



! Embedded Event Manager (EEM) is part of your router or switch code and allows for powerful scripting to be performed as needed. For example, it is common to use EEM scripts with HSRP or GLBP to change how a router responds in the event of a change in 'up/down' status

- ! - We used simple IP addresses in this example for ease of reading the config.
- ! - Email info@configtoolbox.com if you have any questions.

! These examples are for Cisco IOS-XE.

! These IP SLA commands will ping host 2.2.2.1 every 15 seconds to determine if the host is alive.

```
ip sla 1
icmp-echo 2.2.2.1 source-interface GigabitEthernet0/0
frequency 15
ip sla schedule 1 life forever start-time now
```

! This track command uses 'ip sla 1' above to create a reachability state of 'up' or 'down'. The track will delay a state of 'down' after 35 seconds (or 2 ping fails), and delay a state of 'up' after 20 seconds (or 1 ping success).

```
track 1 ip sla 1 reachability
delay down 35 up 20
```

! EEM requires a username with privileged EXEC (Level 15) access to your router or switch. The configs below also enables syslog messages once the script has run, so ensure you have logging setup — see the Free Download 'Basic Logging'.

```
event manager session cli username "priv-username" privilege 15 >> Change to real username
```

! In this example IP SLA track 1 is down which will trigger an EEM script to remove a static route and then send a syslog message of the change.

```
event manager applet SCRIPT-1 trap authorization bypass
event track 1 state down
action SCRIPT-1.1 cli command "enable"
action SCRIPT-1.2 cli command "config t"
action SCRIPT-1.3 cli command "no ip route 1.1.1.0 255.255.255.0 2.2.2.1" >>>> example route
action SCRIPT-1.4 cli command "end"
action SCRIPT-1.5 syslog msg "IP SLA TRACK 1 DOWN, ROUTE CHANGED"
```

! In this example IP SLA track 1 is up which will trigger an EEM script to add a static route and then send a syslog message of the change.

```
event manager applet SCRIPT-2 trap authorization bypass
event track 1 state up
action SCRIPT-2.1 cli command "enable"
action SCRIPT-2.2 cli command "config t"
action SCRIPT-2.3 cli command "ip route 1.1.1.0 255.255.255.0 2.2.2.1" >>>> example route
action SCRIPT-2.4 cli command "end"
action SCRIPT-2.5 syslog msg "IP SLA TRACK 1 UP, ROUTE CHANGED"
```

!
! In this example IP SLA track 1 is down which will trigger an EEM script to make a change to an
! access-list named ACL and then send a syslog message of the change.
event manager applet SCRIPT-3 trap authorization bypass
event track 1 state down
action SCRIPT-3.1 cli command "enable"
action SCRIPT-3.2 cli command "config t"
action SCRIPT-3.3 cli command "ip access-list standard ACL"
action SCRIPT-3.4 cli command "5 deny 3.3.3.0 0.0.0.255" >>>>>>>>>> example subnet
action SCRIPT-3.4 cli command "end"
action SCRIPT-3.5 syslog msg "IP SLA TRACK 1 DOWN, ACL CHANGED"
!
!
! This command will show you the registered EEM policies on your router or switch.
show event manger policy registered
!
! You can unregister an EEM script with a 'no' command.
no event manager applet <script> (for example, 'no event manager applied SCRIPT-1')

Let us know if you have any questions or need config guidance.

- Config Toolbox @ <https://configtoolbox.com/contact-us>

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