acme 가
 가 .; Acme 4500, Acme 4501, Acme 4502.
 4500 Acme
 .; SNMP Object Acme4500, 4501, 4502 SNMP

Scan

SNMP object (asterisk) *가
가

1.3.6.1.4.311.1.1.3.1.3

1.3.6.1.4.1.311.1.1.3.1.3;1.3.6.1.4.1.311.1.1.3.1.4

1.3.6.1.4.1.311.1.1.3.1.3,4

1.3.6.1.4.1.311.1.1.3.1.1,3-4

1.3.6.1.4.1.311.1.1.3.1.*

Note	<i>hosttype.ini</i>	. WhatsUp Gold	<i>hosttype.ini</i>
object			"Cisco
3204(1.3.6.1.4.1.9.1.37)	"Cisco 3xxx(1.3.6.1.4.1.9.1.32-37)	WhatsUp Gold	"Cisco
3204"	"Cisco 3xxx"		

11 **Service Add** 가

12 **Event Add** 가

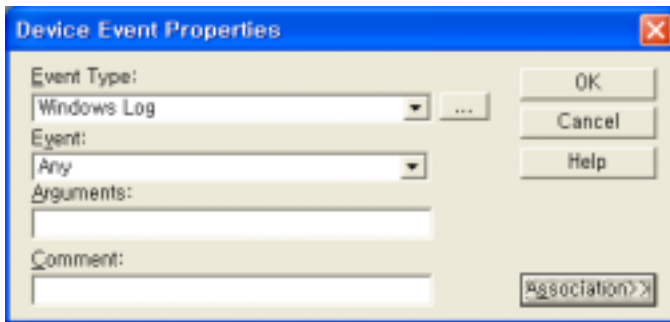
13 가

Association

가

가 **Up** **Down** 가

"Association Button Details"



14 **OK**

(Changing the Double-Click Action

for a Customized Devices)

(Action) :

- (Action)

[default] -

[snmp] - SNMP

[telnet] - telnet.exe

[ping] - Ping

[trace] - TraceRoute

[browse] - IP

- , DbIClk Action

, WS_FTP PRO

, ftp95pro.exe

parameter

"Program Variables"

(Running a script or program for customized devices)

(SmartScan Scan)

1 Autorun Cmd

2 "Changing the double-click Action"

가 (Add Web Menu Items to Devices)

가 가

hosttype.ini

가

.()

GUI Menu Items

[hosttype]
 MCOUNT=count of menu items
 MNAMEn=display name
 MCMDn=command line
 MARGn=arguments
 (n is a number from 0 to MCOUNT-1)

Web Menu Items

[hosttype]
 WCOUNT=count of menu items
 WNAMEn=display name
 WCMDn=URL
 WARGn=arguments
 (n is a number from 0 to WCOUNT-1)

Argument that are valid in MCMD or WCMD lines:

%a=address
 %R=read community (also 'c')
 %W=write community
 %n=hostname
 %1=object name (1=lower case L)
 %1=info 1
 %2=info 2
 %T=hosttype
 %O=host SNMP object id

가 :

1. WhatsUp Gold .
2. WhatsUp Gold hosttype.ini .
3. 가 .

Note "Ipswitch" [Old NT System] 가
 . 가 가 가 , "Ipswitch"
 . Ipswitch 가 .

Hosttype.ini :
 NT hosttype.ini .:

[Old NT System]

BMPNAME=OldNTWorkstation.emf

SCOUNT=0

OBJID=1.3.6.1.4.1.311.1.1.3.1

EXECUTE=

AUTORUN=

TYPE=0

OVERLAYTEXT=OldNT

WCOUNT=0

MCOUNT=0

1. WCOUNT=0 가 0 1 . (1 가 .)
2. 가 WCOUNT=1 .
3. Type : WNAME0=Ipswitch (n 0 MCOUNT 1 .)
 WhatsUp Gold 가 Ipswitch
4. 가 WNAME0=Ipswitch .
5. Type : WCMD0=HTTP://WWW.IPSWITCH.COM (Ipswitch
 가 .)
6. **File** , .

Hosttype.ini.file, BEFORE your changes
[Old NT System] BMPNAME=OldNTWorkstation.emf SCOUNT=0 OBJID=1.3.6.1.4.1.311.1.1.3.1 EXECUTE= AUTORUN= TYPE=0 OVERLAYTEXT=Old NT WCOUNT=0 MCOUNT=0

```

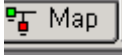
Hosttype.ini file, AFTER your changes
[Old NT System]
BMPNAME=OldNTWorkstation.emf
SCOUNT=0
OBJID=1.3.6.1.4.1.311.1.1.3.1
EXECUTE=
AUTORUN=
TYPE=0
OVERLAYTEXT=Old NT
WCOUNT=1
WNAME0=Ipswitch
WCMD0=HTTP:\\WWW.IPSWITCH.COM
MCOUNT=0
    
```

1. WhatsUp Gold
2. properties **General**
3. Type list "Old NT System" , **OK**
4. 가
5. "Ipswitch"
6. Ipswitch

Note : 가 hosttype.ini 가

(Using the Customized Devices on a Map)



- 1 (device pool) **Custom Device Types** (customized device type)
- 2 가 (customized device)
- 3 , "Map" tab  (monitor mode)

(Scanning and Mapping a Device)

- Cisco 4000 (SmartScan) (custom icon)
- 1 . "Device Type Properties" **SNMP object**
 - 2 **Discover your network using ICMP** , :
 - IP Scan .
 - , **SNMP Read Community**
Community
SNMP Community
 - 3 **Discover your network using SNMP SmartScan** , **SNMP Communities** Scan Community **SNMP Communities**
- WhatsUp Gold

(Changing the Standard Device Icons)

(, ,) , router , router

Note WhatsUp Gold
VDevice

WhatsUp Gold

WhatsUp Gold

(starting point) . : bridge.emf, host.emf, subnet.emf, container.emf, hub.emf, lanbox.emf, printer.emf, router.emf, server.emf, workstn.emf

Note WhatsUp Gold .emf .dse .
 VDevice .dse , .dse .emf (WhatsUp Gold 가
) . .dse .

, :
 1 (VDevice.exe) (.dse) . Bitmap
 .
 , printer.emf , printer.dse .

Note VDevice .dse , .emf .

2 VDevice (.dse) . (.dse)
 , WhatsUp Gold
 (.emf) .

3 VDevice WhatsUp Gold .emf
 .emf .

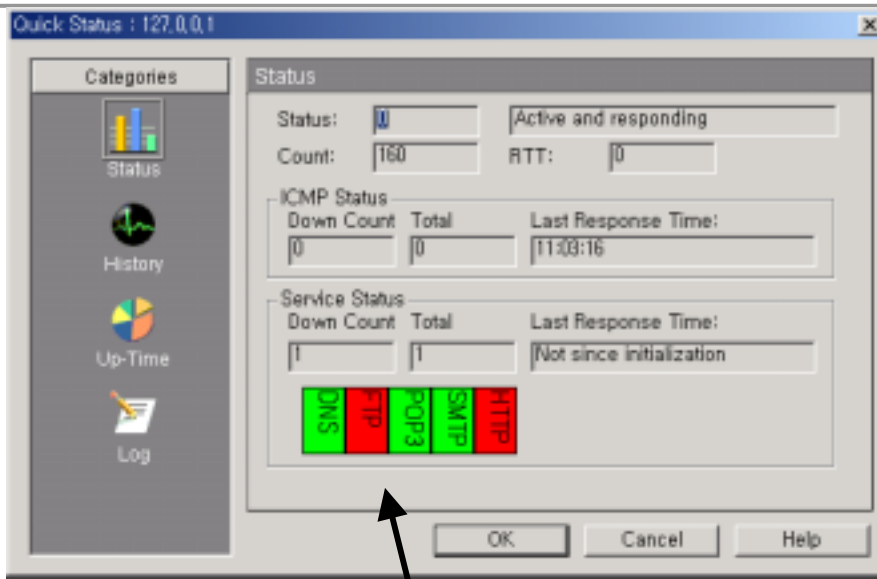
6 (Monitoring Services)

WhatsUp Gold 가 , **Service**
 . WhatsUp Gold

:

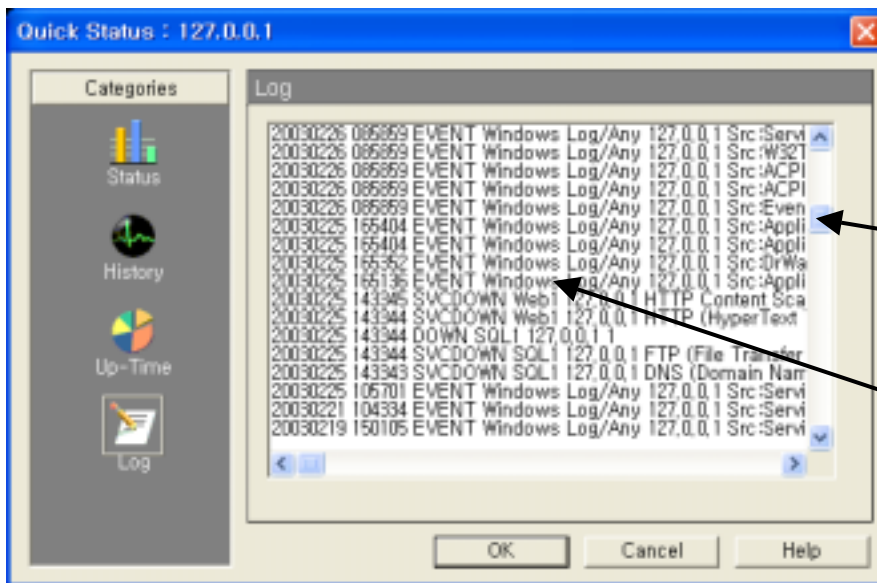
- TCP/IP (: Telnet, DNS, SMTP)
- TCP/IP (: Radius, IRC,)
- SNMP
- Microsoft's Component Object Model (NT) . "Custom Services API"
 Note .
 가 polling , .
- Activity **Log** Activity Log
 . **Log** , **Quick Status**
Log .
- **Status** , **Quick Status** **Status**
Status
- .(
- .)
- 가
 "Colored Link Lines" .
- ()notification .(notification 가
 notification .)

Note WhatsUp Gold ,
 가
 WhatsUp Gold failed connections
 .;



Status

Note



Log

Event
Events"

"Chapter 7:Monitoring

TCP/IP

(Monitoring Standard TCP/IP Services)

TCP/IP
Telnet, Time

DNS, FTP, POP3, SMTP, NNTP, HTTP, SNMP, IMAP4, Echo, Gopher,
(scan)

가 Scan :

1

Note 가 .

2 **Services**

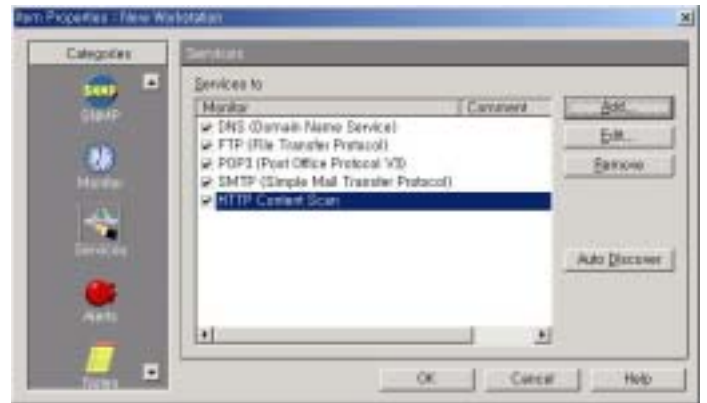
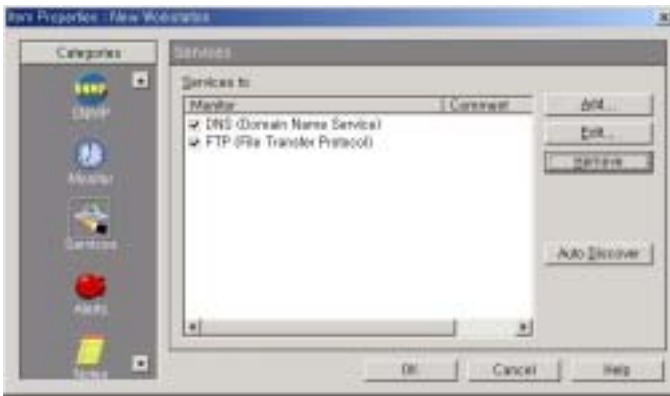
3 **Auto Discover**

가 .

Auto Discover
가

Auto Discover
가 가

4 가



, WhatsUp Gold ICMP

ICMP

General **Polling Method** **ICMP** **TCP**

Note TCP UDP **Service only**

가

Service ICMP TCP 가

(**General**).

Polling

Method IPX NetBIOS , TCP/IP

Services

TCP/IP

1 **Monitor** **Monitor**
This Device

2 **Services**



3 **Auto Discover** ; WhatsUp Gold

4 **OK**

(Monitors and Services)

TCP/IP

WhatsUp Gold / :

- HTTP (Content Scan)
- Radius Server(Remote Authentication Dial-In User Service)
- IMail Server
- WS_FTP Server
- WhatsUp Gold Web Server v5
- WhatsUp Gold Web Server v6
- WhatsUp Gold Web Server v7

- WhatsUp Gold Web Server v8

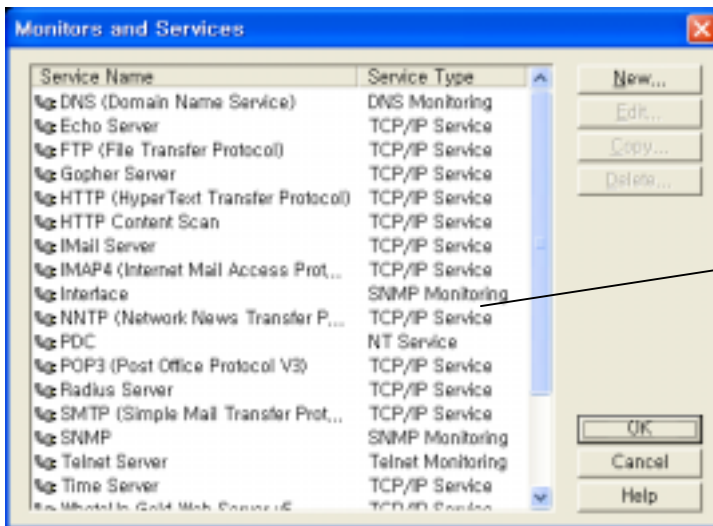
가 TCP , IRC(Internet Relay Chat) ,
 Lotus Notes , Microsoft SQL , Microsoft Exchange
 (SMTP, POP3)

TCP/IP (Defining a Custom TCP/IP Services)

WhatsUp Gold (handshake,)
 가 (rules expressions)
 , 가 가 "fail"
 , (a rule expression) "fail"
 , 가
 . ("this", "that", "the other" .)

TCP/IP , :

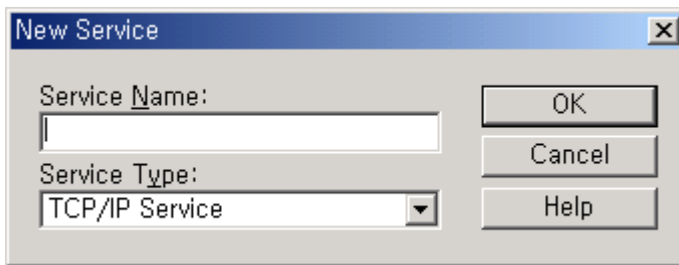
1 Configure Monitors & Services



- **New**

- **Edit** . (.)
- **Copy** . (.)
- **Delete** . (.)

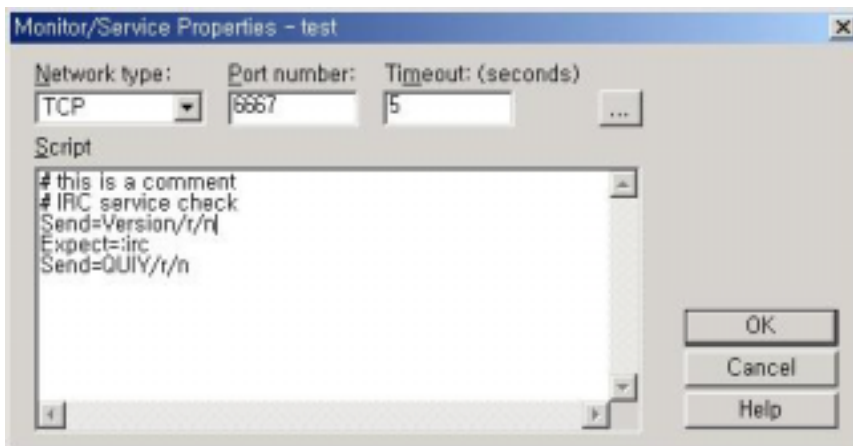
2 **New**



3 **Service Type** TCP/IP Service

4 **Service Name** ,
 Services

5 **OK**



6 **Network Type** TCP UDP

- , IRC(Internet Relay Chat) TCI
- , RADIUS(Remote Authentication and Dial-In Service)
 UDP

7 **Port Number** , TCP UDP

- , 6667 IRC(Internet Relay Chat)
- , 1645 RADIUS(Remote Authentication and Dial-In Service)

8 **Timeout**

Note 가 WhatsUp Gold
가 1 500 501
999 (millisecond) 500
(milliseconds)

9

10 **OK**

11

Script Syntax

Note Command=String
Command Send, Expect, SimpleExpect, Flow Control
send receive

Keywords.

- string , **Send=keyword**
- string , **SimpleExpect=keyword** **Expect=keyword**
- , #symbol
- “error” “success” **Flow Control**

Keywords

Examples:

- **SimpleExpect=keyword**

“SimpleExpect=Keywords”

- **Expect on connect** , **Expect=keyword** 가
 (a rule expression) . Rule Expression Editor
 (a rule expression) ,
 “Using Rules Expression” .
- **Send command on connect** , **Send=keyword** .
 : IRC , “Version \r \n”
- **Expected a command response** , **Expect=keyword** .
 (a rule expression) .
 , IRC “:irc”
- **Send to disconnect** , **Send=keyword** .
 , FIN RST , QUIT \r
 \n .

Note plug-ins /
 : DNS , Telnet , SNMP , NT . WhatsUp Gold
 “Plug-Ins” .

SimpleExpect Keywords

Keyword	Description
%nnn	Binary value (for example %000 is null, %027 is escape)
.	Matches any character
\%	The “%” character
\,	The “,” character
\\	The “\” character

Flow Control Keywords

“error” “success”

IfState – (ok error) true label .

: IfState { ERR|OK} label

: IfState ERR End

IfState OK Bye

Goto – label .

: Goto End

: GotoEnd

Exit – (ok error) .

: Exit {ERR|OK}

: Exit ERR

Exit OK

:Label – 가 . Label “.”

:()

: :Bye

OnError – .

: OnError {EXIT|CONTINUE|GOTO} label

: OnError EXIT (Default behavior)

OnError CONTINUE

OnError GOTO Logoff

(Using Rules Expressions)

(Rules Expressions) (syntax) .:

search_text *quantifier*

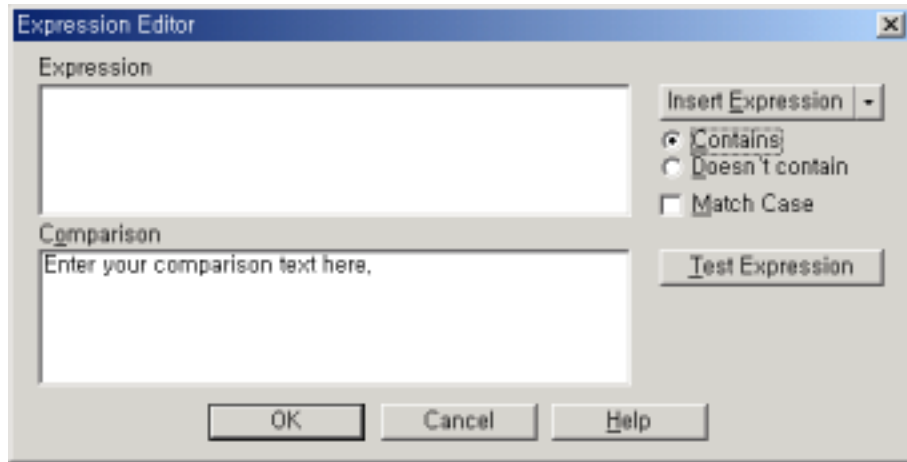
search_text

(Rules Expressions) , :

- 1 “Monitors&Services” **Add/Edit Expect Rule** , Rules
 Expression Editor

Add/Edit Expect Rule...

Add/Edit Expect Rule



- 2 가 **contains** ;
 가 **Doesn't contain** .

- 3 **Match Case** ;
 , **Match Case** 가 .

- 4 .
 • , fail ,
fail .
 • quantifier(, some, any, all) . “Rules Expressions Text and Quantifiers Tables” .

- **Insert Expression** quantifier “Rules Expressions Text and Quantifiers Tables” .

- 5 **OK** .

Rules Expressions Text and Quantifiers Tables

Text Pattern	Expression
Placing this in the first position(before any other expression) causes the search engine to start comparison with the first byte in the received buffer.	^
Match Any character	.
Match X or Y	(x/y)
Match Any word character (a-z, A-Z, 0-9)	\w
Match Any non-word character	\W
Match Any digit (0-9)	\d
Match Any non-digit	\D
Match Any white space (spaces and/or tabs and/or carriage returns)	\s
Match Any non-white space	\S
Match Any punctuation character (any printable character other than a space or alphanumeric characters)	\p
Match Any non-punctuation character	\P
Match '.'	\.
Match Binary value	%nnn where nnn is a number between 0 and 255

Quantifier	Expression
Match Zero or more	*
Match One or more	+
Match n times	{n}
At least n1, but not more than n2(where n1 and n2 are numbers)	{n, m}

Note:

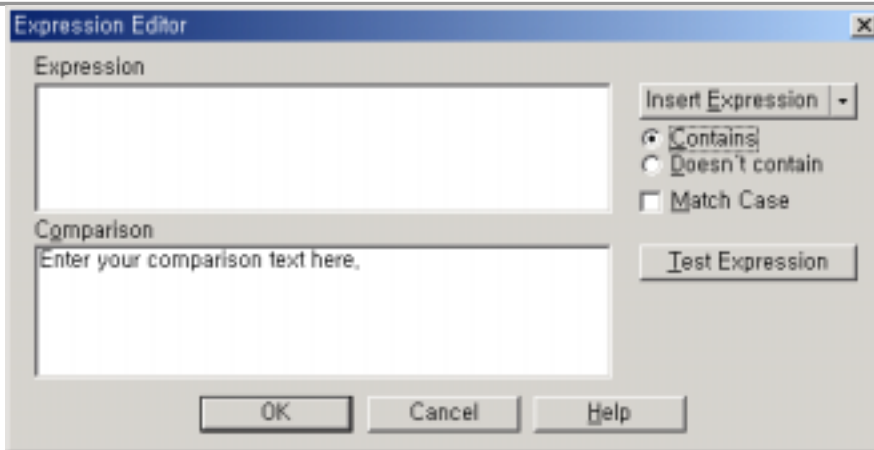
{ } () | * + , . % \

() , (\)

\+

(Testing a Rules Expression)

, Rules Expression Editor



1 Rules Expression Editor 가 , **Configure** **Monitors&Services.**
 , (rule) **Browse**
 Rules Expression Editor

2 Rules Expression Editor
 , **Contains** **Test Expression**



Specified 가 , **The Comparison Text MATCHED the Pattern**



Specified 가 **The Comparison Text DID NOT MATCH the Pattern**
 가

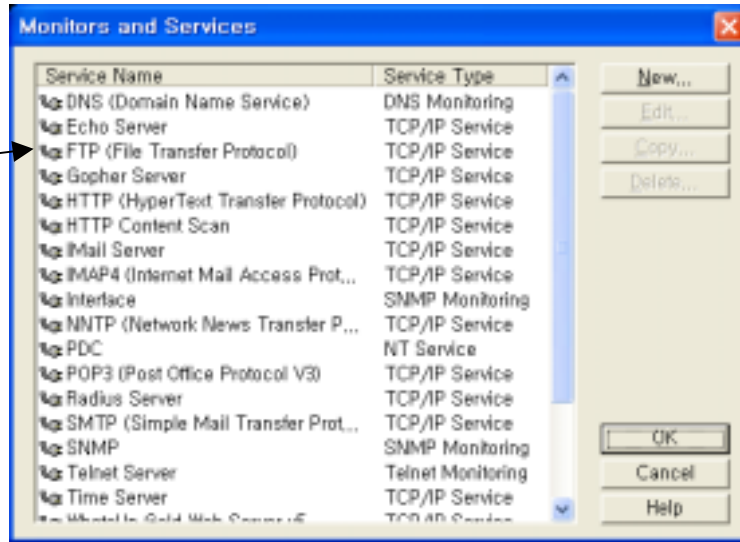
SNMP (Defining an SNMP Object to Monitor)

SNMP

SNMP

SNMP ()

1. Configure Monitors & Services



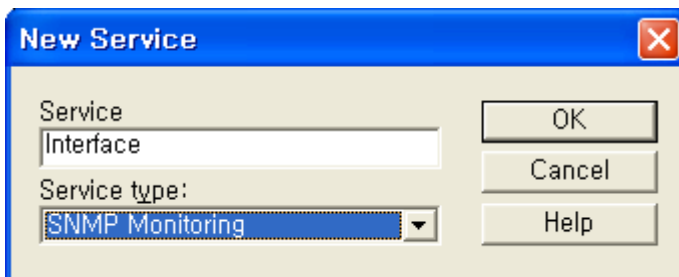
New

Edit

Copy

Delete

2. **New**



API(Custom Services API)

WhatsUp Gold COM(Component Object Model) , COM
 WhatsUp Gold "plug in" customized service checks
 WhatsUp Gold TCP/IP Service WhatsUp Gold COM
 plug-in .

Ipswitch NT Service Monitor Plug-in SNMP Threshold Plug-in
 Plug-in . Ipswitch Plug-
 in

<http://www.ipswitch.com/Support/whatsup/plugins.html>
 plug-in , WhatsUp Gold 가 wugapi.h

COM , WUG
 wugapi.h COM
 WhatsUp Gold . COM

7 (Monitoring Events)

WhatsUp Gold 가

- Interval Polling – (HTTP, FTP)
WhatsUp Gold / DOWN 가 WhatsUp Up
• Asynchronous Event – Down , 가
.(
) /
“ ” 가 WhatsUp Gold

Asynchronous event :

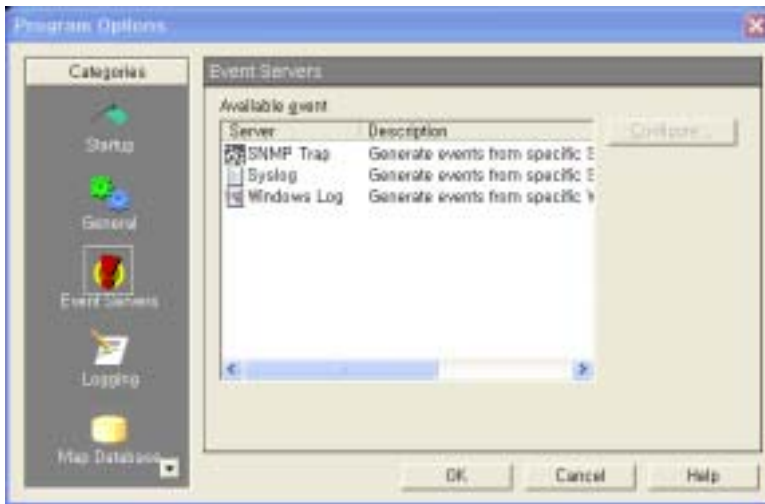
- SNMP Traps – 가
SNMP WhatsUp Gold
- Syslog Messages – Syslog
(WhatsUp Syslog 가)
4 가
1. “Configuring the Event Servers”
2. Event Library
3. 가
4. () 가

Note %(*) 가 “The Event Notification Variable %(*)”

Windows Log Event , WhatsUp Gold
 가 “ ”
 SNMP Syslog event SNMP Log WhatsUp Gold Syslog
 가 “Filter Unsolicited Events”가
 Activity Log “Unsolicited”

(Configuring the Event Servers)

Configure->Program Options Event Servers
 가 가 Configure
 SNMP Syslog Entry
 Windows Log



?(What is an Event Server?)

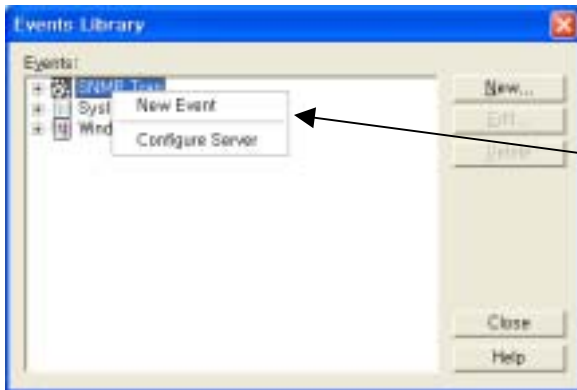
WhatsUp Gold 가
 Event Library 가 , SNMP Trap Server SNMP
 WhatsUp Gold 가 SNMP
 “authenticationFailure” SNMP WhatsUp Gold
 “authenticationFailure”

Event Library 가 (Adding Events to the Events Library)

Configure->Events Library
 Event Library 가
 New
 Edit .(.)

Note	traps.txt	SNMP	Display Name	OK
				traps.txt

Delete .(.)

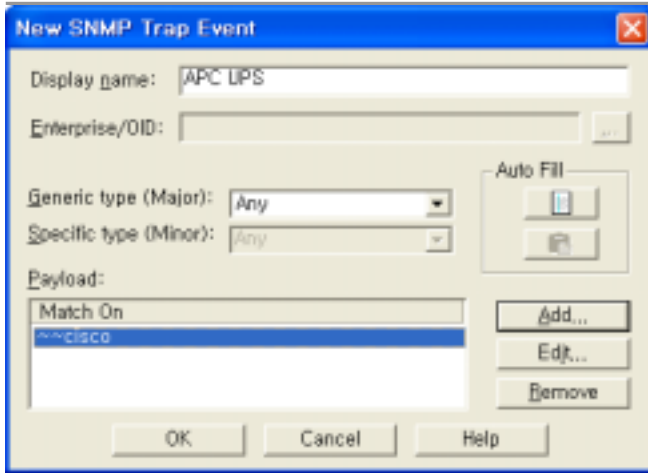


Event

Note	WhatsUp Gold 가	Event
------	----------------	-------

SNMP Trap Event (Defining an SNMP Trap Event)

Event Library SNMP traps New



Display Name.

Enterprise/OID. MIB Enterprise object
 identifier(OID)
 SNMP enterprise OID trap
 enterprise OID

Note: Generic Type "6-EnterpriseSpecific"

Generic Type (Major). 가 . Generic types 0- coldStart, 1-warmStart, 2-linkDown, 3-LinkUp, 4-authenticationFailure, 5-epgNeighborLoss, 6- enterpriseSpecific

Note: 0 6 WhatsUp Gold 가 SNMP 가

Specific Type (Minor). 0 2147483647 가 .
 Generic Type enterprise "Any"

Add Expression Editor
 가 payload 가 WhatsUp Gold
OK Payload

Note Expression Editor "Script Syntax"

Edit Remove

NOTE: (Auto Fill).

Browse. WhatsUp Gold SNMP Trap Log Viewer(Logs->SNMP Trap Log
).

Copy

Paste. paste WhatsUp Gold SNMP Trap (SNMP Trap Log
) SNMP Trap

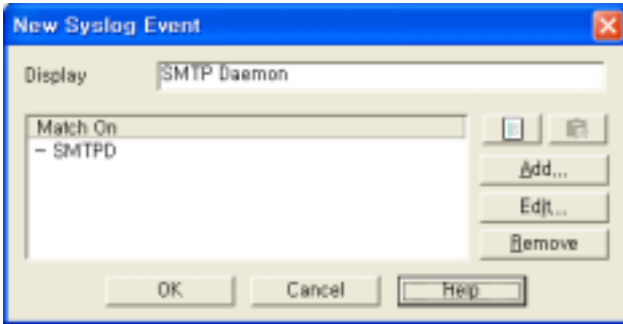
Syslog Event (Defining a Syslog Event)

Event Library Syslog **New**

Add Syslog

Expression Editor 가 Syslog 가 Syslog

WhatsUp Gold **OK**



Display Name.

Add Syslog

Expression Editor 가 Syslog 가 Syslog

WhatsUp Gold **OK**

Edit Remove

NOTE:

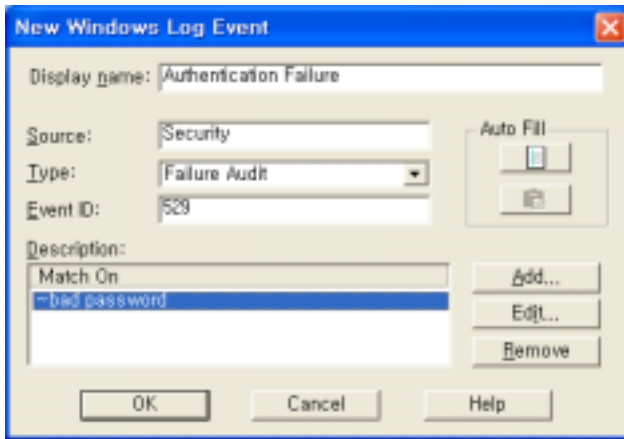
Browse. WhatsUp Gold Syslog Log Viewer(Logs->Syslog Log
).

Copy

Paste paste WhatsUp Gold Syslog Event (Syslog Log)
 Syslog log

Windows Log Event (Defining a Windows Log Event)

Event Library Windows Log **New**



Display Name.

Source.

Type.

가

NOTE: Windows 가 5 가
 Error, Warning, Information, Success Audit, Failure Audit
 "Any"

Event ID.

Description.

가

가 description

Note description 가 **Add** Expression

Editor 가

가

OK

Description

Edit **Remove**

description

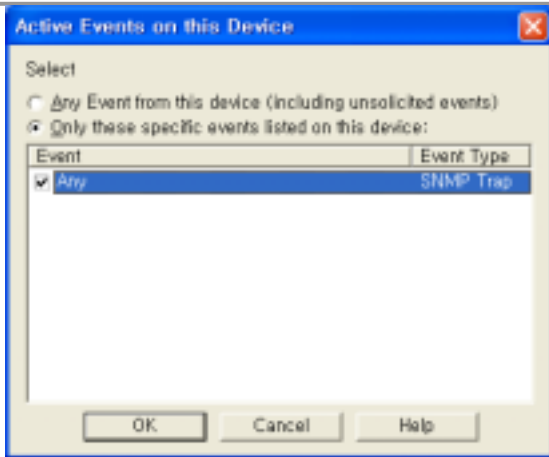
.(Auto Fill).

Browse.

Event Viewer

User's Guide

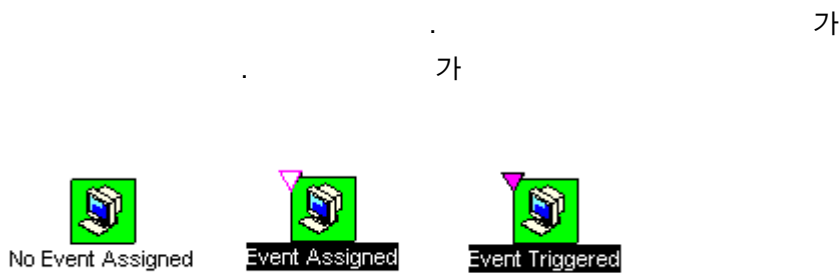
1 0 0



5. Help

6. 가 OK

(Event Visual Indicator)



(Manually Triggering your Event)

1. SNMP trap 127.0.0.1

2. 가 가

Note IP 가 SNMP
 가 가

8 Notifications (Setting Up Notifications)

activity 가 , WhatsUp Gold 가 .
WhatsUp Gold 가 . :

- Activity Log Activity . (“Logging and Reporting Activities”)
 - Status Log .
 - . (“Reading the Network Map”)
 - , notification . ()
- WhatsUp Gold notification .
- .
 - .
 - .
 - .
 - (pager) .
 - SMTP .
 - (Windows 98 Windows ME 가) .
 - “Text to speech” notification .
 - SMS notification .
 - Windows NT WinPopup .
 - notification notifications .
 - “ notification (recurring notification)” notification . “Sending Recurring Notifications” .

notification 가 . :

1 , notifications

2 , notification

notifications

“Assigning Notification to an Alert”

Notifications (Defining Notifications)

Notifications Library notifications 가
 Notifications Library

- **Configure Notifications Library**

Note notifications WhatsUp Gold 가 Notification

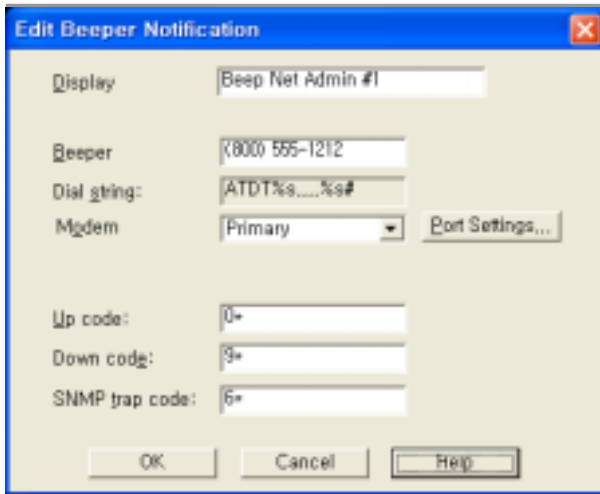
Notifications (Defining Beeper Notifications)

notification 가

notification , :

1 **Configure Notifications Library Beeper**

2 **New notification Display Name**
 , “Beep Brad”



3 Beeper Number

4 Dial String, ATDT%s,,,%s# . WhatsUp Gold %s
%s (beeper code)
'#' , '*' (-)
(,) 1
가

5 Modem Setup Primary Alternate 가
Port Settings notification
notification
(: baud rate)
alternate , Primary setting notification

Note Port Settings

6 Signal Codes, Up Code 가
가 (0*). Down Code 가
가 (9*). **SNMP Trap**
Code SNMP
(*)
가 , Up Down , notification 가
Item digital code .(**Item digital code**

notification , “Add/Edit Notification” .)
 “Assigning Alerts to Devices” .

7 Port Settings

- **Dial String.** notification .
- **Baud Rate.** (bps, bit per second) .

Note (, 56K) 가 (2400 bps - TAP specification).
 9600 bps

- **COM Port.** .
- **Modem Initializing String.** ATE0Q0V1X4F1 .
 “Command Echo Off(E0)”, “Result Codes On(Q0)”, “Verbal Results(V1)”,
 “Extended Status(X4)” .
- **Timeout.** , (가) 가 .

8 **OK** .

9 **OK** notification .

notification , notification **Test** . WhatsUp
 Gold / Debug log

Note “ (one way)” (WhatsUp Gold feedback
), 가 Test “ (success)”

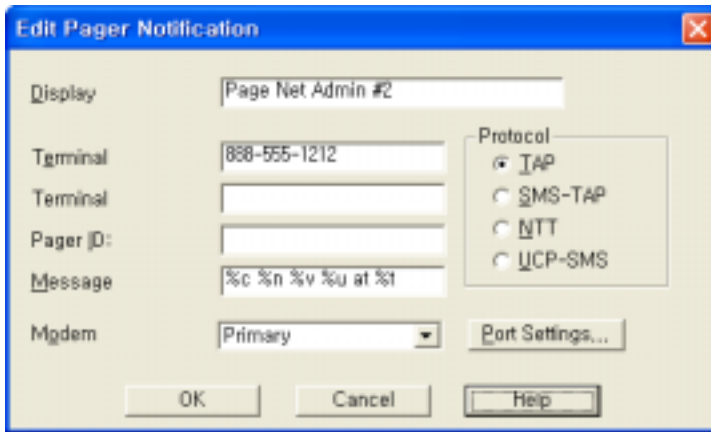
notification , notification **Edit** ,
OK .
Delete .

Notifications (Defining Pager Notifications)

notifications , 가
 . WhatsUp Gold PageNet TAP(Telocator Alphanumeric input Protocol)
 , SMS-TAP NTT, UCP-SMS (British Telecom), NTT(Nippon
 Telegraph and Telephone)

notification , :

- 1 **Configure Notifications Library Pager**



- 2 **New** pager notification **Display Name**
 , "Page Brad"

- 3 **Terminal Number** 가 **Terminal Password**

- 4 **Pager ID** , identification . ()

- 5 **Message String** , notification
 ("Notification Message Variables")

- 6 **Modem Setup** **Primary** **Alternate** 가
Port Settings

notification

notification

. (: baud rate)

alternate , Primary setting notification

Note Port Settings

SMS Notification (Defining SMS Notifications)

WhatsUp Gold SMS Service) . SMS
 가 가 . SMS
 가 . SMS
 가 . SMS

Note WhatsUp Gold SMS
 . WhatsUp Gold SMS

SMS notification :

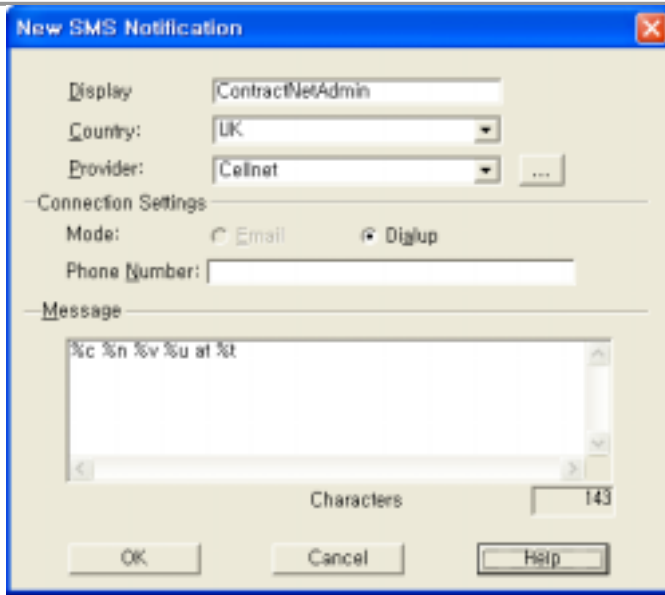
1. **Configure** Notifications Library SMS
2. **New** Notification Display Name
3. **Country.** 가
4. **Provider.**

Note 가 , ,

5. Connection Settings. Mode Email
 Dialup 가 가

Email to. SMS
 . GSMNumber@providerdomain.com providerdomain.com
 : Brad 가 770-555-1234 Voicestream
 Brad SMS 7705551234@voicestream.net

Phone Number.



6. **Message.** notification

7. **Characters Remaining.**

가

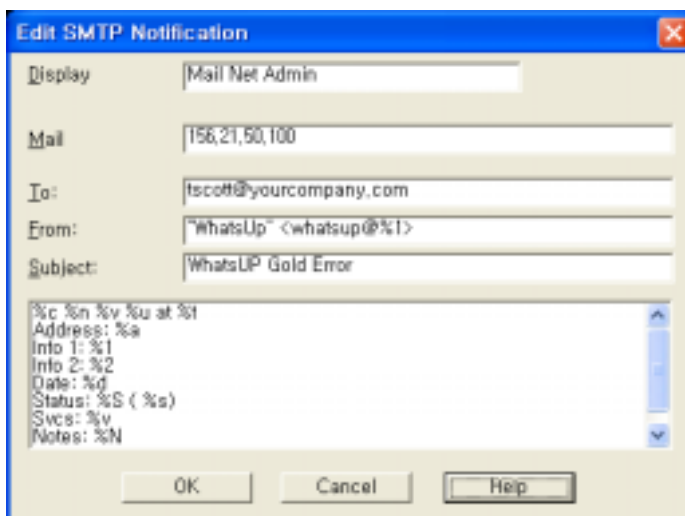
provider

Notifications (Defining E-mail Notifications)

notification

가

- 1 **Configure** Notifications Library SMTP Mail
- 2 **New** email notification Display Name
 , "Mail to Netadmin"



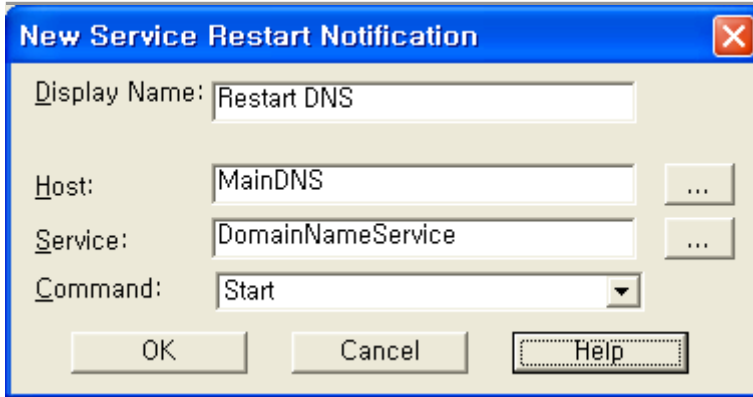
- 3 **Mail Server** , SMTP IP .
- 4 **To** , SMTP 가 .
 (brackets, []), (braces, { }),
 (quote, ‘ ’), (parentheses, ()) .
- 5 **From** notification . <WhatsUp@%1> , %1
 WhatsUp Gold . (SMTP)
 , (angle
 bracket, < >)

Note “ ” .
 <whatsup@%1> .
 , Debug log (Logs->Debug Log), WhatsUp Gold

- 6 **Subject** , notification .
- 7 **Message** , notification . (.)
 “Notification Message Variables” .)
- 8 **OK** notification .
- notification , notification **Test** . WhatsUp
 Gold / Debug log
- notification , notification **Edit** ,
OK .
- Delete** .

Service Restart Notification (Defining Service Restart Notification)

Service Restart 가 NT



Configure

Notifications Library

Service Restart

Note

Help

1. **New** Service Restart notification **Display Name**
2. **Host.** "%h"
3. **Service.**
4. **Command.** 가 Start Stop
5. **OK** notification

Note

Notification

Sound Notifications (Defining Sound Notifications)




notification 가

Note

가

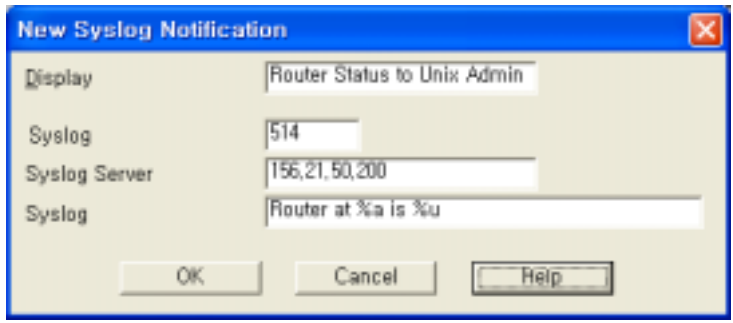
WhatsUp Gold NT WUG 가
notification "continuous",
가 WUG

notification , :

- 1 **Configure** **Notifications Library** **Sound**
- 2 **Add** notification **Display Name**
- 3 **Filename** , **Browse** , .wav
-  notification .wav **Sound Recorder**
- Browse** , .wav
-  :PCM 8,000Hz, 16 bit, monaural
- Sound Recorder**
- 4 () **Continuous play** , **Quiet** 
- 5 **OK**

Syslog Notifications **(Defining Syslog Notifications)**

- 가 Syslog Syslog 가
- 1 **Configure** Notification Library Syslog
 - 2 **Add** , Syslog notification **Display Name**
 - . (: "Server1 Syslog")



- 3 **Syslog Port box** Syslog 가 UDP . 514
- 4 **Syslog Server Address box** Syslog 가 IP
- 5 **Syslog Message** Syslog
- notification 가 "Notification Message
- Variables" . Syslog 511
- . Notification 가 Syslog
- 1023 . Tab linefeed ASC

6 **OK** notification

Note WhatsUp Gold IMail syslog
 SysLog 가 ? : Syslog “ .” 가 .

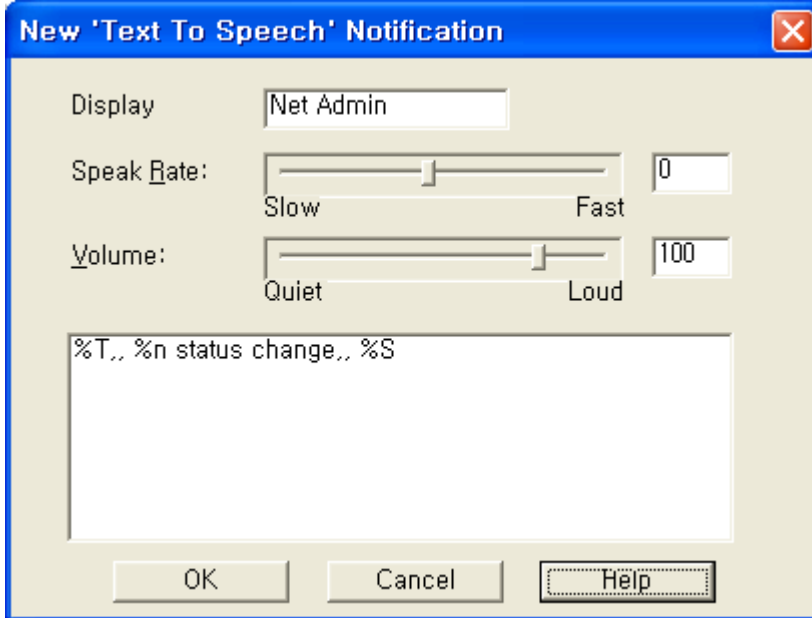
Syslog Port 514 **Configure→Program Options→Event Servers Syslog Entries Configure**

Text to Speech Notification (Defining Text to Speech Notification)

Text to Speech Plug-In 가 text speech notification

1 **Configure** Notifications Library TextSpeech

2 **Add** , TextSpeech notification Display Name



3 **Speak Rate**

4 **Volume**

5 **Message** notification 가

가	가	,	가	
				"Notification Message Variables"
6	OK		notification	
notification		,	Test	WhatsUp Gold
		/		
notification		,	notification	Edit
	OK			
	,	notification	Delete	

Note () "Speech"

Text to Speech tab Voice Selection

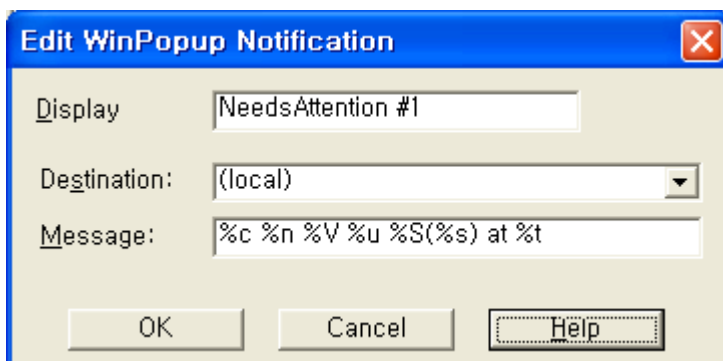
About tab

WinPopups Notification (Defining WinPopup Notifications)

WinPopup notification Windows NT WinPopup
Windows NT notification

WinPopup notification :

- Configure** Notifications Library WinPopup
- New** notification Display Name



- Destination** notification (asterisk,*)

- Message**, notification (variables)

“Notification Message Variables”

5 **OK**

Notifications (Defining Group Notifications)

notification , , , WinPopup, ,
 notifications notification “Notify All”(
 notification) , “Notify First”(
 notification)
 notification , :

1 **Configure -> Notifications Library Group**

2 **New , Group Name**



3 **Add “Add Group Member”**
 notification 가 notification

- Time Period.
 7X24 Change

Note Alert name Up Down ()
 Alert name Delete Alert name

4 notifications
Notify First Member, **Up** **Down**
 notification, **Notify All Members**

Example A. notification SeriousProblem
 notifications .:

- PageTommy, 24 ()
- Page Brad, 24 ()
- PageManager 7 (), 24 ()

Example B. notification notifications
 .() 가 , 가 notification (Operations
) 가 ; .

- BeepTara
- EmailTara
- BeepJan
- EmailJan

, WhatsUp Gold Tara
 가 ,
 , WhatsUp Gold Jan
 , Jan 가 가 , ;
 WhatsUp Gold 가 Operation notification

5 OK

Notifications (Defining Program Notifications)

가 (down) “up”, notification

anotherspecialmib.1.2.3.5-6.2031

org.9.83.121.115.109.111.110.76.111.103-6.2031

trap.txt mib.txt

WhatsUp Gold

MIB 가

6

enterprises.3332.30.100.6-6.2

enterprises.3332.30.100.4-6.2

enterprises.3332.30.100.5-6.2

enterprises.3332.30.100.3-6.2

enterprises.3332.30.100.2-6.2

enterprises.3332.30.100.1-6.2

MIB

ipswitch-prd-bot-amp1-high-trap

ipswitch-prd-bot-audio-high-trap

ipswitch-prd-bot-door-trap-tripped

ipswitch-prd-bot-airflow-traps-6.2

ipswitch-prd-bot-humidity-high-trap

ipswitch-prd-bot-temperature-high-trap

On Event

**On Event
Trap events)**

(More details for On Event – regarding SNMP

SNMP

“enterprises.3332.30.100.6-6.2”

MIB 가

MIB 가

“ipswitch-prd-bot-amp1-high-trap”

Notification (Notification Message Variables)

notification

Device Variable Case Sensitive	Returns
%1	Info line 1 (General)
%2	Info line 2 (General)
%a	IP Address(General)
%C	(notification Alert setup extra parameter)
%c	%T , , %T ; %c
%h	Host Name(General)
%M	SNMP Community
%m	. (SNMP trap - SNMP trap 가)(Windows Log - Windows Event Log)(Syslog - Syslog)
%N	Notes(Note)
%n	Display Name(General)
%O	SNMP Object .(SNMP Object , "unknown")
%R	SNMP Read Community(SNMP)
%S	WhatsUp Gold ("timed out" "did not respond")
%s	Winsock
%T	device Type(General)
%u	"UP", "DOWN", "TRAP", "Event name", "SVCUP", "SVCDOWN"
%V	, "services"
%v	
%W	SNMP Write Community(SNMP)
%Y	UP
%y	UP
%Z	
%(service::up)	Up
%(service::down)	Down
%(service::justup)	up 가
%(service::justdown)	
%(*)	payload . "The Event Notification Variable %(*)"

System Variable	Returns
Case Sensitive	
%A	Names of devices with down Service
%D	# of Down Hosts
%d	Date format is (mm/dd/yyyy)
%e	Down Host display Names
%L	The Activity Log file, EV-yyyy-mm-dd.tab (or %Lnn where nn = last nn lines of the log file)
%Ln	Last n lines of the log file (n can go up to 99)
%l	Display Name from General of device properties
%o	# of devices with Down Services
%P	Up Host display Names
%t	Current time (hh:mm:ss)
%U	# of Up Hosts

Notification (The Event Notification Variable %(*))

8.0 가 . “ 7 Monitor Events” . notification 가 . %(*)
 WhatsUp Gold 가 . ,
 SNMP payload .

Note 8.0 SNMP 가 %u %m .

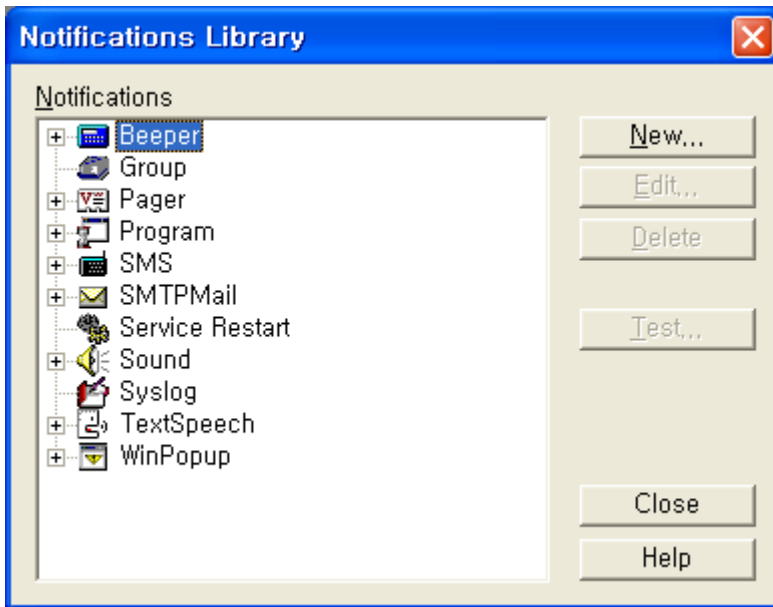
%u notification TRAP .
 %m .
 %(* %m .
 Notification 가 %code .
 payload .
 %(* .
 1. %(* notification .
 2. notification Alert .
 3. notification .
 notification SMTP Mail WinPopup .

4. “ ” %(*) 가 notification . %m notification .

Note “Event Variable %(*) 가 .

Notifications (Testing the Notifications)

notification , Notification Editor notification **Test**
 . WhatsUp Gold / .



Debug Log(Logs->Debug Log)

(Setting Up a Voice Modem)

notification , WhatsUp Gold 가
 Unimodem/V . WhatsUp Gold "3COM/US Robotics
Sportster Voice 56K Faxmodem with Personal Voice Mail 33.6K

Note , Unimodem/V Windows 98 Windows ME
 , notification Windows NT Windows 2000, Windows XP

- 1 Microsoft Unimodem/V (unimodv.exe)
 (readme.txt)
- 2 Unimodem/V
 가 Unimodem/V .wav .inf
 \windows\inf
)
- 3 WhatsUp Gold .wav
 PCM 8,000 Hz, 16bit, Mono
 notification wave

Default .wav file	Message
isdown.wav	"... is down"
isup.wav	"... is now reachable."
svcdown.wav	"a service is down on."
svcup.wav	"the service is now up on..."
ahost.wav	"a host..."
pressone .wav	"WhatsUp Gold has a message for you. Press 1 for the message."

- 4 **Voice** .wav .wav 가
 "Defining Voice Notifications."
- 5 가 COM
System -> Device Manager -> Ports COM

Note (, Unimodem/V , COM)가
 , "Notifications Library" **Voice**


Notifications (Defining Voice Notifications)

가 (“Setting Up a Voice Modem”) , notification ,
 .
 WhatsUp Gold .wav , .wav
 .
 notification , WhatsUp Gold ,
 .
 (pressone.wav) “WhatsUp has a message for you. Press one for the
 message.” 1 가 .
 , “A host is down.” 가 .
 (, “Gyro is down”),
 .wav , notification 가 ,
 “Add Notifications” .
 “Assigning Alert to Devices” .

notification (Creating a voice notification)

Note , Unimodem/V 가 , **Voice** 가 .

notification :

- 1 **Configure -> Notifications Library** **Voice** .
 - 2 **Add** , notification **Display Name** .
 - 3 **Phone number** , .
 - 4 **Repeat Msg** , WhatsUp Gold
 가 (.wav) , .
- Invoke Sound Recorder** , (->) .wav
 .
-  Invoke sound recorder
- 5 **Count** , 가 (가
).

WhatsUp alert . :

- 가 .
- 가 down up
- 가 . “ 7 Monitoring Events” .
- SNMP (trap) notification , alert
- 가 trigger notifications .
- 10 alert .

Note alert . “Assigning Alerts to Selected Devices”

Alerts Dialog (Using the Alerts Dialog)

Alerts . :

- (logging) .
- (sound alarm) .
- notifications alert alerts .

Alerts , :

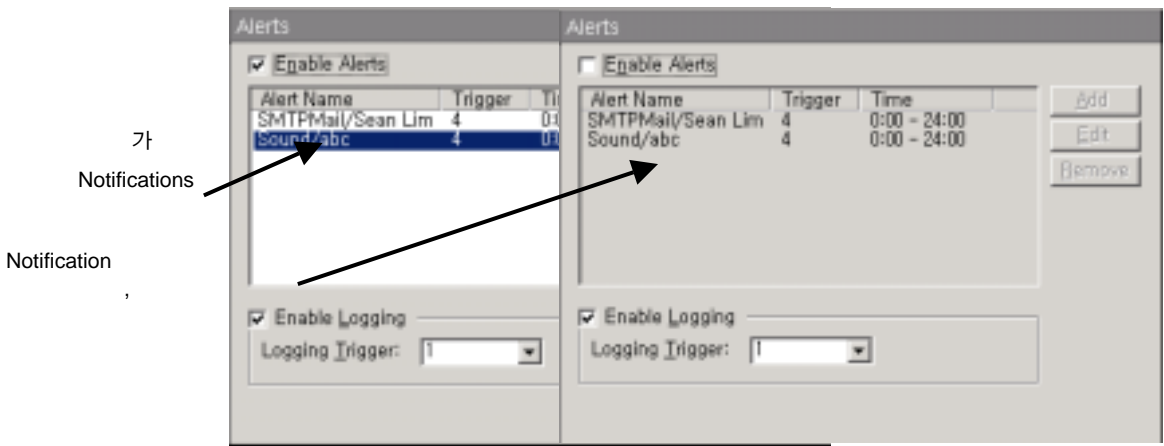
1 , **Alerts** .

Note ,
 , Properties Alerts .

2 Alerts notifications , **Alerts**



Alerts 가 , notifications 가 가 , notifications 가



3 Enable Alerts

4 WhatsUp Gold 가 (Event Log) "DOWN"/"UP"
Enable Logging
Log . (
Quick Status , **Log** .)

Alerts (Assigning Alerts to Selected Devices)

alerts :

1

Note Ctrl

Add Alerts to selected

devices Alerts 가

2 **Enable Alerts.** alerts 가

3 **Enable Logging.** WhatsUp Gold 가 up

Note Alerts 가 alerts 3
가

- alert , 가 ,
- alert , ,
- , toggle
- alert 가
- 가 가

4 Alert 가 **Add** Add Alert 가

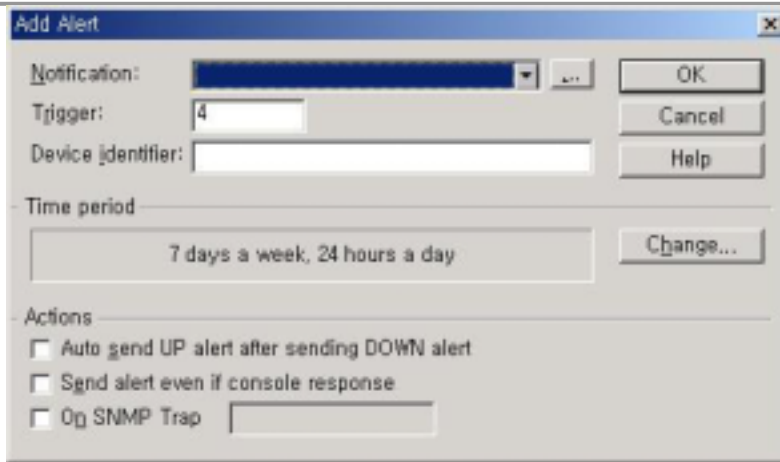
5 Alert **Edit** Edit Alert 가

Notification Alert (Assigning a Notification to an Alert)

Note notification alert , notification
"Defining Notifications"

notification , **Alerts** 가 (**Enable alerts** **Enable Notifications**):

1 **Alerts** (**Properties** ,
Alerts), **Add** "Add Notification"



2 notification . notifications
 . 가 notification
 browse notification . (notification library
)

Note

NT WhatsUp Gold .
 WUG 가 notification "continuous"
 WUG 가 .

3 **Trigger**

WhatsUp Gold 가 notification . 4 .

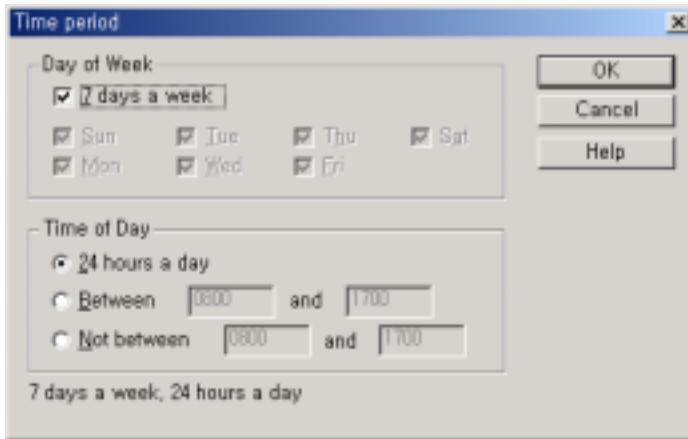
4 **Device Identifier.**

notification . notification wave
 notification

- (, IP) "UP" "Down"
 notification . **Note:** (*)
 IP
- notification , .wav
 (,) .
 .wav ; , "Server one"
 가 , "Server one is down."
 [auto] ; display_name.wav(,

server1.wav) , "a host"
 ahost.wav .("A host is down."
 .)

- 5 **Time Period** , notification
 . **Change** (7days a week, 24hours a day)



6 **Actions:**

() **Auto send UP alert after sending DOWN alert** , ()
 가 down notification (up) notification . NOTE:
 "Up Alert Modes"

- **Send UP alert after the device and all services are up.**
 가 up 가 up
- **Send individual UP alerts for the device and each service the comes up.**
 up 가
 up

Send alert even if console response , WhatsUp Gold
 alerts 가 . (Monitor→ Acknowledge)

On Evnet. Select Event .
 . On Event

WhatsUp Gold . 가
 가 "Setting Colors and Views"



Note “ 7 Monitoring Events”

Alerts (Editing Alerts)

- Alert 가
 - Alert (i.e. notification)
- notification , **Alerts**
- notification , **Edit** “Edit Notification”

Note notification , **Alerts**

notification , **Edit** “Edit Notification”

“Assigning a Notification to an Alert ”

9 (Working from the console)

WhatsUp Gold (device pool) 가 가 . ;
 (console) (web interface)가 . WhatsUp Gold
 WhatsUp Gold 가 .

WhatsUp Gold

“ 11 Working from a Web Browser”

(Opening Network Maps)

WhatsUp Gold 가 ,
File -> Open , **File -> New Map Wizard**
 “ 2 : Creating Network Maps”

WhatsUp Gold 가

) **Configure-> Program Options-> General** **Automatically load subnet**
when opening maps

Monitor

Monitor This Item . (.)

(Starting and Stopping Polling)

, WhatsUp Gold Master Switch 가
 (pass) ,
 , WhatsUp Gold

WhatsUp Gold

(pass)

Configure->Program Options-> General **Polling Master Switch**
 가

(To Initiate Automatic Polling)

, WhatsUp Gold
 Master Switch 가

Properties . **General**
 (Poll Frequency), (Default Timeout),



Stopwatch button

Stopwatch(active)

. WhatsUp Gold statistics tab view

. **Poll Frequency**
 , **Stopwatch(active)**

WhatsUp Gold

, **View** **Dependencies**

Dependencies tab , “Viewing and Changing Dependencies”

(To Stop Automatic Polling)

, **Stopwatch**
 , **Stopwatch**

Note WhatsUp Gold 가 , WhatsUp Gold 가
 30 , WhatsUp Gold
 (task) (Ctrl+Alt+Del).

(To check a Device)

up **Check now** , pop-

(Reading the Network Map)

- (highlight) : 가 .
 “Types of Events Logged” .
- () : 가 “UP” ()
- () : 가
- () : 가
- () : 가 “DOWN” (가
 , 4)



Note 8

startbust() .

- () : 가 “DOWN”
- Help “Program Options(Map Color)” ,
- status bar , IP ,
- WhatsUp Gold status bar (count-down timer)
- Poll Frequency (Properties**
General) ,
- . WhatsUp Gold .

(Receiving Alarms)

- Enabled Alerts (Alerts) ,**
 alert 가 , 가 4
 가 , 가
- Quiet Monitor**



Quiet button

Stop Alarm

Notifications (Receiving Notifications)

notifications . :

- 가 .
 - 가 .
 - 가 .
 - SNMP
- notifications , **View** **Notifications**
 "Viewing Active Notifications"

(Acknowledge Alerts)

, **Monitor** **Acknowledge** . Acknowledge
 가 가 ,
 가 가 .(
 .) Send alert even if console response 가 alert (Device properties-
 >Alert-Add Edit)

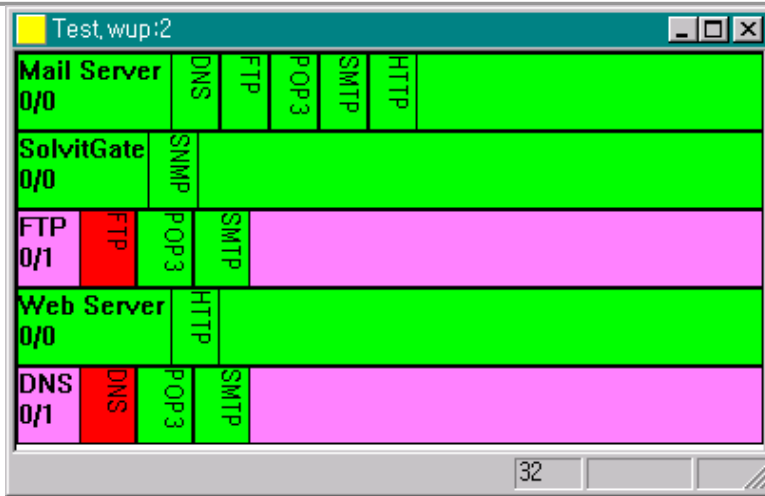
Status Window (Using the Status Window)

Status Window

, 가

Note () tab "Optional Map Views"

View , **Status**



Status Window

Status Window



Poll button

Poll

Stopwatch

Status Window

Dependencies

(Viewing and Changing Dependencies)

, WhatsUp Gold

가

Dependencies

Dependency

Dependency

가

가 "Up"

"Down"

가

가

Traceroute

dependencies

(Set Dependencies)

, Dependencies

dependency

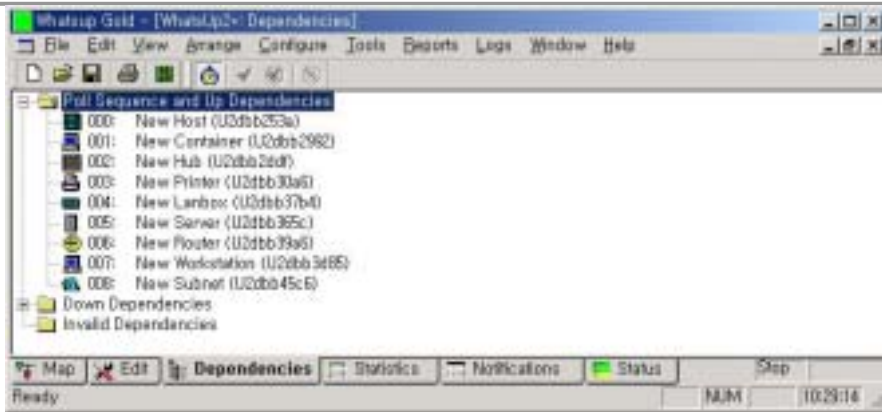
가

"up dependency"

"down dependency"

View

, **Dependencies**



Note () tab "Optional Map Views"

Dependencies , 가 up or
down dependencies
(identifier)

Poll Sequence and Up Dependencies.

가 "up dependent" ,

, 가 .:

- **Polling Sequence and Up Dependencies** ,
- , popup
- **Move to**
- popup **Move to**

Start of Poll.

Move Earlier in Poll.

End of Poll.

Later in Poll.

Up Down Dependencies (Setting Up and Down Dependencies)

“up” “down” dependency 가 ,
 . “up dependency” 가 “up” ,
 . “down dependency” 가 “down”
 , .

Dependencies **Up Dependencies, Down Dependencies**
 . 가 (“dependent”) ,
 .

“up” “down” dependency , :

1 **Up Dependencies Down Dependencies** , dependency
 , .

2 dependency .

3 **Depend on Prior Device** .

Note Invalid Dependencies. dependencies 가
 . : #1 #2
 dependency 가 #1 #2
 dependency .

(Viewing the Polling Statistics)

WhatsUp Gold
 . **View Statistics** ,
 .

Note () tab . “Optional Map Views”
 .

가 . [map_name].wui . .wui

Device	Address	Type	Status	Period	Count	% R.	% M.	Down	# Al.	Av.	ML	Ma
Mail Server	210.180.47.97	ICMP	Up	0:05	5	100.00	0.00	0:00	0	2	0	33
SshGate	210.180.47.90	ICMP	Up	0:05	5	100.00	0.00	0:00	0	2	0	33
FTP	210.180.47.90	ICMP	Up	0:05	5	100.00	0.00	0:00	0	2	0	33
Web Server	210.180.47.120	ICMP	Up	0:05	5	100.00	0.00	0:00	0	2	0	33
DNS	210.180.47.90	ICMP	Up	0:05	5	100.00	0.00	0:00	0	2	0	33

Device.
Address. (ICMP TCP/IP)
Type. General (ICMP, TCP, NetBIOS IPX).
Status. 가 (0) 가 "up"
 . TCP/IP , 10000
 . Winsock .
 , **Quick Status** , **Status** .
 , Statistics Window .
 가 , .:

- **Monitor** **Reset Counters** (Statistics Window 가 가)
- **Reset Counters**
 Statistics Log . Statistics
 . Statistics Log
 , **Logs** (Configure -> Program Options-> Logging
 Advanced)

Period. 가 (:)
Count. 가 가
% Responded. (%)
% Missed. (%)
Down Time. (:). Map Poll Frequency
 Missed poll . , 가 7 ,
 Map Poll Frequency 가 7 .

#Alerts.

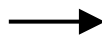
Avg RTT. (round trip time, RTT)
Min RTT. RTT
Max RTT. RTT

Notifications (Viewing Active Notifications)

notifications . **View**

Notification

Alerts



Device	Alert Name	Trigger	Start Time	End Time
Mail Server	EmailMarty	4	0000	2400
SolvitGate	BeepEmmett	4	0000	2400
FTP	Default Mail	4	0000	2400
Web Server	PageElena	4	0000	2400
DNS	EmailSpin	4	0000	2400

() tab

“Optional Map Views”

notifications

(Using the Mini Status View)

Mini Status

. Mini Status

View

Mini Status Mode

. WhatsUp Gold

가

Mini Status

가

Mini Status

Mini Status

WhatsUp Gold Status						
203.242.134.193			203.242.134.192			
SOLVNT1	DNS	FTP	MAP4	POP3	SMTP	
DRAGON1	HTTP		SMTP			
DRAGON2	DNS	FTP	HTTP	MAP4	POP3	SMTP
ALIALI	HTTP					
STRONG	HTTP					
SHLIM	SMTP					
203.242.134.233			203.242.134.193			
vhkim.shigh.co.kr						
YISONG						
MAIN-TEST						
HAPPY	HTTP	POP3	SMTP			
Y.KIM						
ESKIM						
JASHIN	FTP	HTTP	SMTP			
203.242.134.254						
			FTP	HTTP	Telnet	Interfac
						Interfac

10

(Logging and Reporting)

WhatsUp Gold 4 가 (logging) .:

- Syslog – , , UNIX UDP .
(SL-yyyy-mm-dd.tab)
- Activity - Activity 가 (down) (up) ,
. Activity Activity Log(EV-yyyy-mm-dd.tab) .
Activity 가 ,
Debug Log .
- (polling statistics) - RTT(Round
trip times) . Statistics
Log(ST-yyyy-mm-dd.tab) .
- SNMP traps - SNMP Trap Log SNMP .
(
"Quick Status"). SNMP , **Configure -> Program**
Options-> Event Servers->SNMP Traps 가 **Configure** **Enable SNMP**
trap handler .

WhatsUp Gold
가 . **Reports** ,
.;

Performance Graphs. 가

Outage Reports. / , / , 가
WhatsUp Gold activity . ,
(tab-delimited) .

Statistics Reports. RTT (missed
polls) . , (tab-
delimited) .

WhatsUp Gold Syslog

WhatsUp Gold Syslog Daemon, (switch), UNIX, UDP
 UDP syslog 514. WhatsUp Gold syslog, (switch), UNIX, 514 UDP
 UDP 가, Syslog (time stamp) IP
 Syslog WhatsUp Gold (SL-YYYY-MM-DD.tab)

: "WhatsUp Gold Syslog".

Activity (Logging and Reporting Activities)

WhatsUp Gold Activity Log Activity, Activity *EV-yyyy-mm-dd.tab*

WhatsUp Gold activity() , **Alerts**
Enable Logging activity(
 가) . WhatsUp Gold 가
 , import
 tab-delimited(가)
 , activity activity

Activity Log (Actions that Trigger Entries in the Activity Log File)

WhatsUp Gold 가 , (*EV-yyyy-mm-dd.tab*)
 WhatsUp Gold

- Map Changes : 가 ,
- " 7 Monitoring Events"
- : **Alert** **Enable Logging**
 WhatsUp Gold up/down 가

- Notifications : notification
- Acknowledged Alerts : Monitor→Acknowledge()
 Acknowledge activity
- Access table lockout entries : , IP Security(Configured→Web Server→IP Security)
 가
 IP
- NT Service : NT up/down

Activity (Changing How Activities Are Logged)

- activity()
- "up" "down"
- "DOWN" "SVSDOWN"
 가 (Threshold).

1 **Properties**

2 **Alerts**

3 "DOWN" "UP" **Enable**

Logging (

Quick Status **Log** .)

Logging Trigger 1 .
 가 ; 가
 () , "DOWN"
 "SVSDOWN" 4

가 , Activity

log "DOWN" "UP"

2, 3, 4 **Trigger**

Trigger alert **Edit**

Note notification , alarm notification ,
 Activity Log "DOWN" "UP" (event)가 ,
 notification **Trigger** **Logging Trigger**

4 **OK**

가 , :

1 ()

가

Note , Ctrl

2

Add Alerts to Selected Devices.

3 **Enable Logging.**

가

WhatsUp Gold

가 Activity Log

.(Logging Trigger

)

4 **Logging Trigger.**

Activity Log

Activity (Viewing the Activity Log)

Activity Log

activity

activity

"Actions that Trigger Entries in the Activity Log File"

Activity

, Logs






Activity Log



Activity Log , activity 가 , activity , activity

Activity Log WhatsUp Gold activity 가
 , / , (alert acknowledged gements)
 activity Activity Log . Activity Log SNMP
 (SNMP 가) ;
 activity WhatsUp Gold 가



Log Viewer: 가 가

	Back icon: 'Back'
	Current icon: 'Current'
	Forward icon: 'Forward' 가 'Back'
	Find icon: 'Find'
	Filter icon: 'Filter' 가 , 가 Filter 'off' 'on' OK , Log Viewer 가 가 "Back" "Forward"

Note
 . "Back", "Forward" 가 가

	Week(s), Month(s), Year(s)	Range
• Week(s)		
	: 1 'Back'	7
• Month(s)		
	: 1 'Back'	4
• Year(s)		
	1 'Back'	52

• **Range** /

	Refresh icon: (SYSLOG) 'Refresh'
	Print icon: , 'Print'

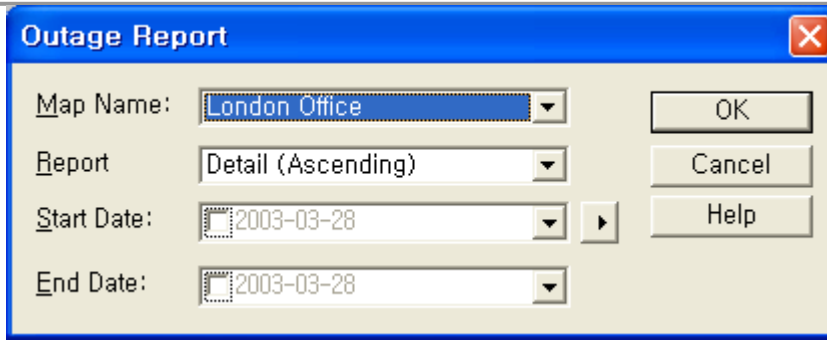
Format option buttons: 'Raw' 'Formatted' 가 'Raw'

yyyy/mm/dd 'Raw' /
 'Formatted'
 가 mm/dd/yyyy

Outage (Creating an Outage Report)

WhatsUp Gold 가 Activity , Activity , "Actions that Trigger Entries in the Activity Log File" activity "Changing How Activities Are Logged"

Outage Report , :
 1 **Reports** , **Outage Report** . Create Outage Report 가



2 **Map Name**

Note (child map) (parent map)

child map

가

3 **Report Type**

Summary.

, **Worst First**

Detail.

“up” “down”

“down”

, **Worst First**

가 , Detail Report

activity

activity

, NT

(table lockout)

“Actions that Trigger Entries in the Activity Log File”

Raw Data. Event Log

(import)

tap-

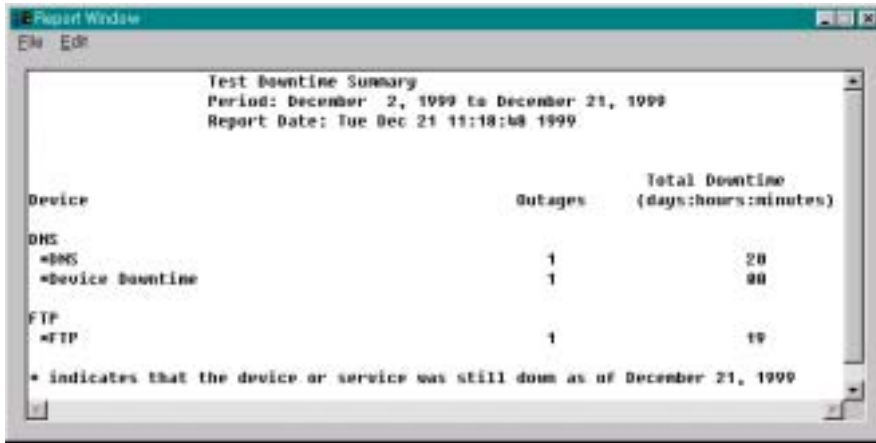
delimited

(export)

4 **Date Range**

, **Start Date** **End Date**

5 **OK**



Note "insufficient data"

(Debug Log Information)

WhatsUp Gold
 (actions) Debug Log . Debug Log WhatsUp Gold
 가 , Logs
Debug Logs

Outage (Using the Command Line for Outage Reports)

wugrpt.exe WhatsUp Gold Event Log(*EV-yyyy-mm-dd.tab*)
 (MS-DOS prompt) *wugrpt*
 MS-DOS

Basic Command Syntax

`wugrpt -mmapname [-syyyyymmdd] [-eyyyymmdd] [-logfile] [-osortmode] [-rreport] [-tmaptitle]`

Note	WhatsUp Gold	-m
-------------	--------------	----

Argument	Explanation
-mmapname	wugrpt -m"c:\program files\WhatsUp\network1.wup"
-syyyyymmdd	-s
-eyyyymmdd	-e
-logfile	-l
-osortmode	-o (); ; "score" Score , score
-rreport	-r . Detail Summary down, up . Export raw data tab delimited
-tmaptitle	-t
-?	-?

(Exmples)

Boston1 Event Reports

wugrpt -m"c:\Program Files\WhatsUp\Boston1.wup"
 ().

wugrpt -m"c:\Program Files\WhatsUp\Boston1.wup" -s20020301 -e20020331
 1 .

Return Codes

wugrpt 가 , 1 . ;
 0 .

(Logging and Reporting Polling

Statistics)

WhatsUp Gold , 가
 WhatsUp Gold 가 , ,
 (import) tab-delimited(
 가)
 "Creating
 Performance Graphs"

(The Polling Statistics)

WhatsUp Gold Statistics Log(ST-yyyy-mm-dd.tab)
 Statistics log ST-yyyy-mm-dd.tab ,

WhatsUp Gold
 . :

Average RTT. Round Trip Time(RTT).
 Statistics generation
 "Changing Statistics Logging"

Maximum RTT. RTT. (
)

Minimum RTT. RTT. (
)

Percentage of missed polls. . (
)

Statistics Log Statistics . Statistics
 . Statistics Log , Program Options
Logging (Configure -> Program Options -> Logging Advanced
)

(Changing Statistics Logging)

Statistics log(ST-yyyy-mm-dd.tab)가

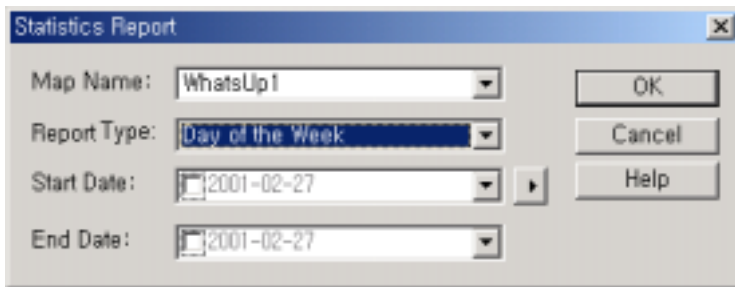
Statistics log

- 1 **Configure** , **Program Options** , **Logging**
- 2 **Log type** "WhatsUp Statistics"
- 3 **Advanced**
- 4 **Log update interval** . 0 254
0
- 5 () **Update Log** ,

(Creating Reports on Polling Statistics)

WhatsUp Gold 가

- 1 **Reports** , **Statistics Report** . Statistics Report 가
- 2 **Map Name**



Note (child map) (parent map)
 (child map)

가

3 Report Type

Detail.

Statistics Log

“Statistics Report

Legend”

Raw Data. Statistics Log

(import)

tab-delimited(가) format

“Exporting Raw Data”

Day of the week.

/

4 Date Range

, **Start Date**

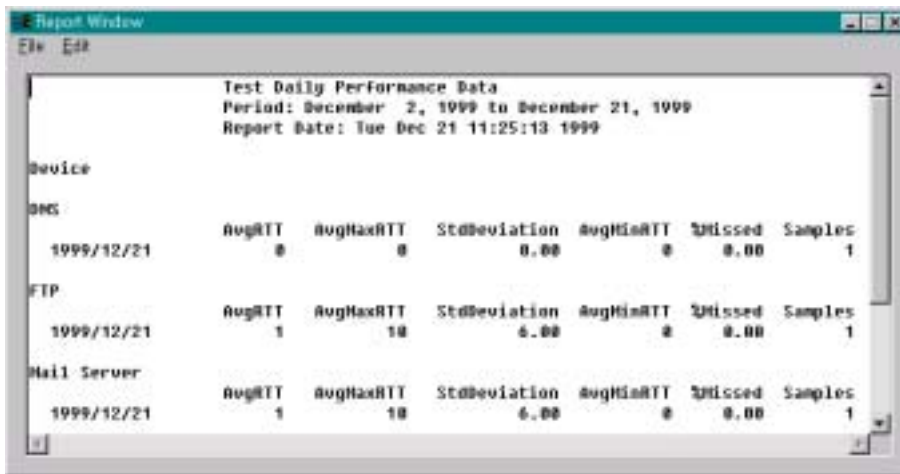
End Date

5 OK

WhatsUp Gold

, Report Window

Report Window



Note “insufficient data”

Exporting Raw Data

Statistics Report raw data . tab-delimited(가) raw data (import) (spreadsheet) (import)

	A	B	C	D	E	F	G
1		Primary Network Status from WhatsUp Gold					
4	Device	Date	Time	Avg RTT	Max RTT	Min RTT	% missed
6	SOLVNT1	99-12-20	1359	0	10	0	0
7	SOLVNT1	99-12-20	1459	1	11	0	0
8	SOLVNT1	99-12-20	1559	1	10	0	0
9	SOLVNT1	99-12-20	1659	1	10	0	0
10	SOLVNT1	99-12-20	1759	1	10	0	0
11	SOLVNT1	99-12-21	1002	1	10	0	0
12	SOLVNT1	99-12-21	1102	1	10	0	0
13	gate1	99-12-09	1495	1	10	0	0
14	gate1	99-12-09	1527	1	10	0	40
15	gate1	99-12-09	1627	0	0	0	100
16	gate1	99-12-09	1727	0	0	0	100
17	gate1	99-12-09	1827	0	0	0	100
18	DRAGON1	99-12-20	1359	1	10	0	0
19	DRAGON1	99-12-20	1459	0	10	0	0
20	DRAGON1	99-12-20	1559	0	10	0	0
21	DRAGON1	99-12-20	1659	1	10	0	0
22	DRAGON1	99-12-20	1759	1	10	0	0
23	DRAGON1	99-12-21	1002	2	11	0	0

(Statistics Report Legend)

Statistics Log(ST-yyyy-mm-dd.tab)
 , WhatsUp Gold
 ; Statistics Log (samples)
 . :

Sample. (n).

() , 가 24 , 24

Average RTT. RTT n sample

Average Maximum RTT. RTT n sample

Average Standard Deviation. RTT

Average Minimum RTT. RTT n sample

Average Percentage of Missed Polls. missed poll percentage n sample

(Using the Command Line for

Statistics Reports)

wugstat.exe WhatsUp Gold Statistics Log(*ST-yyyy-mm-dd.tab*)

WhatsUp Gold Utility

(command prompt), MS-DOS prompt wugstat.exe

-mmapname (argument) *wugstat.exe*

(command prompt), MS-DOS

Basic Command Syntax

wugstat [*-mmapname*] [*-ddevicename*] [*-syyyymmdd*] [*-eyyyymmdd*] [*-llogfile*] [*-osortmode*] [*-rreport*] [*-tmaptitle*]

Note WhatsUp Gold *-m* argument
arguments

Argument	Explanation
<i>-mmapname</i>	() "local.*"
<i>-syyyymmdd</i>	() -s
<i>-ddyyyymmdd</i>	() "router*"
<i>-eyyyymmdd</i>	() -s
<i>-llogfile</i>	() -l wugstatdata.log
<i>-osortmode</i>	() ascend() , descend() -o ();
<i>-rreport</i>	() (detail report). detail(), dow() , export(raw data tab-delimited) -r
<i>-tmaptitle</i>	() -t

-?	-?	.
----	----	---

(Examples)

Boston1

Event Reports

wugstat -mBoston1.wup

().

wugstat -mBoston1.wup -s20010301 -e20010331

1

Return Codes

wugstat 가

, 1

;

0

Performance Graphs

(Creating Performance Graphs)

WhatsUp Gold 가

가

RTT(Round Trip Time)

, Performance

Graphs 가

,

가

가

(RTT)

Graphs ST-yyyy-mm-dd.tab

“Logging and Reporting Polling Statistics”

Note Reports

Performance Graphs

가

, Microsoft

ODBC

ODBC

. ODBC

“System Requirements”

(Graph Options)

Performance Graph

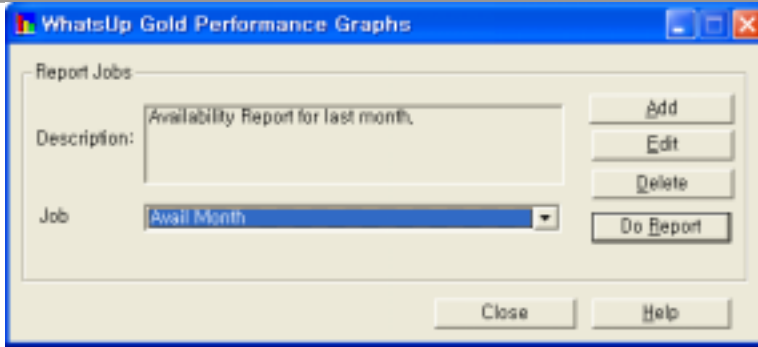
- : , , , .
- () :
- : ;
- .
- : 가 export .

(Creating a Graphs)

- 1 Performance Graphs
 - **Reports** Performance Graphs
 - **Start** WhatsUp ->WhatsUp Gold -> WhatsUp Gold Performance Graphs
 - Map Level , **Performance Graphs**

Note Ctrl

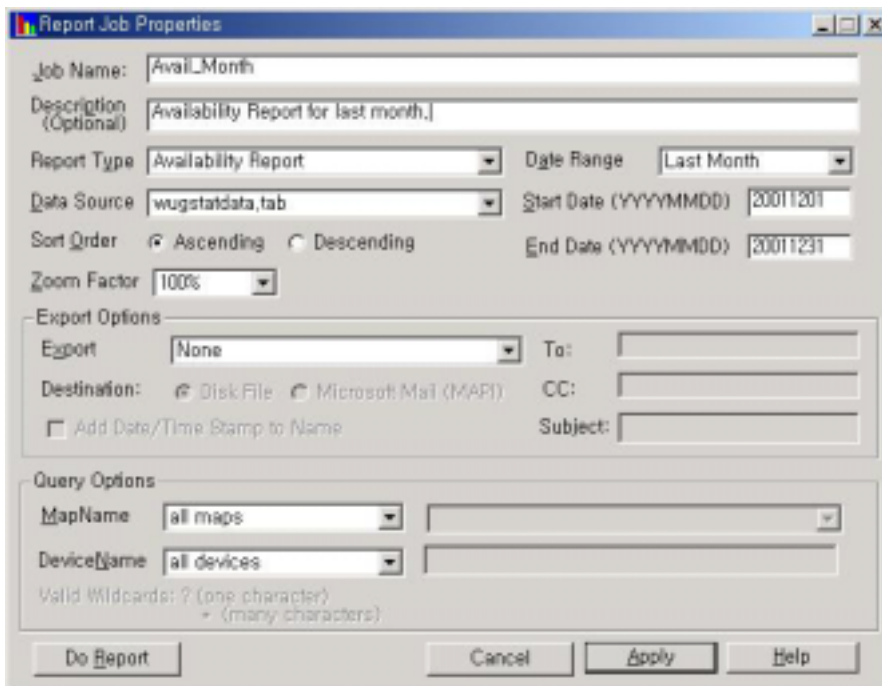
Performance Graphs



Job Name , 가 report jobs
Description 가
 , **Do Report**

Report job 가, , 가 가 .

Job Name 가 Report Job
 가 .



2 **Reports Type** , (performance)
 , “Sample Performance Graphs”
 Report Type “Report Job Properties”

3 **Date Range** , **Start Date** **End Date** 가

Custom	,	Start	End Date	. yyyyymmdd
	.	(, 20020208	.)
4 Data Source		<i>wugstatdata.tab</i>		ST-
		<i>yyyy-mm-dd.tab</i>		
			WhatsUp	
	(, C:\Program Files\WhatsUp\)		<i>wugstats</i>	,
Data Source				
5 Sort Order				
	Ascending ()	Descending ()		
	(Comprehensive Report)		
6 Zoom Factor				
7 Export Options.	export			
• Export Format.	export			
• Destination.		(MAPI)		

Note / 가 .()
 가 . Export job WUGWEBDIR\Reports
 WhatsUp Gold . : **Top**

View->Performance Graphs.

8 Query Options	,		
	,	<i>ST-yyyy-mm-dd.tab</i>	
	.	Criteria	,
MapName.		All maps	
	,	contains	, Search String
	(search expression)(contains, starts with)	,
(search text,)	Search String	
		(: *map1.wup, *map2.wup,	
*map3.wup.)			

Note (*)

DeviceName. All devices (contains, does not contain, start with

) , (,)

(: Device1, Device2, Device3)

- 9 **Do Report** 가
 가 , **Exporting**
Records 가 **Cancel Exporting**
 “Sample Performance Graph”

Note **Apply**

(Using Search Expressions)

All maps or all devices	
Contains	가 () ; Search String 가 . ? = ; * = “,” Atlanta,GA Atlanta, GA “,” escape
Does not contains	가 ()
Starts with	()
Does net starts with	()

Search String. Search string , ;
 , wks120 , ;
 wks120. , “*” : *whatsup1.wup
 C:\Program Files\WhatsUp\whatsup1.wup

Note “contains” “does not contain”

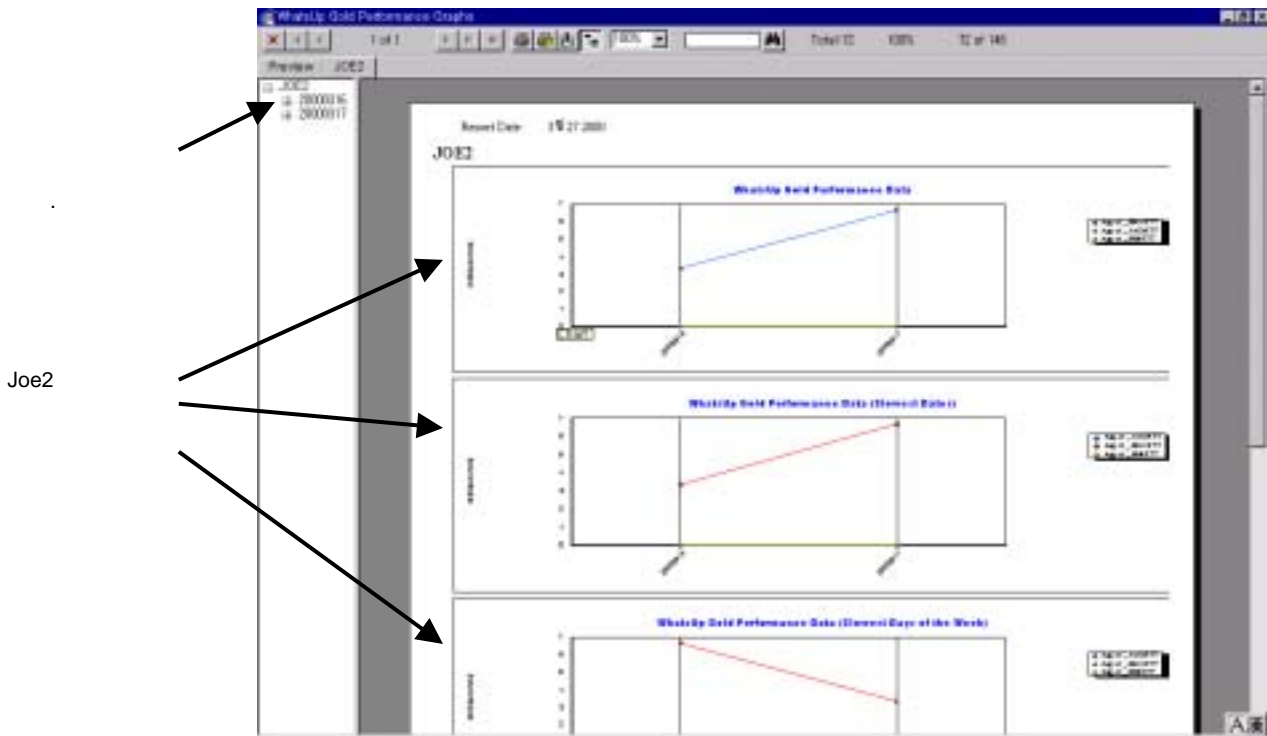
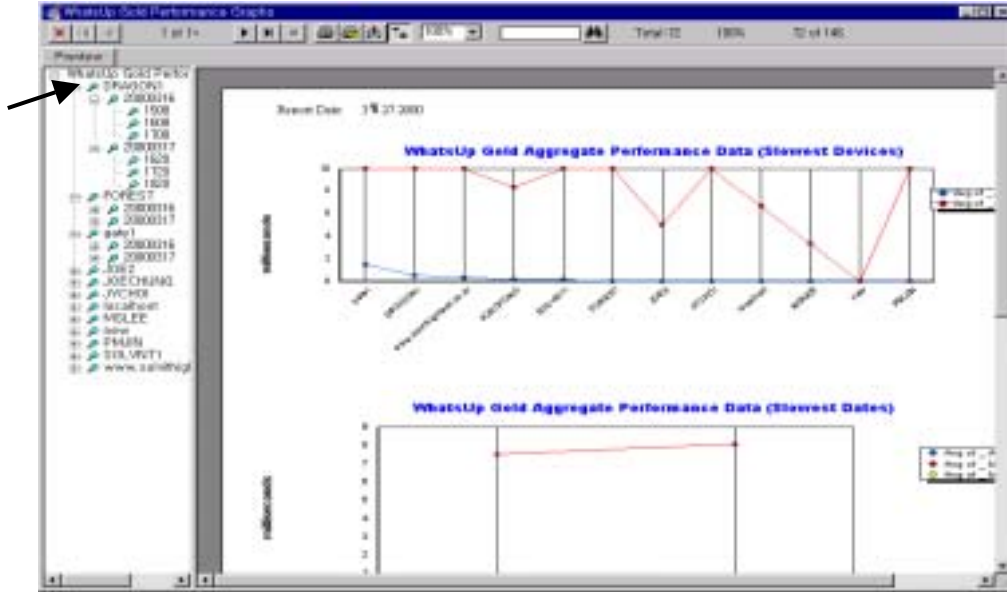
contains , Search String “?” , “* “
 , :

wks? - wks1, wks2, wks9 ; wks10, wks11, wks120

wks* - wks1, wks10, wks120

(Sample Performance Graphs)

Comprehensive Report



(Viewing, Printing, and Exporting

Performance Graphs)

Performance graphs (viewer)

가

Daily Text Report

Device list. (viewer)

IP

Tool Bar. (tool bar)

(export),



Export

Printing Graphs.

Print

Print Setup

Exporting Graphs.

HTML (export) (export)

(export) , :

1 **Export** . Export 가

2 **Format** . HTML, text, RTF

3 **Destination**

4 **OK**

(exported)

(Using the Command Line for Performance

Graphs)

Cstatrpt.exe Statistics Log(ST-yyyy-mm-dd.tab)
 WhatsUp Gold (MS-DOS)
cstatrpt Performance Graphs
 . -x argument non-interactive mode .(, 가
 .) -x HTML Performance Graphs ,

Basic Command Syntax

cstatrpt [-mmapname] [-ddevicename][-Ddateopt] [-syyyymmdd] [-eyyyymmdd] [-logfile] [-osortmode] [-x]

Argument	
<i>jobname</i>	Cstatrpt.ini.file job . Note: 가
<i>-mmapname</i>	cstatrpt -mc:\Program Files\WhatsUp\network1.wup , -m*network* network1, network2, network3,
<i>-ddevicename</i>	-d , -d*WKS* WKS1, WKS2, WKS3
<i>-Ddateopt</i>	-D recurring time period wtd - Current week to date td - Today lastw - Last week mtd - Month to date lastm - Last month
<i>-syyyymmdd</i>	-s
<i>-eyyyymmdd</i>	-s
<i>-logfile</i>	-l wugstatdata.log
<i>-osortmode</i>	-o () - Ascend; - Descend
<i>-rreport</i>	-r Wugstatall.rpt - Comprehensive Report Wugstatdaily.rpt - Daily (Line Chart) Wugstatdow.rpt - Day of the Week (Area Chart)

	Wugstatdowbar.rpt - Day of the Week (Bar Chart) Wugstatmoy.rpt - Monthly (Area Chart) Wugstatmoybar.rpt - Monthly (Bar Chart) Wugstatdailytext.rpt - Daily Text Report Wugstatavail.rpt - Availability Report Wugstathour.rpt - Hourly Report (Line Chart) Summary.rpt – Summary Report
-x[n]	-x , -r HTML (export) (exported) WhatsUp Web\reporttype NOTE: cstatrpt.out . [n] 1 18 . (.)
-u	/ 가 .
-?	-?

Examples

Boston1 Performance graphs .

Example1.

cstatrpt -m*Boston1.wup

Boston1 Comprehensive
 report . (.)

Example2.

cstatrpt -m*Boston1.wup -rwugstatdaily.rpt -Dlastm -x

Boston1
 , HTML (export) . (Performance Graphs
 .)

Export File Formats. export UI (command line)

Note

User Interface Report Job Property

Job Name

가 . : Avail_Month_HTML

Boston1.wup . : cstatrpt

Avail_Month_HTML. : cstatrpt-m*Boston1.wup –

oascend –rwugstaravail. –Dlastm –x1 -u

Export File Formats.

UI 가

- HTML
- Seagate Crystal Reports
- Acrobat (PDF)
- Data Interchange
-
- Record Style Format (column of values)
- Rich Text
- Comma Separated Values (CSV)
- Tab Separated Values
- Text (ASC)
- Paginated Text (ASC)
- Lotus 1-2-3 (WKS)
- Lotus 1-2-3 (WK1)
- Lotus 1-2-3 (WK3)
- Excel 2.1
- Excel 3.0
- Excel 4.0
- Excel 5.0

(Exporting Multiple Report Jobs)

Report 가 Crystal
 Cstatrpt.exe 가 8.0 가
 cstatrpt

(version 8.0)
Cstatrpt Avail_Week
Cstatrpt Hour_Week
Cstatrpt foo

(version 8.0)
Cstatrpt Avail_Week Hour_Week foo
(NOTE: .)

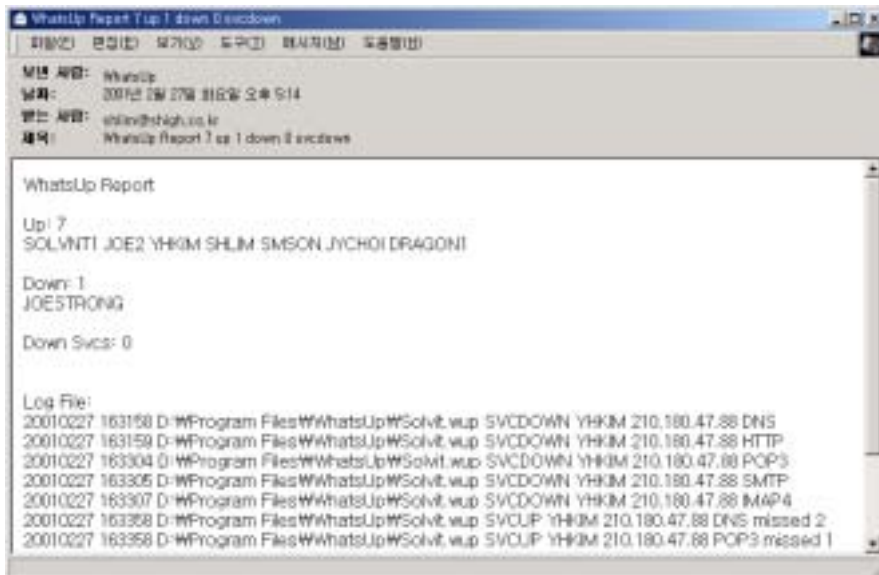
Notification (Sending Recurring Notifications)

notification(Recurring notification), SMS, SMTP, WinPopup, TextSpeech, notification notification :

- up
- down
- down
- Activity Log (the most recent lines)

가 가

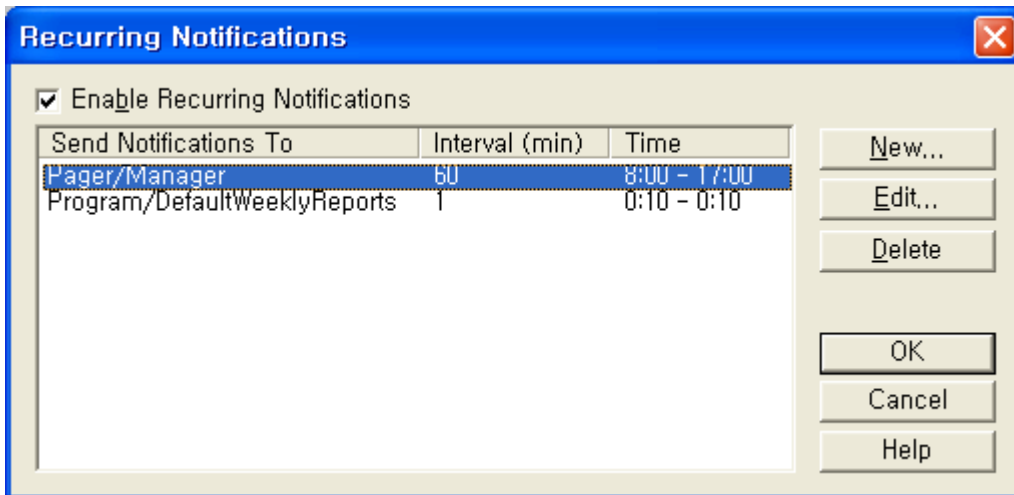
Recurring Notification



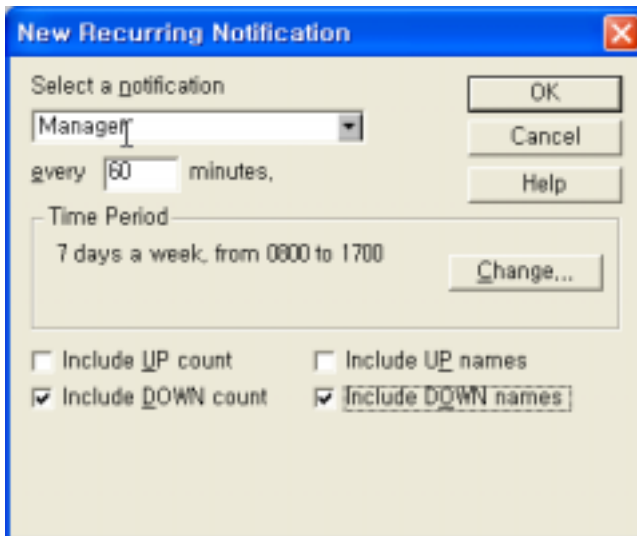
Recurring Notification , :

1 **Configure** , **Recurring Notifications** . Recurring Notifications
가 .

2 **Enable Recurring Notifications** .



3 **Add** . Add/Edit WhatsUp Reports 가 .



4 notification .
 , 가 notification
notification . Notification

“Defining Notifications”

5 () .

6 **Time Period** . **Change** , (7 days a week, 24 hours a day)

Day of Week . : 7 days a week . 7 days a week

Time of Day 3 가

- 24 hours a day
- Between
- Not between

Note **Between** **Not Between**

AM PM 24hour (0000 to 2400)

Not between 0600 0601 1

7 , SMTP , WinPopup, notifications , TextSpeech notification

Include UP count. Up

Include UP names. Up

Include DOWN count. Down

Include DOWN names. Down

notification .:

Include last n lines of log file.

. (가) Activity

notification

Message format. WhatsUp Gold 99

. 3 %u , %u= up , %u= down , %u=

up 가

	(%)	.	(*)	,
		(-)	.	,
	:99*%u*%u*%u*			
8	OK	notification	,	WhatsUp Gold
	/	notification		Recurring Report
9	OK	,	.	

11 Web Browser)

(Working from a

, WhatsUp Gold remote
 (mapping), (monitoring), notification (access)

WhatsUp Gold Server)

(Setting Up the WhatsUp Gold Web

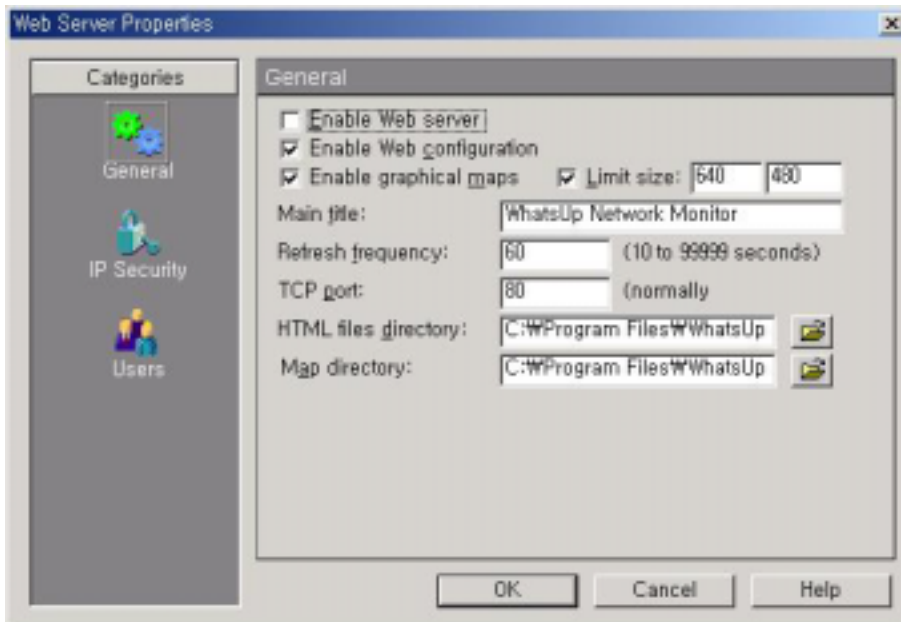
WhatsUp Gold

, WhatsUp Gold

WhatsUp Gold Windows NT
 service") , 가

("Running WhatsUp Gold as a Windows NT

- 1 **Configure** , **Web Server** , **General**



- 2 **Enable Web Server**

3 가 WhatsUp Gold , **Enable Web Configuration**

(“Setting Web Access by IP Address”). **Enable Web Configuration**
 , WhatsUp Gold , .

4 가 가 .;
 가 . JPEG .;
 , **Enable Graphical Maps**

5 **Enable Sounds.** 가 .
 () .

6 .
 Limit Size. .
 Main Title. WhatsUp Gold (“Top View”)

Refresh Frequency. WhatsUp Gold (
 10 99999 refresh)

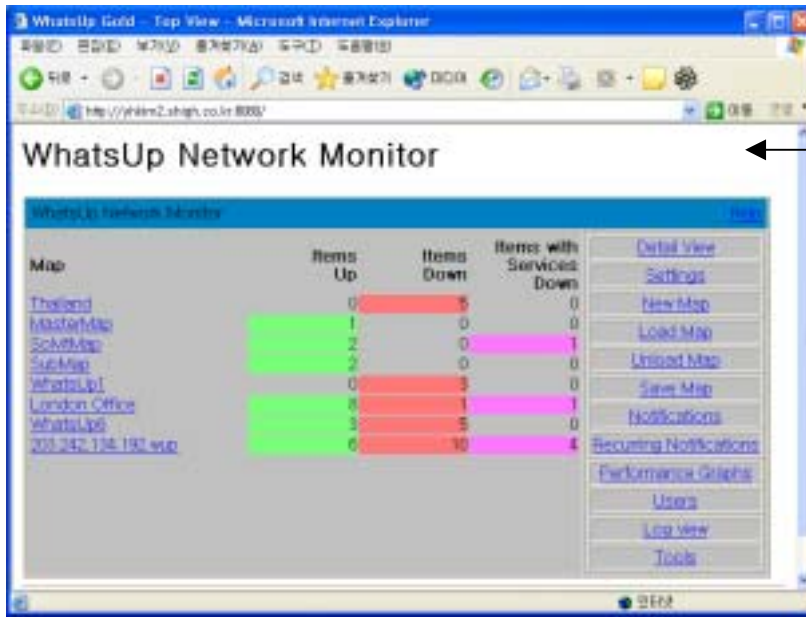
TCP Port. 80 (HTTP) TCP/IP
 . 가 ,
 (, 8008 8080).

HTML Files Directory. WhatsUp Gold \Web
 . WhatsUp Gold 가
 , HTML 가

Note: *default.asp* *TopView.asp*

Map Directory. , ,

7 **OK**



(Making Maps Available for Web Viewing)

WhatsUp Gold

가

“Setting Web Server Access”

, **Configure program**

가

WhatsUp Gold 가

가

• WhatsUp Gold

, **Configure**

-> **Web Server**

General

Web Server Properties

. **Map Directory**

가

• , WhatsUp Gold

View”)가

. **Settings**

(“Top

Map Directory

. **Startup**

, WhatsUp Gold

(Setting Web Server Access)

가 . 가

- WhatsUp Gold ID 가
- 가 IP , IP (set)

(Default User Accounts for the Web Server)

WhatsUp Gold 가 ID :

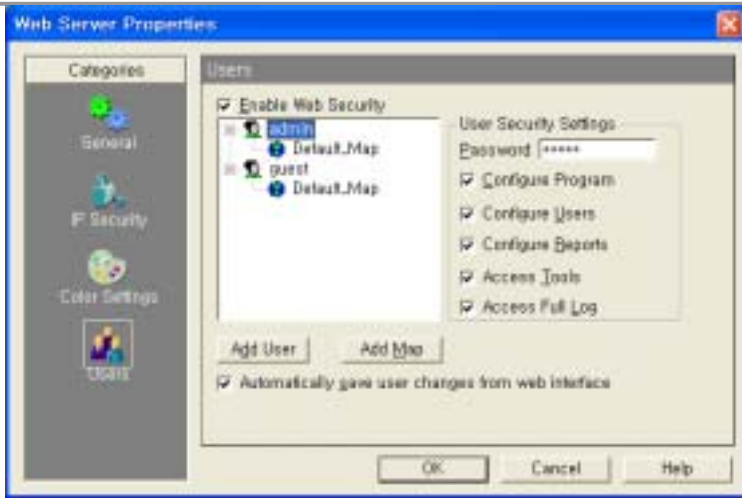
가 , ID

- ID 가 admin(admin) , WhatsUp Gold 가 ().
- ID 가 *guest* , WhatsUp Gold *guest* , WhatsUp Gold *guest* (disable)

(Setting Up User Accounts for the Web Server)

WhatsUp Gold ,

- 1 **Configure** -> **Web Server** , **Users**



2 **Enable Web Security** ().

ID

3 **Add User**

4 **Add User** 가 ,

5 **Username** , ID 39

6 **Password** , 39

7 Available Maps

Note Default Map 가

, Default Map

Map Level Security Settings

()

Map Level Security Settings

Default Map ().

, Default Map

Access Host Pages. 가 ()

Configure Devices

Acknowledge Alerts. 가

Configure Maps. 가 ;
 ; , 가,

Configure Devices. 가 ;
 ; ;
 , 가, ,

Access Log. 가

4 **Map Level Security Settings**

5 () WhatsUp Gold
 , **Automatically save changes to users from web interface**

6 **OK**

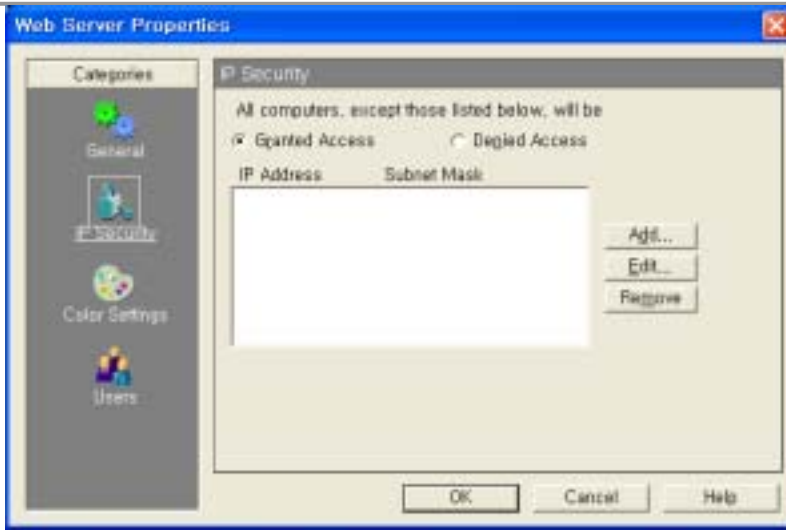
가 WhatsUp Gold
 ID 가

Note WhatsUp Gold ,
 , **Configure** -> **Web**
Server , **General** , **Enable Web Configuration**

IP (Setting Web Access by IP Address)

IP , WhatsUp Gold

1 **Configure** -> **Web Server** , **IP Security**



2 **Granted Access**

3 **Add** . "Deny Access On" 가 .

, **Group of Computers**

IP Address **Subnet Mask**
 , 156.21.50.0
 , 156.21.50.1 ~ 156.21.50.254

IP Address **Subnet Mask**
 255.255.255.0
 IP

4 **OK** IP () 가 IP

5 **IP Security** **OK**

1 **IP Security** **Denied Access**

2 **Add** . "Grant Access On" 가 .

, **Group of Computers**

IP Address **Subnet Mask**
 , 156.21.50.0
 156.21.50.1 ~ 156.21.50.254

IP
 255.255.255.0
 IP

3 **OK** IP () 가 IP

4 **IP Security** **OK**

Enable Web Security (Users) , 가 IP
 ID
 가 .

IP Security , IP , Edit
 ,
 Remove .

(Logging On to the Web Server)

WhatsUp Gold
 WhatsUp Gold 가
 80 .

1 Address(URL) WhatsUp Gold
 WhatsUp Gold monitor1.lpswitch.com
 가 8081 , http://monitor1.lpswitch.com:8081 .

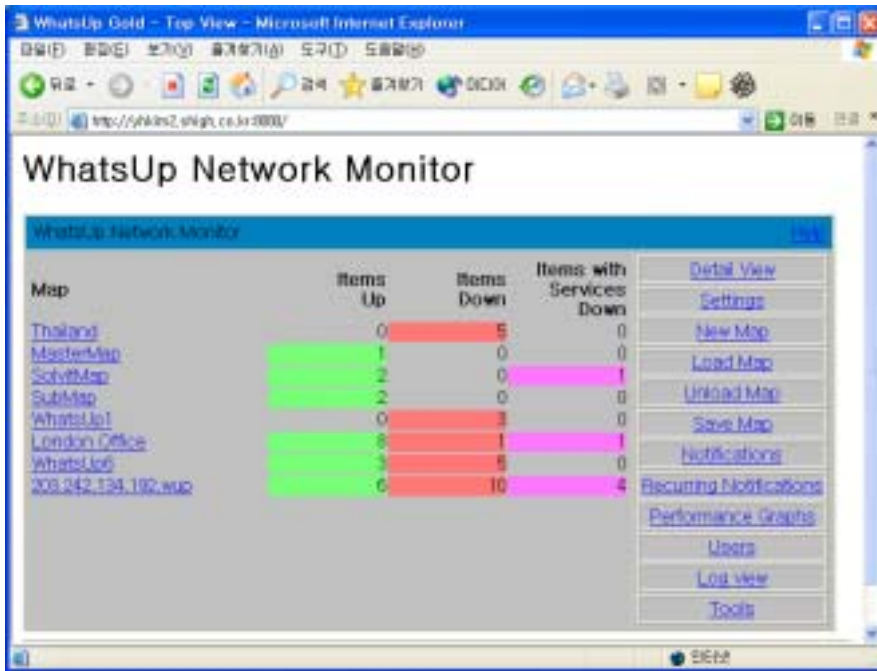
Note WhatsUp Gold “ ” “ ”

- 가 .
- 2 WhatsUp Gold ID .
 WhatsUp Gold 가 가 ,
 가 .
- WhatsUp Gold (“Top View”)가 .
- 가 , .:
- WhatsUp Gold 가 .
 - **Configure -> Web Server -> General** **Enable Web Server**
 .(off .)
 - **IP Security** (**Configure -> Web Server -> IP Security**) , IP

WhatsUp Gold (WhatsUp Gold Web Display)

WhatsUp Gold (Top View), (Map View), (Summary View), (Device view), Activity 가 WhatsUp Gold web monitor Help

Top View. Top View (Map Properties).



Map View. Top View Map View 가 가

JPEG

, **General**

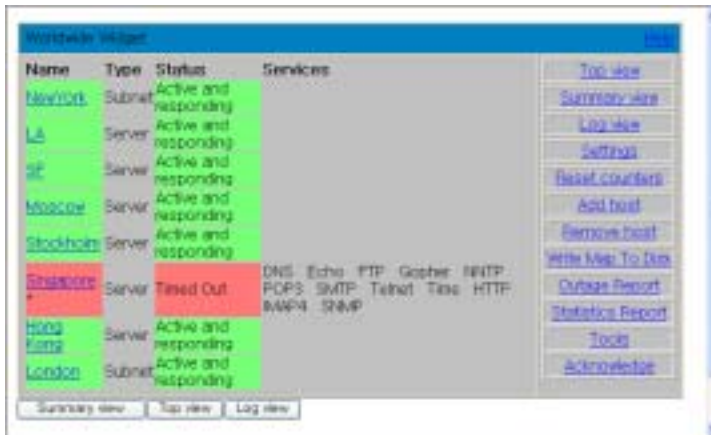
Enable Graphical Maps

. Map View

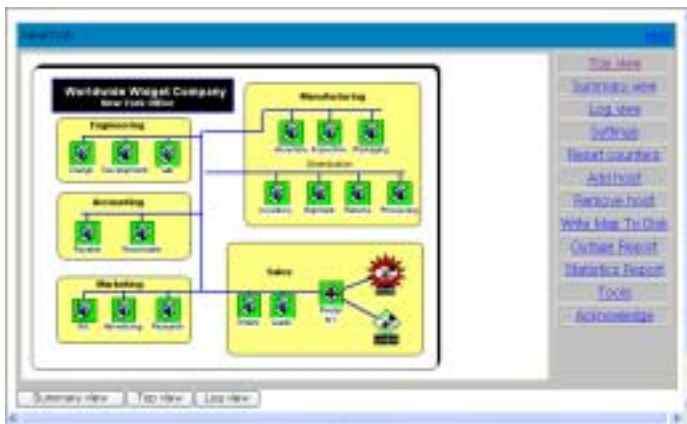
). **Acknowledge**

Text Listing : Configure -> Web Server -> General Enable Graphical

Maps



Graphical Maps : Configure -> Web Server -> General Enable Graphical Maps



Device View. Device View

Device View , IP ,

WhatsUp Gold Statistics Window

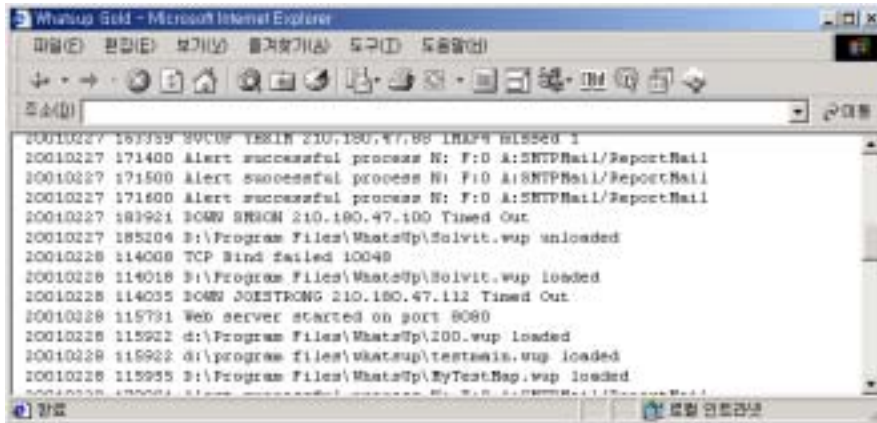


Summary View. Summary View

Name	Type	#	%	%	Down	Period	#	Avg	Min	Max	
		Probs	Responded	Missed	Time		Alerts	delay	delay	delay	
SVR1	ICMP	1151	100.00%	0.00%	0:00	165-28	0	0	0	31	Top view
	DNS	1151	100.00%	0.00%	0:00		1	0	20		Map view
	HTTP	1151	100.00%	0.00%	0:00		0	0	20		Log view
Boas2	ICMP	1151	100.00%	0.00%	0:00	165-28	0	0	0	11	Settings
	HTTP	1151	100.00%	0.00%	0:00		1	0	60		Reset counters
YH3M	ICMP	1151	99.22%	0.78%	0:09	165-28	0	0	0	11	Add host
	DNS	1142	99.82%	0.18%	0:02		1	0	30		Remove host
	POP3	1142	99.91%	0.09%	0:01		2	0	21		Event Report
	SMTP	1142	99.91%	0.09%	0:01		1	0	20		Statistics Report
	HTTP	1142	99.82%	0.18%	0:02		2	0	31		Tools
	IMAP4	1142	99.91%	0.09%	0:01		1	0	30		
SHLM	ICMP	1151	100.00%	0.00%	0:00	165-28	0	0	0	10	
	DNS	1151	100.00%	0.00%	0:00		0	0	0	60	
SMSON	ICMP	1151	94.61%	5.39%	1:02	165-28	0	0	0	10	
JYCHK	ICMP	1151	93.57%	6.43%	1:14	165-28	0	0	0	30	
	FTP	1077	99.91%	0.09%	0:01		1	0	20		
	HTTP	1077	99.91%	0.09%	0:01		0	0	20		
Boas	ICMP	1151	1.13%	98.87%	18:58	165-28	0	0	0	0	
	HTTP	13	100.00%	0.00%	0:00		0	0	0	10	
SVR2	ICMP	1151	100.00%	0.00%	0:00	165-28	0	0	0	20	
	POP3	1151	100.00%	0.00%	0:00		0	0	20		
	SMTP	1151	100.00%	0.00%	0:00		0	0	20		
	HTTP	1151	100.00%	0.00%	0:00		0	0	20		

Detail View. Detail View WhatsUp Gold (WhatsUp Gold
) (map title) ;
 WhatsUp Gold

WhatsUp Network Monitor		
203.242.134.192 up 16 device(s) up No devices down No Services down		Top View
203.242.134.198 (203.242.134.198)		Settings
ICMP		New Map
FTP (File Transfer Protocol)		Load Map
HTTP (Hypertext Transfer Protocol)		Unload Map
Telnet Server		Save Map
Interface(1) TCP/IP Ethernet External Interface		Notifications
(203.242.134.198)		Securing Notifications
Interface(2) HDLC/SDLC Control protocol		Performance Graphs
		Users
SOLVNT (203.242.134.194)		Log view
ICMP		Tools
DNS (Domain Name Service)		
FTP (File Transfer Protocol)		



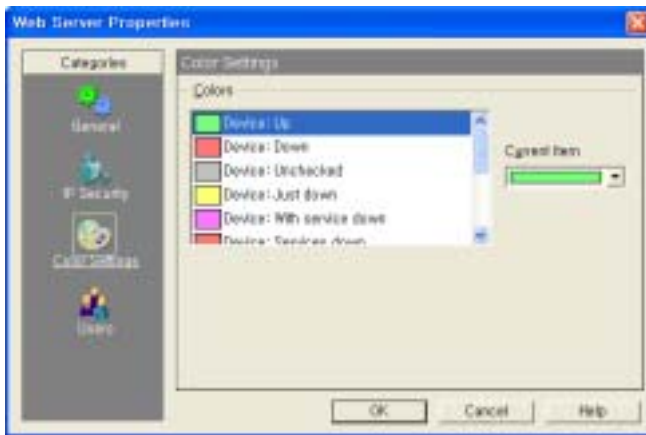
(Setting Web Colors)

Server

Colort Settings

Configure

Web



Colors

Colors

. Current Item Color

WhatsUp Gold Gold Web Site)

(Customizing Your WhatsUp

Note

7.0 WhatsUp Gold customize
가 . WhatsUp
Gold 'Classic' 가 .
'Web' .asp
'Classic' 'Web
TemplatesArchive\Classic'
Ipswitch . TopView.asp
header footer customization
가 가
HTML
가? HTML
(pseudo-script code) WhatsUp Gold
? HTML
, <%APPLICATION_SETTINGS%MAIN_TITLE>, "WhatsUp Gold"
(pseudo-script code) ? WhatsUp Gold
flow control
loops , string
WhatsUp Gold

Note 가 Ipswitch

. <http://www.ipswitch.com/support/whatsup/plugins.html#webtemplate>.

13 SNMP (Monitoring SNMP Devices)

Simple Network Management Protocol(SNMP) ,

. WhatsUp Gold , SNMP (agent)
 SNMP

WhatsUp Gold 가 SNMP ,
 SNMP , WhatsUp Gold 가 ((trap)) SNMP

WhatsUp Gold SNMP (SNMP Implementation in WhatsUp Gold)

WhatsUp Gold , SNMP
 , SNMP SNMP Management Information Base (MIB) . SNMP MIB , "SNMP Overview"

WhatsUp Gold SNMP
 . WhatsUp Gold (SNMP Version 1 MIB). , vendor-provided SNMP 가 MIB . "Setting Up the MIB Identifiers"

Note WhatsUp Gold SNMP . SNMP manager

WhatsUp Gold SNMP . :

- SNMP . SNMP (Tools -> Net Tools -> SNMP) SNMP
- SNMP . **Configure-> Monitors& Services** "SNMP Monitoring"
- SNMP . SNMP Graphing Utility , SNMP . (

-> WhatsUp -> WhatsUp Gold SNMP Graph Utility Tools
SNMP Graph Utility .)

- SNMP (trap) .
 가 (trap) . (trap) ,
 가 , 가

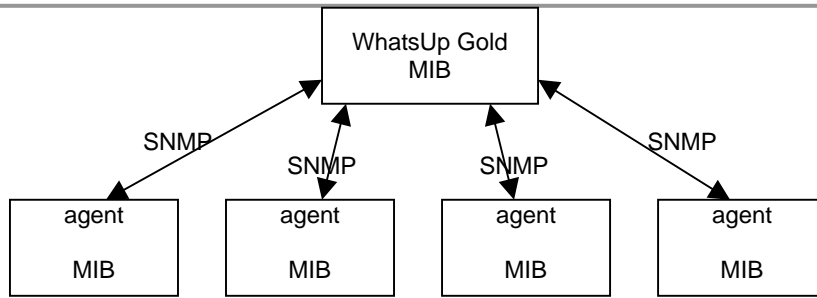
WhatsUp Gold **Quick Status -> Log(**)
 Event Log(**Alerts Enable Logging**)
 .) , WhatsUp Gold 가
 notification (Pager, Beeper, Group, SMTPMail, Sound, WinPopup
 Voice)

(highlight) (.)
Log .

- SNMP 가 .
Services SNMP ,
 , SNMP 가
 ; SNMP .

SNMP (SNMP Overview)

Simple Network Management Protocol(SNMP) 가 , ,
 .
 SNMP agent .
 SNMP agent ,
 (, / / IP
). SNMP , MIB(Management Information Base)
 . MIB SNMP



SNMP MIB 가
(Network management information) . SNMP
MIB . SNMP
RFC(Request for Comments) 1157 . MIB
RFC 1213 .

Note IETF(Internet Engineering Task Force) RFCs (Request for
Comments) . RFC
www.ietf.org/rfc.html . RFCs

MIB (Management Information Base)

MIB “ (management information)”
가 . MIB TCP/IP MIB , TCP/IP

MIB . , RFC 1213 .

MIB “ (object tree)”
. , MIB 가 . :

- system - 가 . :
sysDescr(description), sysContact(person responsible), sysName(device name)
가 .
- interfaces - Ethernet , point-to-point links ,
가 . ; , ifDescr(name), ifOperStatus(status),
ifPhysAddress(physical address), ifInOctets, ifOutOctets(
octet) .
- ip - , IP
. : ipRouteDest (the destination) ipRouteNextHop(the next hop of the route entry)

- (tcp, udp, icmp, snmp, egp)

- MIB 가 ,
 가

MIB public object private object 가 가 , 가

MIB (numeric object identifier) 가
 , sysDescr 가 ,
 . sysDescr (object identifier) 가

```

.:
iso      org      dod      internet  mgmt      mib      system  sysDescr
 1       3       6       1         2         1       1       1
      ,
(instance sub-identifier) 0 가 , 1.3.6.1.2.1.1.1.0
sysDescr

```

MIB (node) , MIB- ()
 1.3.6.1.2.1 가)

(Security)

(community profile) ,
 SNMP agent,
 (community name)
 ,
 , SNMP agent () , agent 가
 IP

SNMP Agent or Manager

SNMP SNMP agent manager 가
 . Windows 2000, 98, 95, Me Windows NT SNMP agent
 (, ,)
) SNMP agent

SNMP Operations

SNMP (Simple Network Management Protocol)은 SNMP agent와 SNMP manager 사이에서 이루어지는 통신을 의미한다.

- Get : SNMP agent가 SNMP manager에게 특정 MIB 값을 요청하는 방식이다.
- Get next : SNMP agent가 SNMP manager에게 특정 MIB 값을 요청하고, 다음 MIB 값을 요청하는 방식이다.
- Set : SNMP agent가 SNMP manager에게 특정 MIB 값을 설정하는 방식이다.
- Trap : SNMP agent가 SNMP manager에게 특정 MIB 값을 보고하는 방식이다.

SNMP agent는 161번 포트에서 SNMP manager와 통신한다. SNMP manager는 162번 포트에서 SNMP agent와 통신한다. (trap)

SNMP agent가 SNMP manager에게 데이터를 전송할 때는 UDP를 사용한다. SNMP manager가 SNMP agent에게 데이터를 전송할 때는 UDP를 사용한다.

SNMP Traps

SNMP agent가 SNMP manager에게 특정 MIB 값을 보고하는 방식이다. (trap) SNMP agent가 SNMP manager에게 데이터를 전송할 때는 UDP를 사용한다. SNMP manager가 SNMP agent에게 데이터를 전송할 때는 UDP를 사용한다.

Trap #	Trap type	Description
0	Cold start	가 SNMP agent
1	Warm start	가 SNMP agent
2	Link down	가
3	Link up	가
4	Authorization Failure	가
5	EGP neighbor loss	가 EGP peer EGP neighbor 가 peer 가

6 Enterprise SNMP specification enterprise specific traps
 specific traps (trap)
 . enterprise specific traps
 MIB 가 .

MIB (Setting Up the MIB Identifiers)

WhatsUp Gold (reference) (*mib.txt* *traps.txt*) MIB
 . SNMP (name/identifier)

, WhatsUp Gold 가 MIB .

WhatsUp Gold , SNMP ,

MIB- SNMP 가 .

가 RFC- MIB (vendor) 가

, MIB trap

. ; MIB Extractor .

WhatsUp Gold "MIB Extractor"(*mibextra.exe*) , SNMP
 , WhatsUp Gold 가

MIB .

MIB extractor , . :

1 MIB .

2 .
 mibextra directoryname \ filename

filename .

MIB Extractor *mib.txt* *traps.txt* , MIB

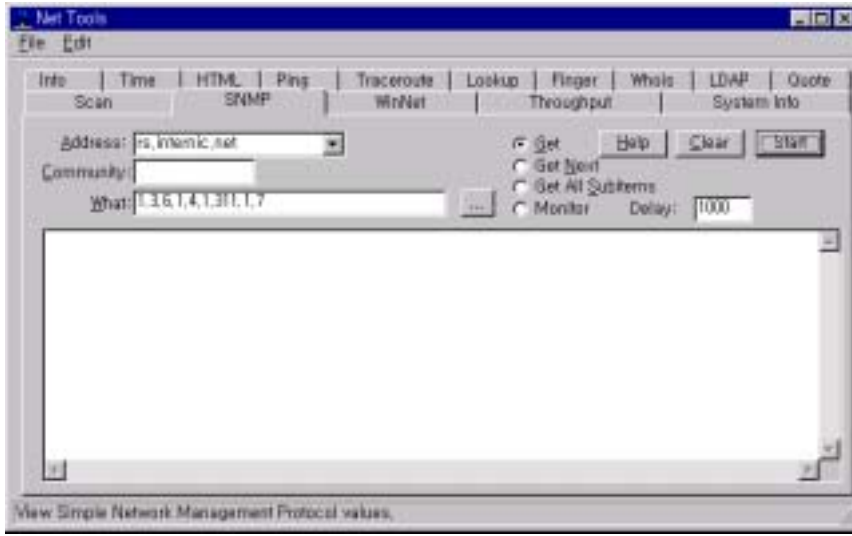
, *mib.txt* *traps.txt* .

Note MIB Extractor 가 "failed to open file" , MIB
 "dependency" 가 . "dependency" 가 mib Import
 . MIB "dependency" .

SNMP (Viewing SNMP Object)

SNMP , SNMP agent 가
 . SNMP , :

1 **Tools** , **Net Tools** , **SNMP** SNMP



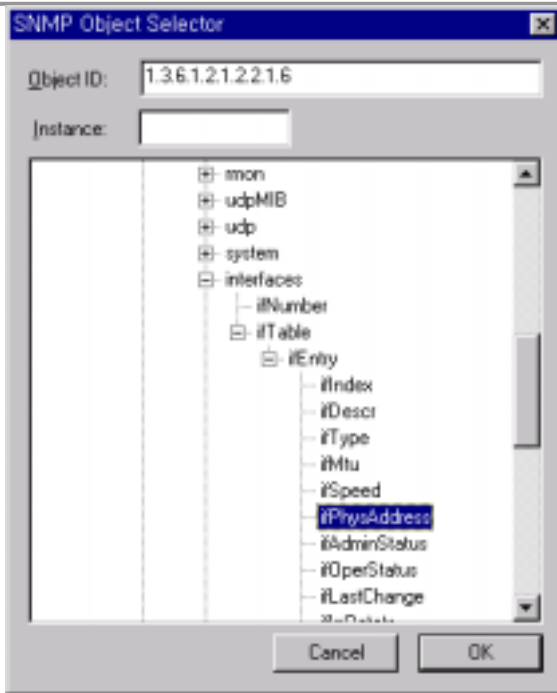
2 **Address** , SNMP IP

3 , **Community** "public"

SNMP (SNMP manager) (,),
 IP , community

(public) , 가 public community
 , SNMP
 가 가 public ,
 community

4 **What** , SNMP (identifier) , **What**
 , SNMP MIB (tree view)



SNMP 가 , "system"
 SysDescr(1.3.6.1.2.1.1.1 가)
 ,
 (instance) 가 ,
 가 , 1.3.6.1.2.1.2.2.1.6 가
 ifPhysAddress 가 ,
 (1.3.6.1.2.1.2.2.1.6.1
).
 0 가 . SNMP
 , "SNMP Overview"

Note What *sysinfo , "system" identification

5

Get. (identifier) , **What**
Get , Windows NT ,
 ifPhysAddress.2 **Get**
 ,
 (instance)가 ,
Get Next. **Get Next** , SNMP agent

. **Get Next**

. MIB

, **What**

Get All Subitems.

Monitor. SNMP Graphing Utility

, **What**

, "Graphing SNMP Values"

6 () **Delay** (1000 milliseconds). SNMP
 SNMP

7 **Start** SNMP

SNMP (SNMP Viewer)

SNMP Viewer SNMP 가

가

SNMP 가

SNMP

SNMP 가

SNMP View

SNMP Viewer 가

가



Configure Interface state colors

	가 up
	가 down.
	가

SNMP

- , **View MIB**
- MIB Viewer
- , MIB tree

SNMP

- , **Monitor Counters**
- SNMP Viewer 가 “ ”
- SNMP
- , **OK**
- SNMP Graph Utility 가 SNMP

- MIB Viewer SNMP **Monitor**

SNMP

- MIB tree ‘walk’ SNMP MIB Viewer
- **Table** MIB

ARP Table – “ARP Table”

Address Table – “Addres Table”

Route Table – “Route Table”

Interface Table – “Interface Table”

SNMP

- Tool SNMP Viewer
- File SNMP Viewer New
- SNMP View
- SNMP Viewer

SNMP (Device SNMP Info)

- SNMP Viewer SNMP
- SNMP 가 가
- SNMP Viewer
- File SNMP Viewer New
- SNMP View
- SNMP Viewer

Host Name. IP

Community. SNMP (Note:
Replace SNMP Community , Read Community
)

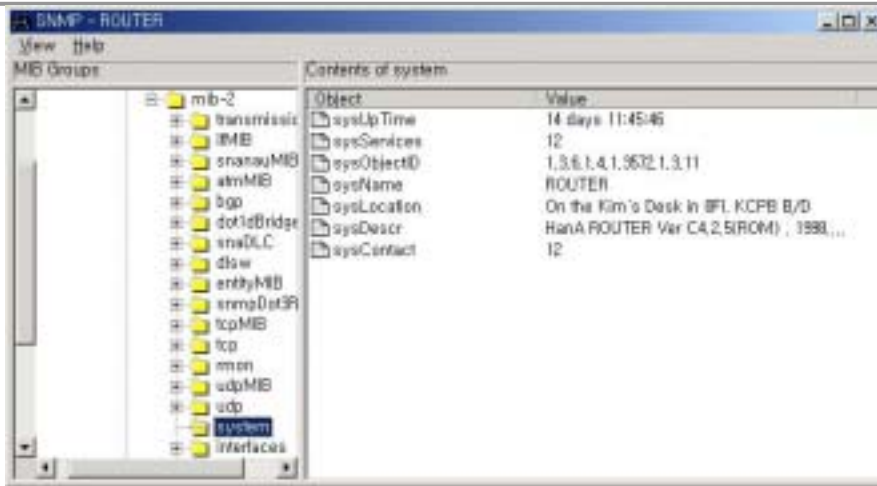
Timeout. 500 milliseconds , 500
가 SNMP

MIB (MIB Viewer)

가 SNMP MIB (SNMP View)
View MIB . MIB Viewer

MIB Viewer (MIB) SNMP . Viewer
SNMP , MIB tree

“walk” . (MIB
)



SNMP

MIB View SNMP : SNMP
 , **Monitor** . SNMP Graph Utility 가 ,

SNMP

SNMP (object identifier)

MIB View SNMP

ARP Table

Table **ARP Table**

Address Resolution Protocol(ARP) Table IP

ARP Table ARP , IP
 가 156.21.50.5 , ARP Table IP 가 ,
 IP (ARP) . IP
 (ARP), IP
 , IP
 - ARP Table .

ARP Table

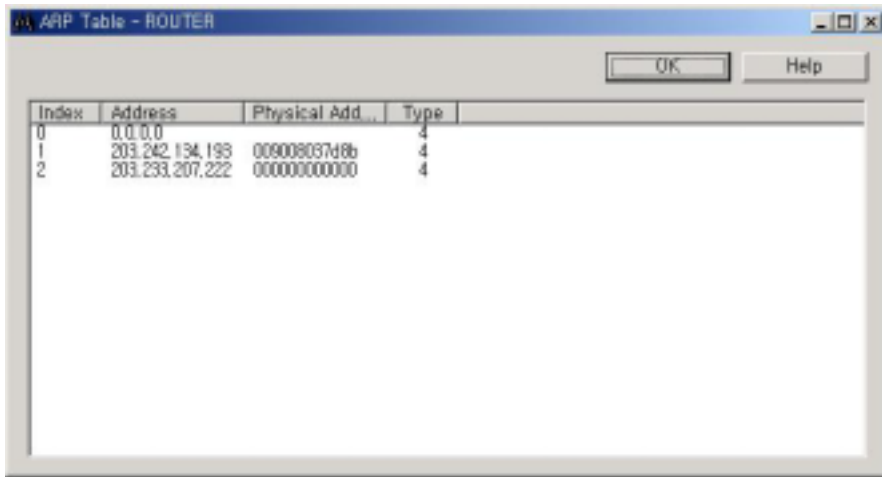
Index: MIB ifTable (ifIndex)

Address: IP : 156.21.50.5

Physical Address: IP . Ethernet
 , 006080716fc0

Type:

RFC1213 1156



Address Table

Table **Address Table**

IP Table IP
 IP portion
 portion

Mask

Address Table

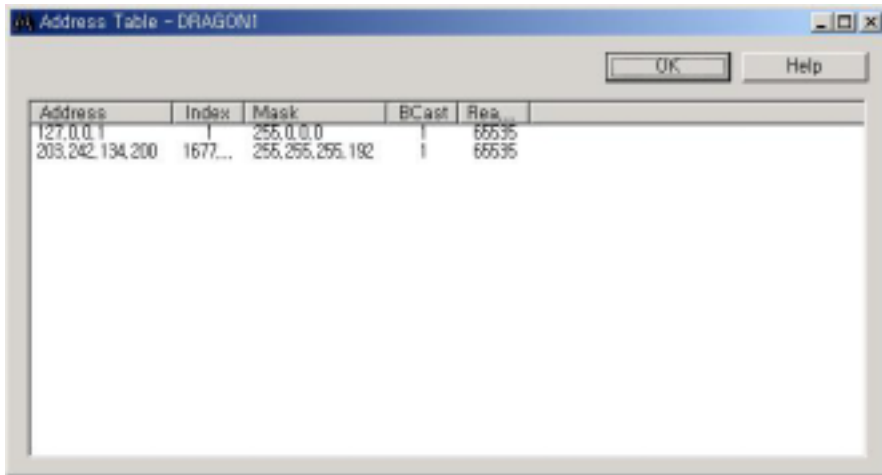
Address: IP

Index: MIB ifTable (ifIndex)

Mask: IP
 1 , 0 IP

Bcast: IP IP 가
 , 1 . ,

ReasmMazSize: 가 IP IP
 .
 RFC1213 1156 .



Route Table

Table **Route Table** .
 IP 가 () , ()

Route Table , Route Table ,
 . Route Table

Route Table .:

Dest Address. IP . 0.0.0.0 가
 .
 table-access mechanism

Index. 가 가 (hop)

Metric1-Metric4. Metric1 routing metric , Metric2 Metric4
 metric metrics

routing . Metric , -1 .

NextHopAddr. Next Hop Address (hop) IP .

Type. : (1)=other, : (2)=invalid, : (3)=direct,
 () : (4)=remote, / / 가

Proto. IP . (1)=other, : (2)=local,
 가 : (3)=netmgmt, : (4)=icmp, ICMP :
 (5)=egp: (6)= ggp: (7)=hello: (8)=rip: (9)=is-is: (10)=es-is: (11)=Ciscolgrp: (12)=bbnSpflgp:
 (13)=oigp

routing 가

Age. 가 . Age “too old”

Mask. IP
 1, 0 IP .

Metric5. metric.

Info. ; 0 .

RFC1213 1156 .

Dest Address	Index	Max	Metric	NextHopAddr	Type	Proto	Age	Mask	Info
0.0.0.0	1677	1	255	203.242.134.153	4	3	186600	0.0.0.0	255 0
127.0.0.1	1	1	255	127.0.0.1	3	3	186600	255.0.0.0	255 0
203.242.134.192	1677	1	255	203.242.134.200	3	3	186600	255.255.255.192	255 0
203.242.134.200	1	1	255	127.0.0.1	3	3	186600	255.255.255.255	255 0
203.242.134.255	1677	1	255	203.242.134.200	3	3	186600	255.255.255.255	255 0
224.0.0.0	1677	1	255	203.242.134.200	3	3	186600	224.0.0.0	255 0
254.255.255.255	1677	1	255	203.242.134.200	3	3	186600	255.255.255.255	255 0

Interface Table

Table **Interface Table** .

Interface Table 가 IP

()
 가 (: inOctets, outOctets)

Interface Table .:

Index: MIB ifTable (ifIndex)

Description: , , .

Interface Type: stack IP / /

Address: stack IP layer .
 (, serial line) 가 , zero length octet string

Admin Status: . : Up-packet .: Down Testing-

Operator Status: . Up-packet . Down: Testing-

MTU: octets / IP .

Speed: . , .

Last Change: sysUpTime .
 가 ,

InUCastPkts: higher-layer unicast .

InUNCastPkts: higher-layer non-unicast(, ,) .

InErrors: higher-layer

InDiscards: higher-layer 가

Unknown Protos:

OutUCastPkts: subnet-unicast
 higher-level

OutNUCastPkts: non-unicast(, ,)
 higher-level

OutErrors:

OutDiscards: 가

InOctets: framing octet

OutOctets: framing octet

RFC1213 1156

Adm...	Ope...	MTU	Speed	Last Cha...	#InUCastPkts	#InNUCastPkts	Unkr
Up	Up	32768	10000000	0 days 00...	27174	0	
Up	Up	1500	100000000	0 days 00...	256460	22933	1

SNMP (Graphing SNMP Values)

SNMP

. WhatsUp Gold SNMP Graphing Utility

SNMP

, SNMP

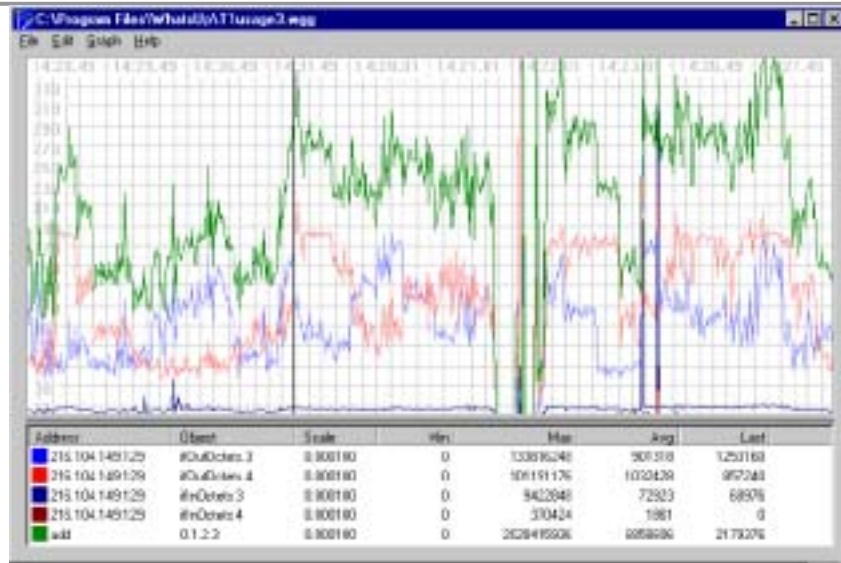
SNMP Graphing Utility
 (line graph)

가 SNMP

Vertical labels



Legend



SNMP 20

, SNMP Graphing Utility

SNMP

“Adding, Editing, Deleting SNMP Object”

Starting the SNMP Graphing Utility

SNMP Graphing Utility

- **Tools**, **SNMP Graph Utility** ; , ->
WhatsUp -> WhatsUp Gold SNMP Graph Utility

Graph -> Properties

SNMP

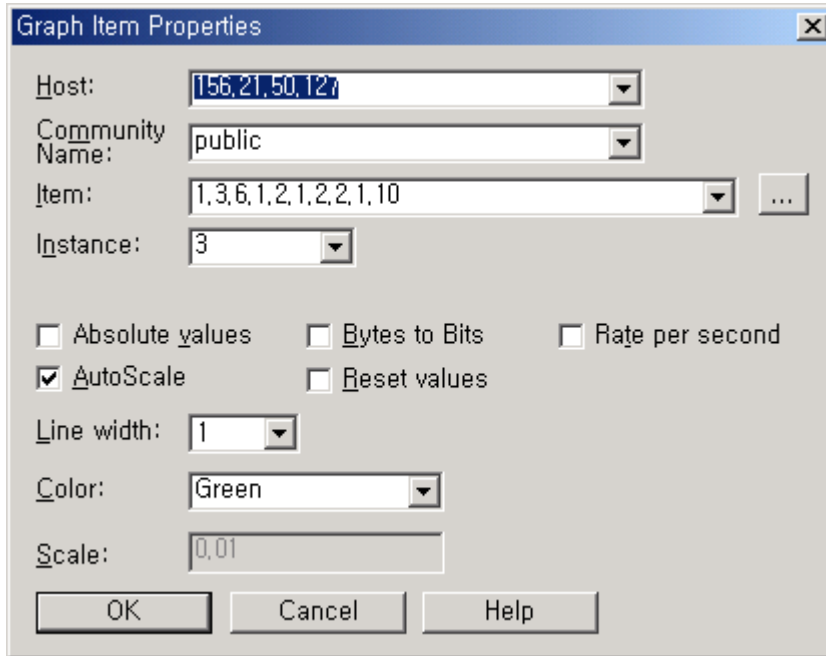
(*graph.wgg*)

- **SNMP** (**Tools -> Net Tools -> SNMP**) , **What** SNMP
(identifier) , **Monitor** **Start** . WhatsUp
Gold Graphing Utility 가 , SNMP

SNMP 가, , (Adding, Editing, and Deleting SNMP Objects)

SNMP 가 , :

1 **Edit** , **Add Item -> SNMP Item** . Graph Item Properties
가 .



2 **Host** , SNMP IP
. . .

3 , **Community Name**
"public"
(public) , 가 public community
가 가 public community
community

4 **Item Instance** , SNMP
(, MIB
MIB .)
Item Instance "SNMP Overview"
MIB
(customizing) "Setting Up the MIB Identifiers"

5 .:
Absolute values. ,
, SNMP

	Absolute values
IfOutOctets	
AutoScale.	SNMP
	Scale
Bytes to bits.	SNMP 8
bit	SNMP
	T1 baud rate
	ifOutOctets 8 baud rate
Reset values.	SNMP
	Edit Clear
SNMP	
Line width.	SNMP
Color.	SNMP
Scale. AutoScale	
Rate per Second.	SNMP
	()
	Interval () 1 가
	Absolute values
6	SNMP 가

(Viewing Item Values)

SNMP	raw data	Legend
	Edit	View Item Values

Time	Value	Diff	Reported
15:17.38	35585543	1020	8160
15:17.39	35586379	836	6688
15:17.40	35587699	1320	10560
15:17.41	35588975	1276	10208
15:17.42	35590207	1232	9856
15:17.43	35591175	968	7744
15:17.44	35592581	1406	11248
15:17.45	35593769	1188	9504
15:17.46	35594605	836	6688
15:17.47	35595353	748	5984
15:17.48	35596652	1299	10392
15:17.49	35597486	834	6672
15:17.50	35598146	660	5280
15:17.51	35599026	880	7040
15:17.52	35599910	884	7072
15:17.53	35601186	1276	10208
15:17.54	35603299	2113	16904
15:17.55	35604399	1100	8800
15:17.56	35605103	704	5632
15:17.57	35606027	924	7392
15:17.58	35607063	1036	8288
15:17.59	35608075	1012	8096
15:18.00	35608750	675	5400
15:18.01	35609592	842	6736
15:18.02	35610868	1276	10208
15:18.03	35611936	968	7744

"View Item Values" SNMP

Title bar. IP SNMP

Time. Time

Value. SNMP

Diff. (가 "Wrap")

Reported.

Item Properties, Graph Accumulator Properties, Graph Timer Properties.

Absolute Value

Bytes to bits

Rate per second

(Time Diff)

second

(Time Diff)

8

2

Bytes to bits

Rate per

2

(Time Diff)

Time Diff. 가
 (milliseconds)

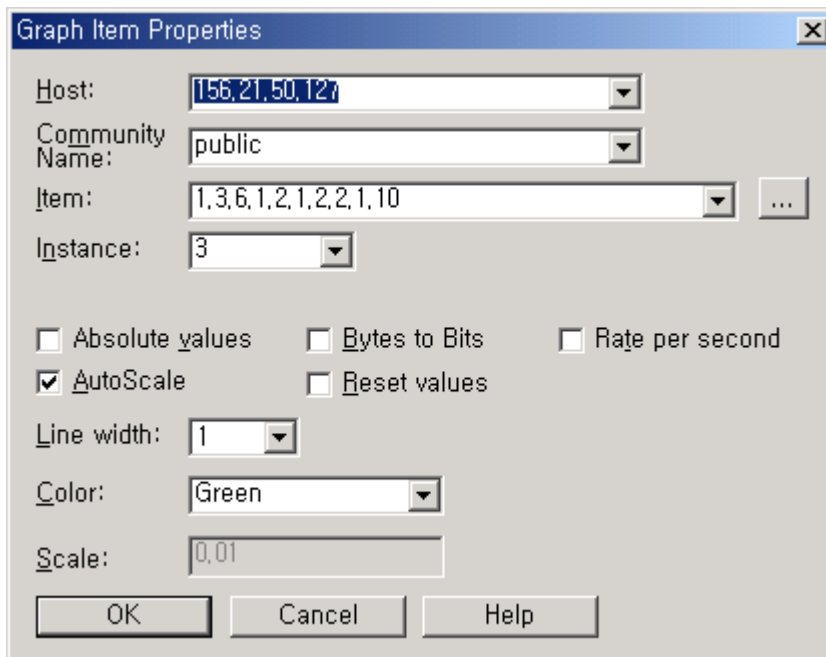
Refresh

(Editing Item Properties)

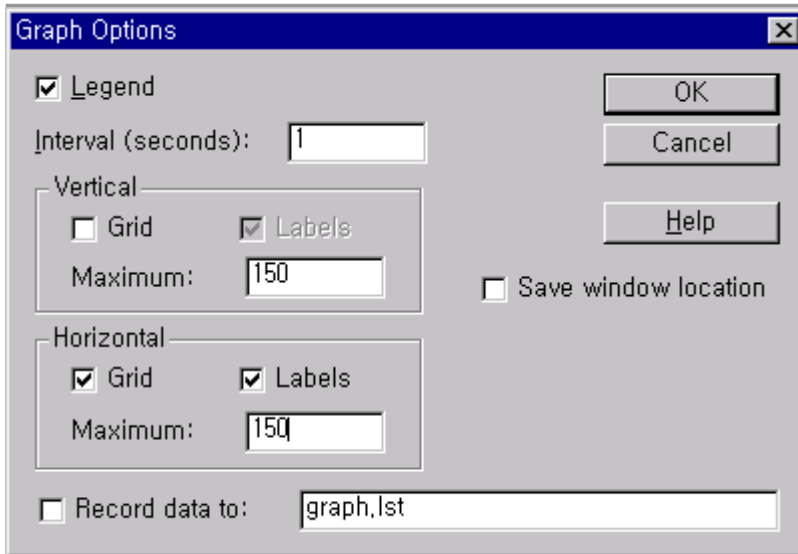
1

- (legend)
- Edit Item Properties
- Properties

Graph Item Properties 가



2 , OK



- Legend.** , 가 .
SNMP , accumulator
- Interval (seconds).** .
- Vertical(y-axis).** **Grid** , X-
 . **Labels** , Y-
Maximum , Y- . 1500
- Horizontal(x-axis).** **Grid** , Y-
X- . **Labels** , X- . **Maximum**
 , X- . 1500
- Save window location.** , ,
- Record data to.** ,
 . WhatsUp Gold . tab-
delimited(가) , (import)
- Append new data to datafile if it already exists.** .
SNMP 가 .

(File Format)

Date [tab] time [tab] first item value [tab] second item value [tab] ...

	IP	SNMP
[156.21.50.12]:1.3.6.1.2.1.2.2.1.10.3		
[156.21.50.12]:1.3.6.1.2.1.2.2.1.16.4		
[156.21.50.12]:1.3.6.1.2.1.2.2.1.16.3		
01/03/2001	11:07:34	103782671006689
01/03/2001	11:07:35	169587431031456
01/03/2001	11:07:36	20678156873944

SNMP (Receiving SNMP Traps)

WhatsUp Gold SNMP (SNMP trap handler) 가 .
 , SNMP 가
 (trap) (trap) , 가 ,
 가

, WhatsUp Gold **Log** (
 , **Quick Status->Log**) Activity Log

(highlight)

, WhatsUp Gold 가 notification (Beeper, Group,
 Pager, SMTPMail, Sound, WinPopup Voice)

WhatsUp Gold , .:
 1 , SNMP agent WhatsUp Gold
 WhatsUp Gold

2 가 "Setting Up the MIB Identifies"
 , MIB Extractor

SNMP Trap Handler 가 . (Configure -> Program Options -> Event Servers . SNMP Traps Configure . Enable SNMP Trap Handler , OK .)



Note SNMP agent 가 WhatsUp Gold SNMP 가 .
 SNMP WhatsUp Gold SNMP 162
 SNMP

3 notifications .

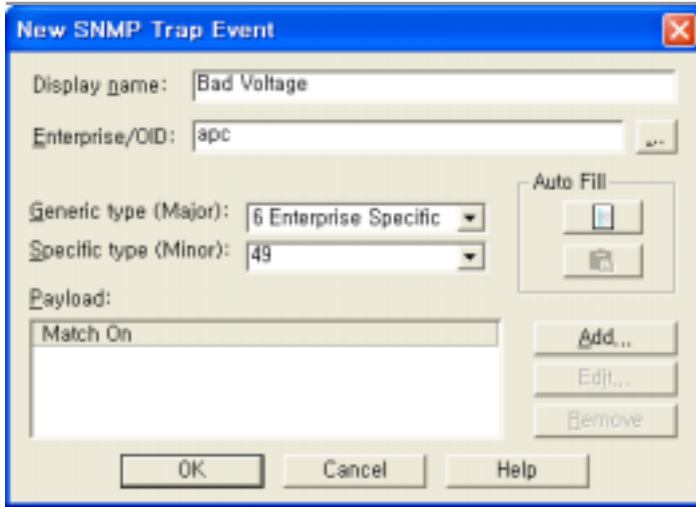
SNMP Trap Event (Setting Up SNMP Trap Events)

Event Library SNMP Trap . “Adding Events to the Events Library” . WhatsUp Gold 가

- badVoltage,apc,6,49
- batteryOverTemperature,apc,6,53

Bad Voltage .

1. Event Library SNMP **New** .

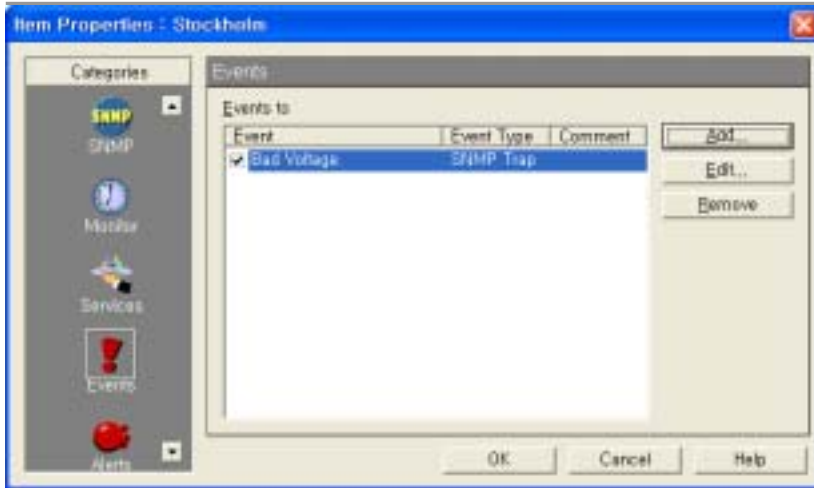


2. **Display Name.** "Bad Voltage"
3. **Enterprise/OID.** MIB "apc"
4. **Generic Type (Major).** "6" – Enterprise Specific.
5. **Specific Type (Minor).** 0 2147483647 "49"
6. **OK**

Note Bad Voltage 가 Events Library SNMP Trap WhatsUp Gold
 \Event\SNMP Traps

SNMP Trap Event (Assigning SNMP Trap Events to a Device)

Bad Voltage properties 가 Events
 . Add OK



Note

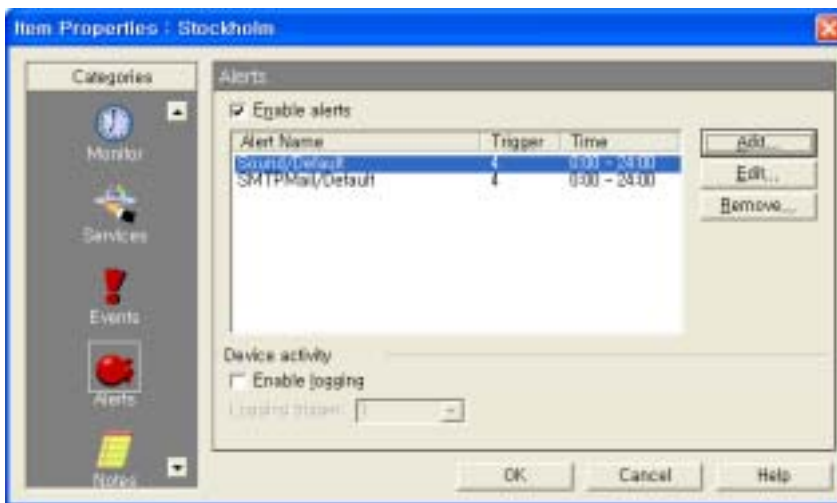
가

SNMP Trap Events Notification (Setting Up Notifications for SNMP Trap Events)

SNMP notification () WhatsUp Gold
 notification . SNMP
 “ SNMP Traps”

“Bad Voltage” notification , :

1. Alerts



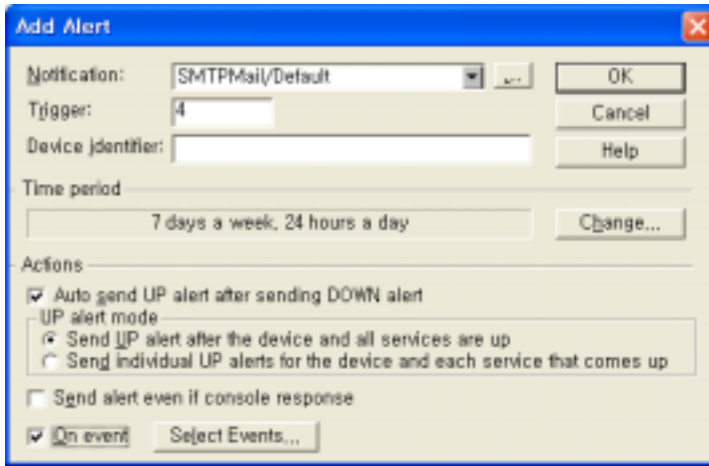
Note

, Properties Alerts . (.)

2 **Enable Alerts** **Enable Logging**

3 **Alerts** , **Add**

“Add Alert” 가



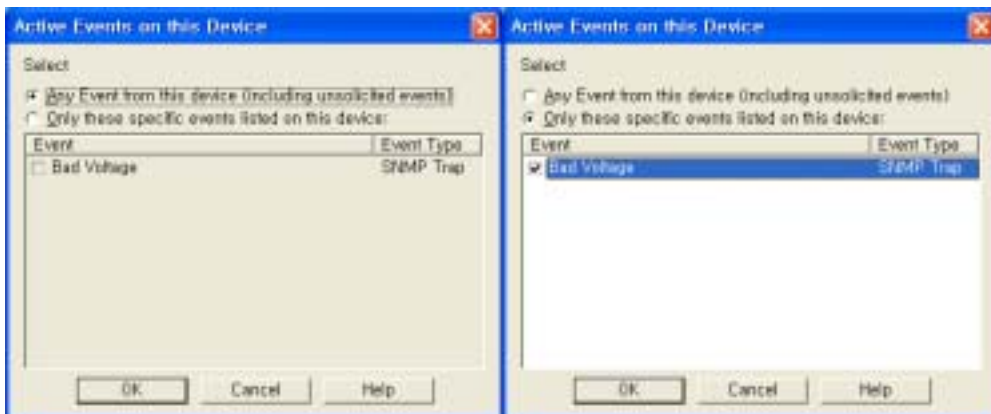
4 , 가 notification

notifications

“Defining Notifications”

5 **On Event**

Select Events



가 . 가

가

6 **OK** Alerts .

notification 가 . **Trigger** . %m

notification 가

“Notification Message Variables” .

Note 가 **Trigger** notification . SNMP

Trigger 9999

7 Notification **Time Period** .

8 **OK** notification

notifications 가 .

9 **Alerts** , **OK** .

(Viewing Trap Log Entries)

SNMP 가 .

Quick

Status -> Log .

Logs **SNMP Trap Log**

SNMP (Monitoring SNMP Service)

SNMP , :

1 .

Note ,

Properties Services .

2 **Services**

3 **Services to Monitor** **SNMP** . 가 가 ,
Add , **Service** **Monitor** .(SNMP)

4 **OK**

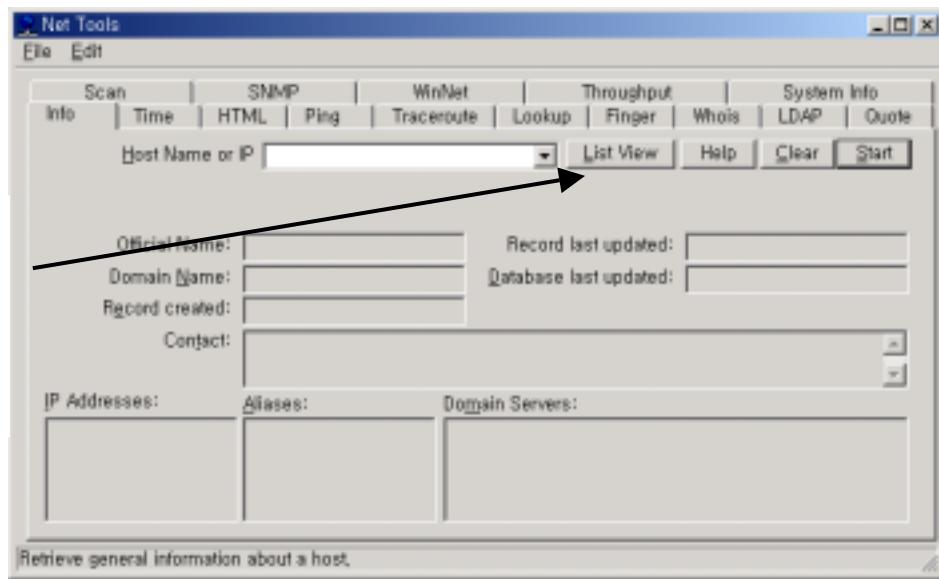
Note SNMP 가 , (*) 가



WhatsUp Gold , , , , ,

Tools **Net Tools** ,

∴



Info, Ping, Traceroute, and Throughput
 "List view"(list format)
 "report view"(textual format)
 (toggle)
 가

(parameter)

∴

- Info -
- Time - Remote Time Server
- HTML -
- Ping -
- TraceRoute -
- Lookup -
- Finger -
- Whois -

(Display Device Information) Info Tool

Info , , IP , (Whois Info
)
 (ping)

Info
 Lookup Whois (query) , (ping)
 가 가

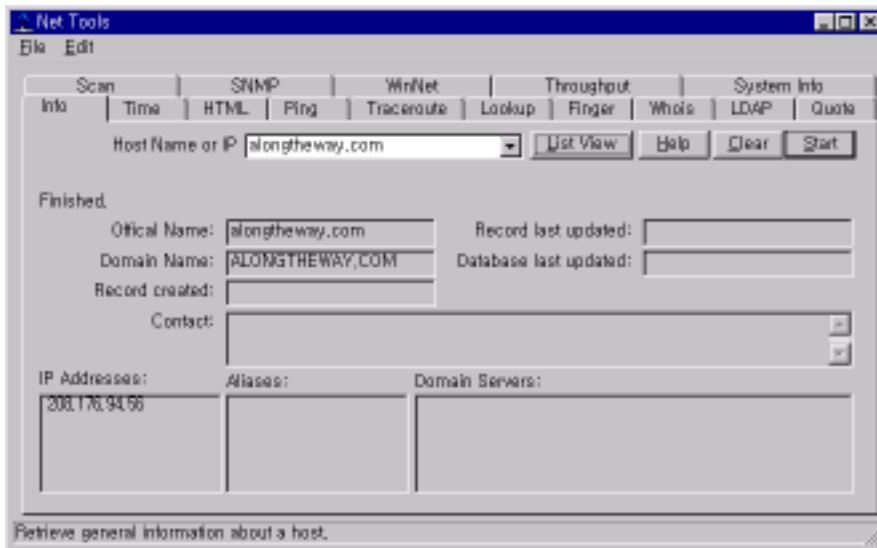
Info (query) , :

1 Tools , **Net Tools** Info Info

2 Host Name or IP

(fully qualified host name) (,
 whitehouse.gov).

3 Start



가 , **Start** **Stop**
Stop . **Clear**

(Checking a Web Access) HTML Tool

HTML

. HTML (URL) (get request) (cookies)
) , (raw formatted HTML)
 (query) , :

1 **Tools** , **Net Tools** HTML **HTML**

2 **URL**(Uniform Resource Locator)

(, <http://hostname/page/>
). (/) URL

3 : **Raw**

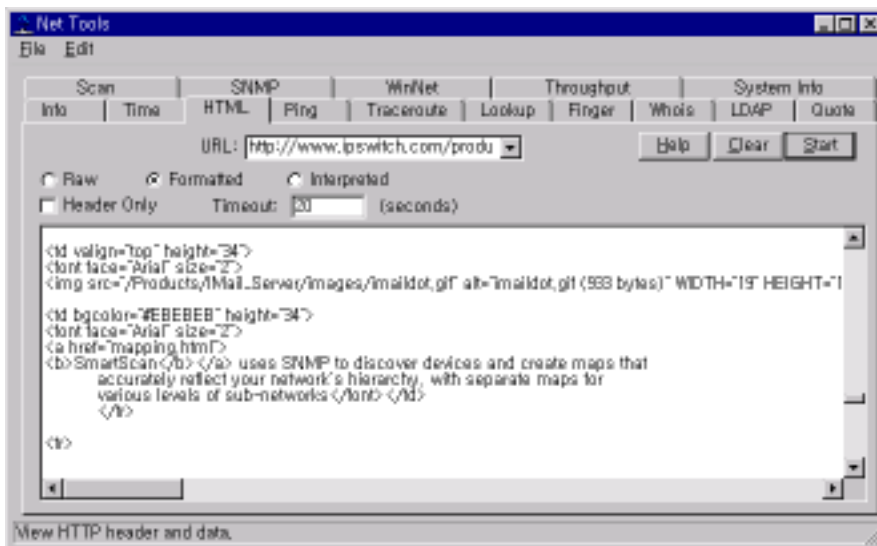
HTML . **Formatted** (carriage return)

Interpreted

HTML **Header only**

4 **Start**

가



가 , **Start** **Stop**
Stop . **Clear**

(Synchronizing Time)

Time

. (, ,) (, ,)
 . Time
 .

Note Time RFC868 Time .

Time

-
-
- GMT (offset,) 가
- (Server Name, Time, Difference, Offset, and Error Code)
 ()

1 **Tools** , **Net Tools** **Time** Time .

2 **Time Server** , (query) IP IP

3 **Synch Clock to Remote Time** () .

4 () **Offset** GMT (offset, ,)
 가

5 **Start**

- **Clear**

Remove

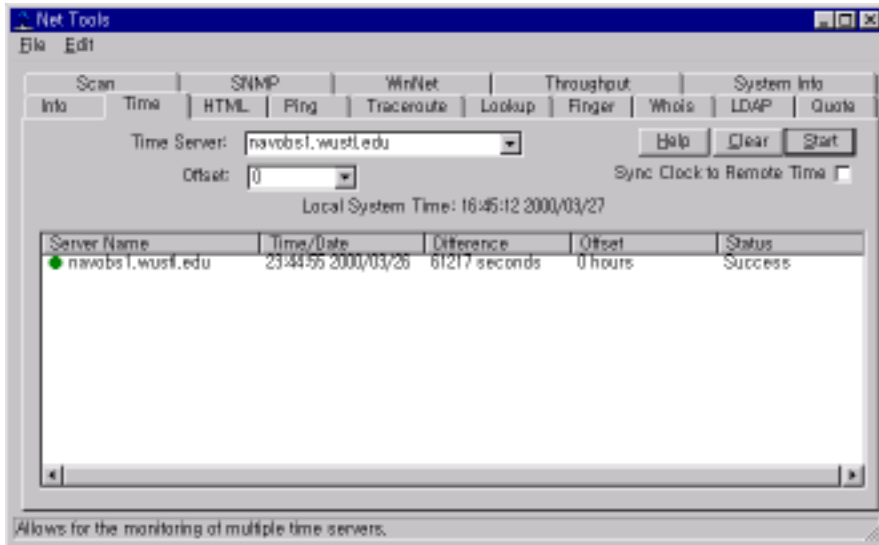
()

()

(offset)

(Time

.)



가

, Start

Stop

Stop

. Clear

Time Server

, IP

Start

:

, Update

Time from Server

:

Sync Clock To Remote Time

Stop Monitoring This Item
 Start Monitoring This Item

Stop Monitoring All This Item
 Start Monitoring All This Item

Remove

() :

1

2 **Offset** (offset)

3 **Start**

(Ping Tool)

Ping

. Ping ICMP "echo request"
 , "echo reply" "pinging"
 . Ping 100 1
 (debugging) . Ping
 (instances)

Pinging a Host:

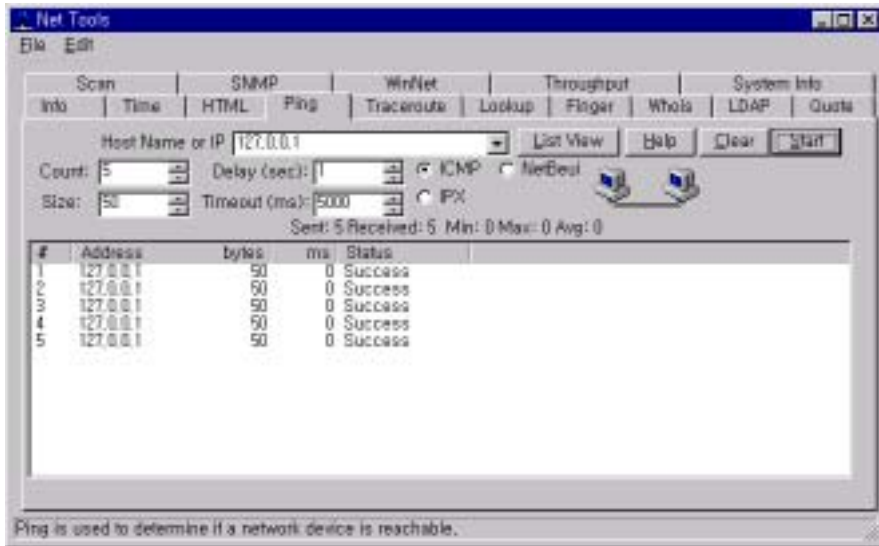
- 1 Tools , **Net Tools** Ping
- 2 **Hostname or IP** , IP
 . (, internic.net)

3 . TCP/IP
ICMP , Novell NetWare **IPX**, Windows
NetBEUI .

Note IPX , Microsoft NWLink IPX/SPX
 , WhatsUp Gold . “System
 Requirements” .

4 . :
Count.
Delay (sec). ()
Size. ()
Timeout (ms). (milliseconds)

5 **Start** .
 Ping echo request echo reply . Ping
 , Ping Ping



PC , Ping .
 가
 가 , 가

Start Stop
 Stop Clear

(TraceRoute Tool)

TraceRoute 가 IP
 100 1 (millisecond)
 TraceRoute

TraceRoute

TraceRoute

1 Tools , Net Tools TraceRoute TraceRoute

2 Host Name or IP
 IP
 IP

3
 Maximum. (hop) IP
 (hop)

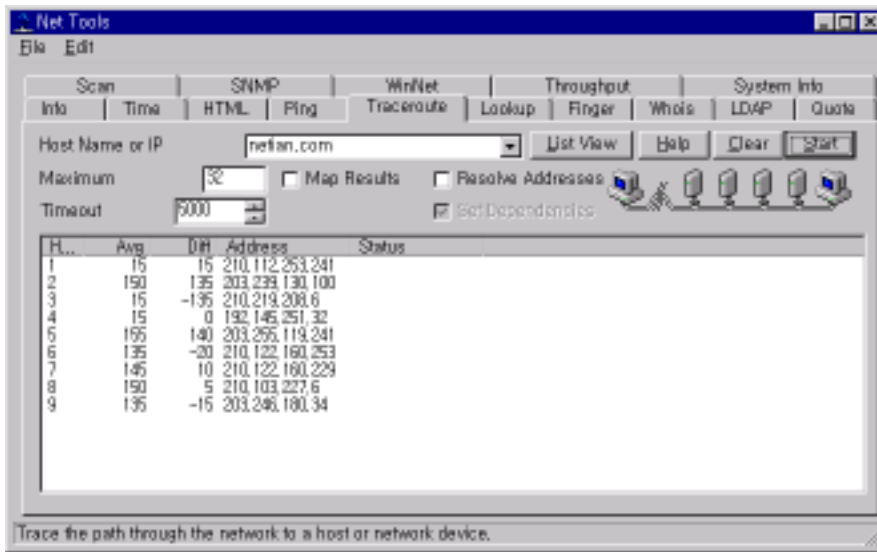
Map Results. , WhatsUp
 Gold

Resolve Addresses.
 IP , IP
 IP 가 가

Set Dependencies. Map Results
 “up dependency”
 가 , WhatsUp Gold

4 Start

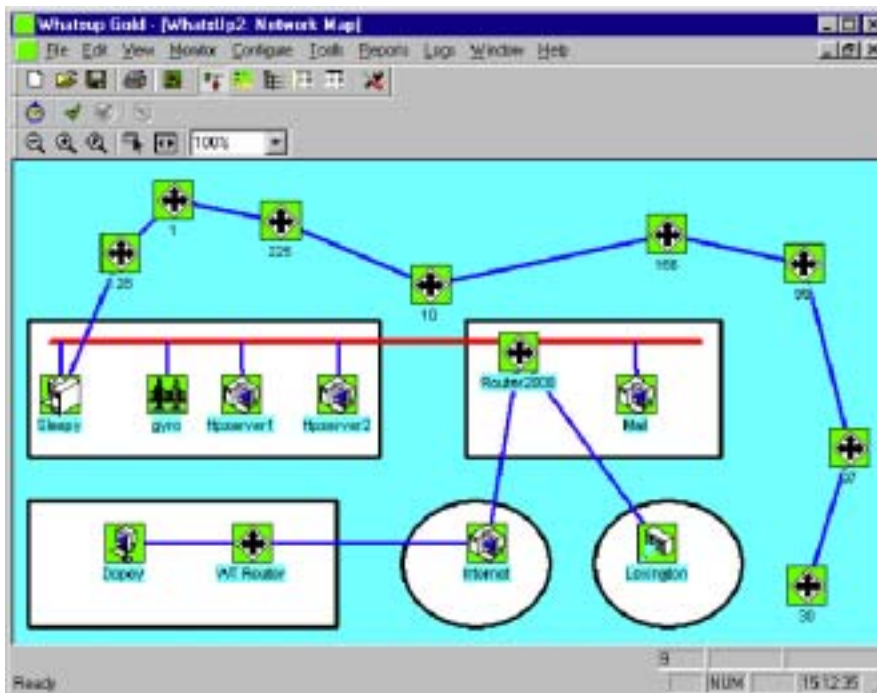
TraceRoute 가



Start Stop
 Stop Clear

Map Results , WhatsUp Gold

Sleepy() Internic 가



(Lookup Tool)

Lookup (domain name servers)
(query) . Lookup
..:

- IP , IP .
- , .
- .
- .

Lookup query :

1 Tools , **Net Tools** **Lookup** , Lookup .

2 Host Name IP Address ,
IP .

3 .

DNS Server. IP ,
[stack] (stack) .

Note [stack] , Lookup Winsock stack lookup routines .
, Lookup DNS Winsock stack routines

Query Type.

..:

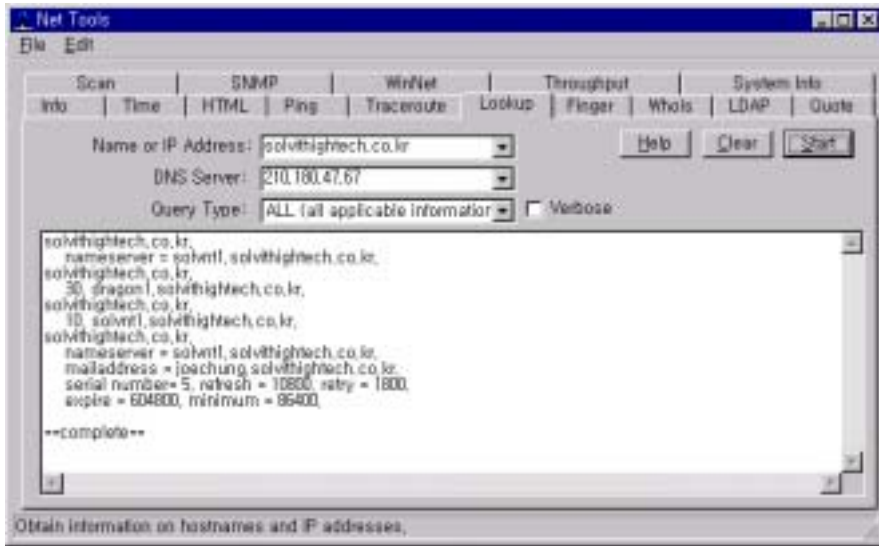
Type	Returns the following information
A	
ALL	All information
CNAME	
HINFO	CPU
MX	The host that acts as the mail exchanger
NS	The name server for the named zone
PTR	The host name, if the query is an Internet address; otherwise, a pointer to other data
SOA	“start of authority” 가 .
ZONE	(ZONE)

Note (stack) , (A)
(PTR) . DNS ,

Verbose **DNS**

DNS

4 Start . Lookup



, **Start** **Stop**
Stop . **Clear**

가 (Finger Tool)

Finger

) (ID (idle time),

Finger 가 , 가 Finger server

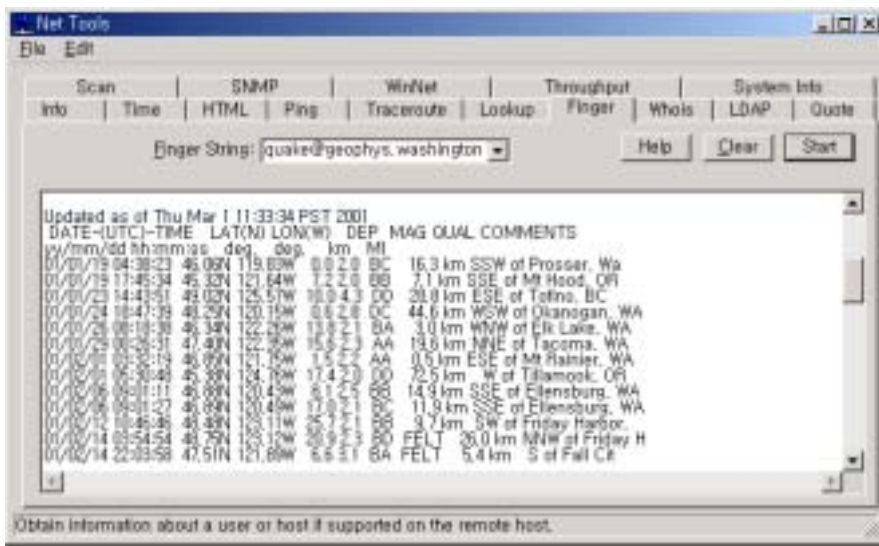
Finger , .plan .project

가 Finger 가 , Finger

. : Connection not made

Finger

- 1 **Tools** , **Net Tools** **Finger** **Finger**
- 2 **Finger String** , IP
 Finger IP
- 3 **Start**
 Finger Finger



Start Stop
 Stop Clear

가 (Whois Tool)

Whois Finger Whois
 Whois , NIC(Network Information Center)

Note NIC(Network Information Center) whois.networksolutions.com.

Whois NIC

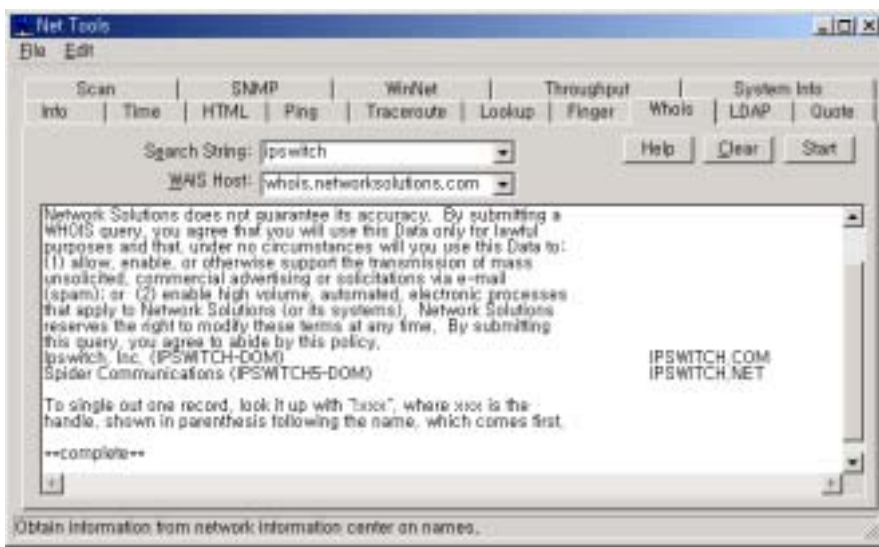
Whois

1 **Tools** , **Net Tools** **Whois**

2 **Search String**

3 **WAIS Host**

4 **Start** . Whois Whois



, **Start** **Stop**

Stop . **Clear**

(LDAP Tool)

LDAP(Lightweight Directory Access Protocol)

LDAP 가 가

LDAP . LDAP x.500 directory

access (subset)

LDAP LDAP 가

LDAP

가

LDAP 가

LDAP , :

1 **Tools** , **Net Tools** **LDAP** **LDAP** .

2 LDAP (query) .
 LDAP
 (query) .

LDAP , ,

contains	the text(in the third box) is part of the entry
is	the text is the exact name of the entry
is like	the text is a near match for the entry (not supported by all LDAP servers)

, (, Acme LDAP) . : .

3 **LDAP Host** , (query) .
 (fully qualified host name) (, mail.acme.com) . LDAP

LDAP 가 .

4 **Start** .
 LDAP 가 .

가
 , Start Stop
 Stop Clear

(Scan Tool)

Scan IP
 “ 2 : Creating Network Maps”

SNMP (SNMP Tool)

SNMP SNMP(Simple Network Management Protocol)
 SNMP
 “ 12 : Monitoring SNMP Devices”

(WinNet Tool)

WinNet , Windows (, ,)
 . Windows NetBEUI
 , ,
 .
 Windows NetBEUI

1 Tools , Net Tools WinNet WinNet

2 Network Items ,
 .
 networks - . (groups of networks)
 domains - . (groups of domains)
 servers -
 shares -

all -

3 **Start**

WhatsUp Gold

Stop , Start Stop Clear

(Throughput Tool)

Throughput (diagnostic tool) IP (kilobytes per second)

Throughput ,:

1 **Tools** , **Net Tools** **Throughput**

2 **Hostname or IP** , IP (internic.net)

3 .:

Packet Count. ping

Timeout (ms). (milliseconds) Timeout

Packet Size. 가 (timing) 가

Delay (ms). (100)

TCP. , ICMP TCP echo (port 7).

Throughput

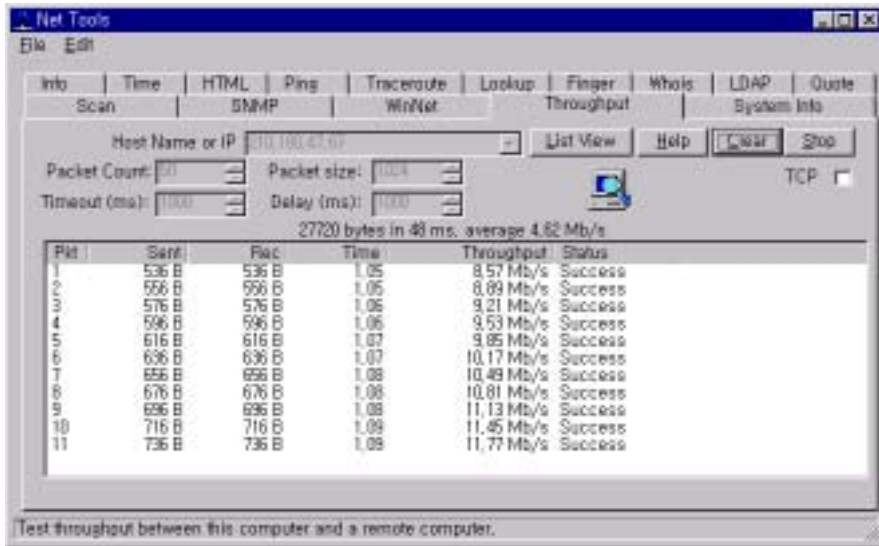
4 **Start**

Throughput

, Throughput

(milliseconds)

가 ():

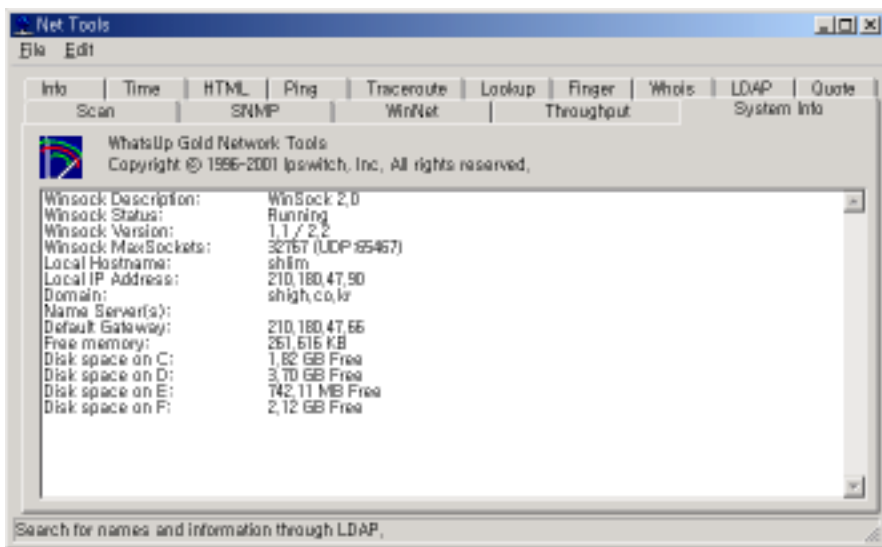


, Start Stop
Stop Clear

(viewing Local system Information)

WhatsUp

Tools Net Tools System Info



. ; WhatsUp Gold

가 .

가 , System Info

. - IP Netmask .

Note DHCP(Dynamic Host Configuration Protocol)

, , IP , ,

, , Netmask .

(Local Hostname, Local IP Address, Domain, Name Server, Default

Gateway, Netmask) , IP Netmask 0(zero)