

CGR 1000에서 WANon 모듈 트러블슈팅 및 확인

목차

[소개](#)

[사전 요구 사항](#)

[요구 사항](#)

[사용되는 구성 요소](#)

[문제 해결 방법](#)

[스크립트 확인](#)

[스크립트를 실행하는 동안 일반적인 문제](#)

[구문 오류](#)

[IPSLA\(Internet Protocol Service Level Agreement\) 다운](#)

[관련 정보](#)

소개

이 문서에서는 Cisco IOS1000 Series CGR(Connected Grid Router)용 IOS 이미지에 포함된 tm_wanmon.tcl이라는 TCL(Tool Command Language) 스크립트의 문제를 해결하고 확인하는 방법에 대해 설명합니다. 이 스크립트가 활성화된 경우 WAN 인터페이스에 대한 WAN(Wide Area Network) 모니터링 소프트웨어 역할을 하며 WAN 링크 또는 터널 오류로부터 복구하기 위해 점점 더 간섭적인 작업을 수행합니다.

라우터에서 WANMON이 활성화되면 스크립트가 tmpsys:/eem_policy/ 디렉토리로 추출되며 이 명령을 사용하여 스크립트를 볼 수 있습니다. **Router#more tmpsys:eem_policy/tm_wanmon.tcl.**

사전 요구 사항

요구 사항

Cisco에서는 이 문서에 설명된 대로 TCL 스크립트를 활성화하는 것이 좋습니다.

http://www.cisco.com/c/en/us/td/docs/routers/connectedgrid/cgr1000/ios/software/15_4_1_cg/WANMon.html입니다.

최소 소프트웨어: Cisco IOS 릴리스 15.4(1)CG.

사용되는 구성 요소

이 문서의 정보는 CGR1120/CGR1240을 기반으로 합니다.

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 현재 네트워크가 작동 중인 경우, 모든 명령어의 잠재적인 영향을 미리 숙지하시기 바랍니다.

문제 해결 방법

WANMON이 구성되어 CGR에서 실행되는 경우 이 컨피그레이션을 디바이스의 컨피그레이션에 추가할 때 스크립트에 대한 디버깅을 활성화할 수 있습니다.

```
Router(config)#event manager environment wanmon_debug all
```

스크립트 확인

```
Router(config)#event manager policy tm_wanmon.tcl authorization bypass
Router(config)#event manager environment wanmon_if_list1 {GigabitEthernet2/1 {recovery {5 25}
{90 180} {600 100}}} }
Router(config)#event manager environment wanmon_debug all

*Aug 8 21:24:14.555: %HA_EM-6-LOG: tm_wanmon.tcl: Command: enable <----- WANMON is orienting
itself to privileged exec mode by sending the 'enable' command to IOS
*Aug 8 21:24:14.775: %HA_EM-6-LOG: tm_wanmon.tcl: Output:
*Aug 8 21:24:14.775: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000# <----- Output from IOS tells
WANMON that it is now at the privileged exec prompt
*Aug 8 21:24:14.789: %HA_EM-6-LOG: tm_wanmon.tcl: context_retrieve succeeded <----- The
router was able to successfully retrieve WANMON polling data
*Aug 8 21:24:14.789: %HA_EM-6-LOG: tm_wanmon.tcl: last_run: 1249760980 <----- The event
identifier for the last time WANMON polled its enabled interfaces
*Aug 8 21:24:14.789: %HA_EM-6-LOG: tm_wanmon.tcl: exec_count: 5 <----- The number of times
WANMON has polled since it last started. The last operation (1249760980) was the 5th process in
a row
*Aug 8 21:24:14.791: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1,link_events: {1 {}
1249760380 {Sat Aug 08 19:39:40 UTC 2009}} <----- Enabled interfaces and time stamp of first
execution
*Aug 8 21:24:14.791: %HA_EM-6-LOG: tm_wanmon.tcl: last_polled_run: 1249760980 <-----
last_run and last_polled_run are equal in this case but if recovery levels are active the last
polled run may be earlier than the last_run
*Aug 8 21:24:14.797: %HA_EM-6-LOG: tm_wanmon.tcl: Starting: Received event polltimer <-----
A new polling process has started with a new polltimer
*Aug 8 21:24:14.799: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_name Value: {}
*Aug 8 21:24:14.799: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_sec Value: 1249766654 <---
-- The new event identifier
*Aug 8 21:24:14.799: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_type Value: 21
*Aug 8 21:24:14.801: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain Value: 600.000 <-----
The polltimer has been reset and there are 600 seconds until the next polling event
*Aug 8 21:24:14.801: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_severity Value: severity-normal
<----- This message indicates that this is a regular poll and not caused by one of the alert
levels being triggered from a previous polling event
*Aug 8 21:24:14.803: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_id Value: 3
*Aug 8 21:24:14.803: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_type_string Value: timer watchdog
*Aug 8 21:24:14.803: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time_sec Value: 3458755454
*Aug 8 21:24:14.805: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_type Value: watchdog
*Aug 8 21:24:14.805: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain_msec Value: 0
*Aug 8 21:24:14.805: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain_sec Value: 600
*Aug 8 21:24:14.805: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time_msec Value: 46
*Aug 8 21:24:14.807: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_time Value: 1249766654.045
*Aug 8 21:24:14.807: %HA_EM-6-LOG: tm_wanmon.tcl: Name: job_id Value: 6
*Aug 8 21:24:14.807: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_msec Value: 45
*Aug 8 21:24:14.807: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time Value: 3458755454.046
*Aug 8 21:24:14.807: %HA_EM-6-LOG: tm_wanmon.tcl: Exec count: 6 <----- The exec_count has
incremented by 1 from the previous execution
*Aug 8 21:24:14.811: %HA_EM-6-LOG: tm_wanmon.tcl: All interface vars wanmon_if_list1 <-----
If multiple lists are present, they will all be included here separated by spaces (i.e.
wanmon_if_list1 wanmon_if_list2 wanmon_if_list3)
*Aug 8 21:24:14.813: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_interfaces: {GigabitEthernet2/1
{recovery {5 25} {90 180} {600 100}}} } <----- The bracketed configurations from all WANMON
statements will be included in this line
*Aug 8 21:24:14.821: %HA_EM-6-LOG: tm_wanmon.tcl: last_polled_run: 1249760980 <----- Event
```

identifier for exec_count 5

*Aug 8 21:24:14.821: %HA_EM-6-LOG: tm_wanmon.tcl: current_polled_run: 1249766654 <-----

Event identifier for exec_count 6 which is the current process

*Aug 8 21:24:14.823: %HA_EM-6-LOG: tm_wanmon.tcl: drift: 5074

*Aug 8 21:24:14.823: %HA_EM-6-LOG: tm_wanmon.tcl: abs_drift: 5074

*Aug 8 21:24:14.823: %HA_EM-6-LOG: tm_wanmon.tcl: drift_thres: 3600

*Aug 8 21:24:14.825: %HA_EM-4-LOG: tm_wanmon.tcl: Clock drift (5074 s), threshold exceeded, resetting context

*Aug 8 21:24:14.827: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all interface name and states <--

--- This output signifies that WANMON is now polling layer 1 and 2 status for all enabled interfaces

*Aug 8 21:24:14.833: %HA_EM-6-LOG: tm_wanmon.tcl: Command: show interface GigabitEthernet2/1 | include line protocol <----- **Command send to IOS**

*Aug 8 21:24:15.047: %HA_EM-6-LOG: tm_wanmon.tcl: Output: GigabitEthernet2/1 is up, line protocol is up <----- **Input received from IOS**

*Aug 8 21:24:15.047: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#

*Aug 8 21:24:15.057: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1 admin_state:1, line_state:1 <----- **WANMON assigns a binary (0 or 1) value to admin_state and line_state tcl variables**

*Aug 8 21:24:15.061: %HA_EM-6-LOG: tm_wanmon.tcl: Processing all interface config

*Aug 8 21:24:15.087: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all IP addresses

*Aug 8 21:24:15.099: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all IPLSA <----- **As IP SLA is not attached to this configuration, there is no IP SLA output**

*Aug 8 21:24:15.105: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all traffic stats

*Aug 8 21:24:15.109: %HA_EM-6-LOG: tm_wanmon.tcl: Processing all interface statistics

*Aug 8 21:24:15.113: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/1:

*Aug 8 21:24:15.119: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1 lineproto=1 => 1 <-----

The script's logic is that if line_state is 1 or greater then consider the status as "up"

*Aug 8 21:24:15.131: %HA_EM-1-LOG: tm_wanmon.tcl: Detected GigabitEthernet2/1 link is up <--

--- Up status confirmed

*Aug 8 21:24:15.137: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,admin_state) = 1

*Aug 8 21:24:15.137: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,causes) =

*Aug 8 21:24:15.137: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,checkip) = 0

*Aug 8 21:24:15.139: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,checklist) = lineproto

*Aug 8 21:24:15.139: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,exists) = 1

*Aug 8 21:24:15.139: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,fullname) = GigabitEthernet2/1 <----- **This section is where the recovery level timers are shown as well as whether or not the interface state is a 0 or 1.**

*Aug 8 21:24:15.139: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,lineproto,state) = 1

*Aug 8 21:24:15.139: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,0,max) = 25

*Aug 8 21:24:15.141: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,0,thresh) = 5

*Aug 8 21:24:15.141: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,1,max) = 180

*Aug 8 21:24:15.141: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,1,thresh) = 90

*Aug 8 21:24:15.143: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,2,max) = 100

*Aug 8 21:24:15.143: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,2,thresh) = 600

*Aug 8 21:24:15.145: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,state) = 1

<----- **Once the script has completed, the 'state' value is set to 1 and no recovery actions are taken**

*Aug 8 21:24:15.145: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(current_polled_run) = 1249766654

<----- **This is the event identifier which correlates with exec_count 6**

*Aug 8 21:24:15.145: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(if_list) = GigabitEthernet2/1

*Aug 8 21:24:15.147: %HA_EM-6-LOG: tm_wanmon.tcl:

wanmon_saved_ctx(GigabitEthernet2/1,link_events) = {1 {} 1249766655 {Sat Aug 08 21:24:15 UTC 2009}}

<----- **exec_count 6 is finished and its historical polling data has been saved**

*Aug 8 21:24:15.147: %HA_EM-6-LOG: tm_wanmon.tcl: Finished <----- **Regular polling has finished**

*Aug 8 21:24:15.159: %HA_EM-6-LOG: tm_wanmon.tcl: context_save succeeded <----- The process has been statefully ended without error

스크립트를 실행하는 동안 일반적인 문제

구문 오류

WANMON이 구성되었을 때 작동한다고 생각되는 상황이 발생할 수 있지만 실제로 영향을 주지 않습니다. 예를 들어, WANMON 스크립트가 제대로 작동하지 않는 환경에서 이 디버그 출력이 관찰되었습니다.

```
*Aug 8 21:44:14.487: %HA_EM-6-LOG: tm_wanmon.tcl: Command: enable
*Aug 8 21:44:14.601: %HA_EM-6-LOG: tm_wanmon.tcl: Output:
*Aug 8 21:44:14.601: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#
*Aug 8 21:44:14.617: %HA_EM-6-LOG: tm_wanmon.tcl: context_retrieve succeeded
*Aug 8 21:44:14.617: %HA_EM-6-LOG: tm_wanmon.tcl: last_run: 1249767255
*Aug 8 21:44:14.617: %HA_EM-6-LOG: tm_wanmon.tcl: exec_count: 1
*Aug 8 21:44:14.619: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1,link_events: {1 {}
1249766655 {Sat Aug 08 21:24:15 UTC 2009}}
*Aug 8 21:44:14.619: %HA_EM-6-LOG: tm_wanmon.tcl: last_polled_run: 1249767255
*Aug 8 21:44:14.627: %HA_EM-6-LOG: tm_wanmon.tcl: Starting: Received event polltimer
*Aug 8 21:44:14.627: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_name Value: {}
*Aug 8 21:44:14.629: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_sec Value: 1249767854
*Aug 8 21:44:14.629: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_type Value: 21
*Aug 8 21:44:14.629: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain Value: 600.000
*Aug 8 21:44:14.629: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_severity Value: severity-normal
*Aug 8 21:44:14.629: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_id Value: 3
*Aug 8 21:44:14.631: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_type_string Value: timer watchdog
*Aug 8 21:44:14.631: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time_sec Value: 3458756654
*Aug 8 21:44:14.631: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_type Value: watchdog
*Aug 8 21:44:14.633: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain_msec Value: 0
*Aug 8 21:44:14.633: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain_sec Value: 600
*Aug 8 21:44:14.633: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time_msec Value: 45
*Aug 8 21:44:14.635: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_time Value: 1249767854.045
*Aug 8 21:44:14.635: %HA_EM-6-LOG: tm_wanmon.tcl: Name: job_id Value: 8
*Aug 8 21:44:14.635: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_msec Value: 45
*Aug 8 21:44:14.635: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time Value: 3458756654.045
*Aug 8 21:44:14.635: %HA_EM-6-LOG: tm_wanmon.tcl: Exec count: 2
*Aug 8 21:44:14.639: %HA_EM-6-LOG: tm_wanmon.tcl: All interface vars wanmon_if_list1
*Aug 8 21:44:14.641: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_interfaces: {gig 2/1 {recovery {5 25}
{90 180} {400 100}}} }
*Aug 8 21:44:14.649: %HA_EM-6-LOG: tm_wanmon.tcl: last_polled_run: 1249767255
*Aug 8 21:44:14.649: %HA_EM-6-LOG: tm_wanmon.tcl: current_polled_run: 1249767854
*Aug 8 21:44:14.651: %HA_EM-6-LOG: tm_wanmon.tcl: drift: -1
*Aug 8 21:44:14.651: %HA_EM-6-LOG: tm_wanmon.tcl: abs_drift: 1
*Aug 8 21:44:14.651: %HA_EM-6-LOG: tm_wanmon.tcl: drift_thres: 3600
*Aug 8 21:44:14.655: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all interface name and states
*Aug 8 21:44:14.659: %HA_EM-6-LOG: tm_wanmon.tcl: Command: show interface gig | include line
protocol <----- Here you can see the command which has been sent to IOS which indicates that
'show interface gig' instead of 'show interface gig1/2' has been sent
*Aug 8 21:44:14.889: %HA_EM-6-LOG: tm_wanmon.tcl: Output:
*Aug 8 21:44:14.889: %HA_EM-6-LOG: tm_wanmon.tcl: show interface gig | include line protocol
*Aug 8 21:44:14.889: %HA_EM-6-LOG: tm_wanmon.tcl: ^
*Aug 8 21:44:14.889: %HA_EM-6-LOG: tm_wanmon.tcl: % Invalid input detected at '^' marker.
*Aug 8 21:44:14.889: %HA_EM-6-LOG: tm_wanmon.tcl:
*Aug 8 21:44:14.889: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#
*Aug 8 21:44:14.895: %HA_EM-1-LOG: tm_wanmon.tcl: Configuration error: Interface gig does not
exist. Please check configuration. <----- If there is a syntax error in the WANMON
statements, you will see "Configuration error" in the output following the raw session output
*Aug 8 21:44:14.899: %HA_EM-6-LOG: tm_wanmon.tcl: Processing all interface config
*Aug 8 21:44:14.915: %HA_EM-6-LOG: tm_wanmon.tcl: context_save succeeded
```

이 출력에 따라 인터페이스 이름과 해당 번호 사이에 공백이 있기 때문에 스크립트가 성공적으로 실행되지 않습니다. 이 오류를 일으킨 명령:

```
event manager environment wanmon_if_list1 {gig 2/1 {recovery {5 25} {90 180} {400 100}}} }  
올바른 구성은 다음과 같아야 합니다.
```

```
event manager environment wanmon_if_list1 {gig2/1 {recovery {5 25} {90 180} {400 100}}} }
```

IPSLA(Internet Protocol Service Level Agreement) 다운

WANMON이 IPSLA로 여러 인터페이스를 폴링하는 경우

IPSLA 작업은 장애 위치를 즉시 확인하는 것이 어려울 수 있습니다. 이 디버그 출력은 각 인터페이스에서 IP SLA를 사용하는 WANMON에서 두 인터페이스를 모니터링할 때 발생하는 상황을 보여줍니다.

```
*Aug 9 19:55:36.433: %HA_EM-6-LOG: tm_wanmon.tcl: Command: enable  
*Aug 9 19:55:36.547: %HA_EM-6-LOG: tm_wanmon.tcl: Output:  
*Aug 9 19:55:36.547: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#  
*Aug 9 19:55:36.565: %HA_EM-6-LOG: tm_wanmon.tcl: context_retrieve succeeded  
*Aug 9 19:55:36.565: %HA_EM-6-LOG: tm_wanmon.tcl: last_run: 1249847563  
*Aug 9 19:55:36.565: %HA_EM-6-LOG: tm_wanmon.tcl: exec_count: 5  
*Aug 9 19:55:36.565: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1,link_events: {0 ipsla  
1249847563 {Sun Aug 09 19:52:43 UTC 2009}} {1 { 1249847478 {Sun Aug 09 19:51:18 UTC 2009}}}  
*Aug 9 19:55:36.567: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/2,link_events: {0 lineproto  
1249847478 {Sun Aug 09 19:51:18 UTC 2009}}  
*Aug 9 19:55:36.567: %HA_EM-6-LOG: tm_wanmon.tcl: last_polled_run: 1249847136  
*Aug 9 19:55:36.575: %HA_EM-6-LOG: tm_wanmon.tcl: Starting: Received event polltimer  
*Aug 9 19:55:36.577: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_name Value: {}  
*Aug 9 19:55:36.577: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_sec Value: 1249847735  
*Aug 9 19:55:36.577: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_type Value: 21  
*Aug 9 19:55:36.577: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain Value: 600.000  
*Aug 9 19:55:36.579: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_severity Value: severity-normal  
*Aug 9 19:55:36.579: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_id Value: 1  
*Aug 9 19:55:36.579: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_type_string Value: timer watchdog  
*Aug 9 19:55:36.581: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time_sec Value: 3458836535  
*Aug 9 19:55:36.581: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_type Value: watchdog  
*Aug 9 19:55:36.581: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain_msec Value: 0  
*Aug 9 19:55:36.583: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_remain_sec Value: 600  
*Aug 9 19:55:36.583: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time_msec Value: 908  
*Aug 9 19:55:36.583: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_time Value: 1249847735.907  
*Aug 9 19:55:36.585: %HA_EM-6-LOG: tm_wanmon.tcl: Name: job_id Value: 6  
*Aug 9 19:55:36.585: %HA_EM-6-LOG: tm_wanmon.tcl: Name: event_pub_msec Value: 907  
*Aug 9 19:55:36.585: %HA_EM-6-LOG: tm_wanmon.tcl: Name: timer_time Value: 3458836535.908  
*Aug 9 19:55:36.585: %HA_EM-6-LOG: tm_wanmon.tcl: Exec count: 6 <----- The new polling  
interval has begun  
*Aug 9 19:55:36.591: %HA_EM-6-LOG: tm_wanmon.tcl: All interface vars wanmon_if_list1  
wanmon_if_list3 <----- Both lists are included in this output  
*Aug 9 19:55:36.593: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_interfaces: {GigabitEthernet2/1 {ipsla  
1} } {GigabitEthernet2/2 {ipsla 2} } <----- Both bracketed configurations are included in  
this output  
*Aug 9 19:55:36.601: %HA_EM-6-LOG: tm_wanmon.tcl: last_polled_run: 1249847136  
*Aug 9 19:55:36.603: %HA_EM-6-LOG: tm_wanmon.tcl: current_polled_run: 1249847736  
*Aug 9 19:55:36.603: %HA_EM-6-LOG: tm_wanmon.tcl: drift: 0  
*Aug 9 19:55:36.603: %HA_EM-6-LOG: tm_wanmon.tcl: abs_drift: 0  
*Aug 9 19:55:36.603: %HA_EM-6-LOG: tm_wanmon.tcl: drift_thres: 3600  
*Aug 9 19:55:36.605: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all interface name and states <--  
--- WANMON sends show commands to IOS for both enabled interfaces
```

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*Aug 9 19:55:36.613: %HA_EM-6-LOG: tm_wanmon.tcl: Command: show interface GigabitEthernet2/1 |
include line protocol
*Aug 9 19:55:36.825: %HA_EM-6-LOG: tm_wanmon.tcl: Output: GigabitEthernet2/1 is up, line
protocol is up
*Aug 9 19:55:36.825: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#
*Aug 9 19:55:36.835: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1 admin_state:1,
line_state:1 <----- GigabitEthernet2/1 is up/up so it sets admin_state and line_state to 1
*Aug 9 19:55:36.835: %HA_EM-6-LOG: tm_wanmon.tcl: Command: show interface GigabitEthernet2/2 |
include line protocol
*Aug 9 19:55:37.047: %HA_EM-6-LOG: tm_wanmon.tcl: Output: GigabitEthernet2/2 is down, line
protocol is down
*Aug 9 19:55:37.047: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#
*Aug 9 19:55:37.055: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/2 admin_state:1,
line_state:0 <----- GigabitEthernet2/2 is down/down but admin_state is still set to 1
because it is administratively enabled. Since layer 2 is down, line_state is set to 0
*Aug 9 19:55:37.059: %HA_EM-6-LOG: tm_wanmon.tcl: Processing all interface config
*Aug 9 19:55:37.083: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all IP addresses
*Aug 9 19:55:37.095: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all IPSLA <----- Due to the fact
that IP SLA operations are configured for both interfaces, WANMON now sends show commands to
check IP SLA status
*Aug 9 19:55:37.097: %HA_EM-6-LOG: tm_wanmon.tcl: Querying IP SLA for GigabitEthernet2/1
*Aug 9 19:55:37.099: %HA_EM-6-LOG: tm_wanmon.tcl: Command: show ip sla statistics 1 | include
Latest operation return code: <----- IP SLA 1 is queried
*Aug 9 19:55:37.309: %HA_EM-6-LOG: tm_wanmon.tcl: Output: Latest operation return code: Timeout
<----- The state is down because the last return code for the icmp-echo IP SLA process is
Timeout
*Aug 9 19:55:37.309: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#
*Aug 9 19:55:37.311: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1 ipsla: 0 <----- The
ipsla value for Gig2/1 is now set to 0 because the state is down
*Aug 9 19:55:37.313: %HA_EM-6-LOG: tm_wanmon.tcl: Querying IP SLA for GigabitEthernet2/2
*Aug 9 19:55:37.313: %HA_EM-6-LOG: tm_wanmon.tcl: Command: show ip sla statistics 2 | include
Latest operation return code:
*Aug 9 19:55:37.527: %HA_EM-6-LOG: tm_wanmon.tcl: Output: Latest operation return code: OK
<----- IP SLA operation 2 is up, the remote address is reachable
*Aug 9 19:55:37.527: %HA_EM-6-LOG: tm_wanmon.tcl: CGR1000#
*Aug 9 19:55:37.529: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/2 ipsla: 1 <----- The
ipsla value for Gig2/2 is now set to 1 because the state is up
*Aug 9 19:55:37.535: %HA_EM-6-LOG: tm_wanmon.tcl: Querying all traffic stats
*Aug 9 19:55:37.539: %HA_EM-6-LOG: tm_wanmon.tcl: Processing all interface statistics
*Aug 9 19:55:37.543: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/1:
*Aug 9 19:55:37.543: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/2:
*Aug 9 19:55:37.551: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/1 lineproto=1 ipsla=0 => 0
<----- WANMON now checks for 2 dependencies in order to determine state. For interface Gig2/1
the IP SLA state is down even though the interface is up/up.
*Aug 9 19:55:37.555: %HA_EM-6-LOG: tm_wanmon.tcl: GigabitEthernet2/2 lineproto=0 ipsla=1 => 0
<----- For Gig2/2, the IP SLA state is up but the interface is down
*Aug 9 19:55:37.589: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/1, Level 0 recovery
within 10 min
*Aug 9 19:55:37.593: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/1, Level 1 recovery
within 60 min
*Aug 9 19:55:37.595: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/1, Level 2 recovery
within 480 min
*Aug 9 19:55:37.597: %HA_EM-2-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/1: Level 0 recovery
in 10 min
*Aug 9 19:55:37.603: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/2, Level 0 recovery
within 10 min
*Aug 9 19:55:37.605: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/2, Level 1 recovery
within 60 min
*Aug 9 19:55:37.609: %HA_EM-6-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/2, Level 2 recovery
within 480 min
*Aug 9 19:55:37.609: %HA_EM-2-LOG: tm_wanmon.tcl: Interface GigabitEthernet2/2: Level 0 recovery
in 10 min
*Aug 9 19:55:37.613: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,admin_state) = 1
*Aug 9 19:55:37.615: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,causes) = ipsla
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*Aug 9 19:55:37.615: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,check_ipsla) = 1
*Aug 9 19:55:37.615: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,checkip) = 0
*Aug 9 19:55:37.615: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,checklist) =
lineproto ipsla
*Aug 9 19:55:37.617: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,exists) = 1
*Aug 9 19:55:37.617: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,fullname) =
GigabitEthernet2/1
*Aug 9 19:55:37.617: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,ipsla,state) = 0
*Aug 9 19:55:37.619: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,lineproto,state)
= 1
*Aug 9 19:55:37.619: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,0,max)
= 10
*Aug 9 19:55:37.619: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/1,recovery,0,thresh) = 10
*Aug 9 19:55:37.621: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,1,max)
= 60
*Aug 9 19:55:37.621: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/1,recovery,1,thresh) = 60
*Aug 9 19:55:37.621: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,recovery,2,max)
= 60
*Aug 9 19:55:37.621: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/1,recovery,2,thresh) = 480
*Aug 9 19:55:37.623: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/1,recovery,next,level) = 0
*Aug 9 19:55:37.623: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/1,recovery,next,repeat) = 0
*Aug 9 19:55:37.623: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/1,recovery,next,time_left) = 600
*Aug 9 19:55:37.625: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,slaid) = 1
<----- This output gives you the SLA ID (1) of the process bound to the Gig2/1 interface
*Aug 9 19:55:37.625: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/1,state) = 0
<----- The state has been marked 0 or down due to the fact that check_ipsla value is 0 even
though the interface is up and line_state is 1
*Aug 9 19:55:37.627: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,admin_state) = 1
*Aug 9 19:55:37.627: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,causes) =
lineproto
*Aug 9 19:55:37.627: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,check_ipsla) = 1
*Aug 9 19:55:37.629: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,checkip) = 0
*Aug 9 19:55:37.629: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,checklist) =
lineproto ipsla
*Aug 9 19:55:37.629: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,exists) = 1
*Aug 9 19:55:37.631: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,fullname) =
GigabitEthernet2/2
*Aug 9 19:55:37.631: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,ipsla,state) = 1
*Aug 9 19:55:37.631: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,lineproto,state)
= 0
*Aug 9 19:55:37.631: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,recovery,0,max)
= 10
*Aug 9 19:55:37.633: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/2,recovery,0,thresh) = 10
*Aug 9 19:55:37.633: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,recovery,1,max)
= 60
*Aug 9 19:55:37.635: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/2,recovery,1,thresh) = 60
*Aug 9 19:55:37.635: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,recovery,2,max)
= 60
*Aug 9 19:55:37.635: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/2,recovery,2,thresh) = 480
*Aug 9 19:55:37.637: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/2,recovery,next,level) = 0
*Aug 9 19:55:37.637: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/2,recovery,next,repeat) = 0
*Aug 9 19:55:37.637: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_ctx(GigabitEthernet2/2,recovery,next,time_left) = 600
```

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*Aug 9 19:55:37.639: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,slaid) = 2
*Aug 9 19:55:37.639: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(GigabitEthernet2/2,state) = 0
<----- Gig2/2 has been marked 0 or down due to the fact that the line_state is 0, despite the
fact that the IP SLA operation is still UP and the check_ipsla value is 1
*Aug 9 19:55:37.639: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(current_polled_run) = 1249847736
*Aug 9 19:55:37.639: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_ctx(if_list) = GigabitEthernet2/1
GigabitEthernet2/2
*Aug 9 19:55:37.641: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_saved_ctx(GigabitEthernet2/1,link_events) = {0 ipsla 1249847563 {Sun Aug 09 19:52:43 UTC
2009}} {1 {} 1249847478 {Sun Aug 09 19:51:18 UTC 2009}}
*Aug 9 19:55:37.641: %HA_EM-6-LOG: tm_wanmon.tcl:
wanmon_saved_ctx(GigabitEthernet2/2,link_events) = {0 lineproto 1249847478 {Sun Aug 09 19:51:18
UTC 2009}}
*Aug 9 19:55:37.641: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_saved_ctx(exec_count) = 6
*Aug 9 19:55:37.641: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_saved_ctx(last_polled_run) = 1249847136
*Aug 9 19:55:37.643: %HA_EM-6-LOG: tm_wanmon.tcl: wanmon_saved_ctx(last_run) = 1249847563
*Aug 9 19:55:37.643: %HA_EM-6-LOG: tm_wanmon.tcl: Finished
*Aug 9 19:55:37.661: %HA_EM-6-LOG: tm_wanmon.tcl: context_save succeeded
```

관련 정보

- http://www.cisco.com/c/en/us/td/docs/routers/connectedgrid/cgr1000/ios/software/15_4_1_cg/WANMon.html
- http://www.cisco.com/c/en/us/td/docs/routers/connectedgrid/cgr1000/1_0/software/configuration/guide/unicast/Unicast Book/13_backhaul_cgr1000.html#wp998807
- [기술 지원 및 문서 - Cisco Systems](#)