

## How to use map links to represent interface status.

This How-To guide explains how to use links on the map to represent the status of your WAN or LAN links.

The first requirement is to determine the 'index' number of the interface that you wish to monitor. Right-click on the device icon and select the Routers/Port Information menu (even if the device is not a router).

E CRC HQ\lab			
Cisco		internet	<u>^</u>
Router	Properties View P Tools P	-	
	System System		
	RoutersServersCable Modern	Port Information Port Usage (BPS) Port Utilization (%)	
<	Snmp V3	Address Table Routing Table ARP Table	►

Note the *Index* number of the port that you wish to monitor. You will also need to know the IP address of the device that the interface relates to.

E CR	III CRC-MENU-MIB   MenulfEntryInfo (Router)							
1		<b>Ø M</b> L N B .	3 1	0 ÷ sec				
Index	Descr	Туре	Mtu	Speed	WLAN Address	AdminStatus	OperStatus	LastChange
1	Serial0	frameRelay	1500	1544000		up	up	0 days 00:01:36.2 🔺
2	Ethernet0	ethernetCsmacd	1500	10000000	00 e0 1e 68 6b a9	up	up	29 days 01:21:21
3	Serial1	propPointToPointSerial	1500	1544000		down	down	0 days 00:00:25.(
4		other	1500	4294967295		un	un	▲ 1 00:00:00 even 0

In this example we will be monitoring both the LAN link and the Frame Relay link to the Internet. The table shows that the Index for The LAN connection is 2 and the Wan Connection is Index 1. Note the variable 'OperStatus' shows the current status of the link



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Router Lab	View       •         Tools       •         System       •         Switches       •         Routers       •         Servers       •         Cable Modem       •         Snmp V3       •	
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Right click on the link and select properties.

Name the link and enter the IP address of the device which features this interface. If required select the Access Tab and make any changes to the SNMP community settings.

Select the Attributes Tab. Change the *Poll Interval* from 0 to the polling interval you require. The value is in seconds. (example shows polling changed to 30 seconds).

Map Objec	t Properties		
General A	Access Attributes D	ependencies	
Name:	Status Variable		
Value:			▼ >>
Attrib:	Name Link Thickness Show Link Name Exec Program MAC Address Poll Interval Poll Timeout Poll Retries Polling Agent Status Value Status Value Status Value Status OK Expr SNMP ObjectID Has SNMP Has SNMP Has FTP Has Telnet Has RMON	Value 1 No auto.exe 00 00 00 00 00 00 30 2 2 localhost 0 = No	
		OK Cancel	Help

The variable which defines the 'State' of the link is *Status Variable*. Highlight *Status Variable* as shown above. You can either manually enter the variable of use the MIB browser GUI.



To manually edit the Status Variable change the *Value* to ifOperStatus.X where X is the *Index* number that you previously noted. In our scenario for the Wan link this will be index 1 and for the Lan link .2. The variable is case sensitive.

To browse to the MIB variable; highlight Status Variable as shown above and select the >> symbol beside the *Value* box.



Browse to mgmt/interfaces/ifTable/ifOperStatus. Select OK. In the Value box add '.X' where X is the Index value. In this scenario we add '.1'

Map Object Properties			
General A	Access Attributes De	pendencies	
Name:	Status Variable		
Value:	RFC1213-MIB ifOperS	tatus.1	▼ >>
Attrib:	Name Link Thickness Show Link Name Exec Program MAC Address Poll Interval Poll Retries Polling Agent Status Value Status Value Status Value Status OK Expr SNMP ObjectID Has SNMP Has FTP Has Telnet Has RMON	Value 1 No auto.exe 00.00.00.00.00 30 2 2 2 localhost RFC1213-MIBjifOperStatus.1 0 = No	
		OK Cancel	Help



Select *Status Value*. The *Status Value* is the value that SNMPc is looking for in-order to determine the Status test has passed and therefore for the link to go green. In our case we are looking for the interface Operational status to respond as 'Up'.

Map Obje	t Properties	
General	Access Attributes Dependen	ncies
Name:	Status Value	
Value:	0	▼ >>
Attrib:	up down testing unknown dorment	
	MAC Address 00 00 Poll Interval 30 Poll Timeout 2	00 00 00 00
	Poll Retries     2       Polling Agent     local <sup>1</sup> Status Variable     RFC1       Status Value     0	host I 213-MIB ifOperStatus.1
	Status OK Expr = SNMP ObjectID Has SNMP No Has Web No	
	Has FTP No Has Telnet No Has RMON No	<b>v</b>
	OK	Cancel Help

Highlight this value and then select OK. The link should go green



To configure the LAN interface for status checking highlight the link between the router and the 'Lab' lan. The repeat the above steps using ifOperStatus.2 as the variable.



As default the link color will be either green or magenta depending on whether the Status variable passes or fails.

If you wish to generate an email alert or play a WAV sound then you should configure the relevant event filter. Event filters for status tests are "pollStatusTestPass & pollStatusTestFail".



Other How-To guides provide more information on configuring Event Filters.