

CGR 1000中的WANMon模块故障排除和验证

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简介

本文档介绍如何对嵌入在Cisco IOS1000系列Connected Grid路由器(CGR)的IOS映像中的工具命令语言(TCL)脚本tm_wanmon.tcl进行故障排除和验证。此脚本在启用后充当广域网接口的广域网(WAN)监控软件，并执行侵入性日益增强的操作，以从广域网链路故障或隧道故障中恢复。

在路由器上启用WANMON后，脚本将解压到tmpsys:/eem_policy/目录中，并且可以使用此命令查看脚本；`Router#more tmpsys:eem_policy/tm_wanmon.tcl`。

先决条件

要求

Cisco建议您启用TCL脚本，如本文档所述

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

最低软件数：思科IOS版本15.4(1)CG

使用的组件

本文档中的信息基于CGR1120/CGR1240。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

故障排除方法

在CGR上配置并运行WANMON时，在将此配置添加到设备配置时，可以启用脚本调试：

Router(config)#event manager environment wanmon_debug all

验证脚本

```
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,
reseting 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

```

运行脚本时的常见问题

语法错误

当您认为WANMON在配置时工作，但实际上不会产生任何影响时，可能会出现这种情况。例如，在WANMON脚本无法正常工作的环境中，观察到以下调试输出：

```
*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
```

根据此输出，由于接口名称及其编号之间有空格，脚本未成功运行。导致此错误的命令是：

```
event manager environment wanmon_if_list1 {gig 2/1 {recovery {5 25} {90 180} {400 100}}} }
正确配置应为：
```

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

Internet协议服务级别协议(IPSLA)关闭

如果WANMON使用IPSLA轮询多个接口。

IPSLA操作，立即确定故障的位置可能很棘手。此调试输出显示当WANMON在每个接口上使用IPSLA监控两个接口时会发生什么情况：

```
*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
*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

*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
*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
```

相关信息

- 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
- [技术支持和文档 - Cisco Systems](#)