



Configuring Y.1564

This document describes the Y.1564 test feature and configuration steps to execute Y.1564 feature.

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Prerequisites for Configuring Y.1564

- You must disable:
 - Link Layer Discovery Protocol (LLDP) transmit and receive on source port.
 - Loop protection on destination port or Spanning Tree Protocol (STP) on destination and source port.
 - Spanning Tree Protocol (STP).
- NID must have an IP address.
- Loop should not be configured.

Information About Y.1564

ITU-T Y.1564 (Or sometimes called Y.156sam or EtherSAM - Ethernet Service Activation Methodology) is a QoS and network performance ITU-T Ethernet-based service test methodology. This testing procedure tests service turn-up, installation and troubleshooting of Ethernet-based services.

Y.1564 allows simultaneous testing of multiple Ethernet services and measures. It also validates the different QoS mechanisms provisioned in the network to prioritize different service types - allowing faster deployment, easier service and network troubleshooting.

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Configuring New Y.1564 Profile

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: Switch# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 2	setY1564Profile y1564ProfileProfile name description acceptable-fdv acceptable-gdv acceptable-flr acceptable-flr acceptable-ftd acceptable-ftd cir-test {dm-interval dm-interval duration duration step-count step-count start { enable disable } } dst-oam-aware { enable disable } dwell-time dwell-time eir-test { enable disable } meg-level meg-level duration performance-test { enable disable } traffic-policing-test { dm-interval duration } traffic-type { customer-simulated oam } emix user-defined-frame-size } Example: Switch(ciscoY1564)# setY1564Profile y1564Profile profileName Switch(ciscoY1564)# setY1564Profile y1564Profile description Switch(ciscoY1564)# setY1564Profile y1564Profile acceptable-fdv 0-10000 Switch(ciscoY1564)# setY1564Profile y1564Profile acceptable-flr 0-1000 Switch(ciscoY1564)# setY1564Profile y1564Profile acceptable-ftd 0-10000 Switch(ciscoY1564)# setY1564Profile y1564Profile cir-test start enable Switch(ciscoY1564)# setY1564Profile y1564Profile cir-test dm-interval 100-10000 Switch(ciscoY1564)# setY1564Profile y1564Profile cir-test duration <cr> Switch(ciscoY1564)# setY1564Profile y1564Profile cir-test step-count 1-1000 Switch(ciscoY1564)# setY1564Profile y1564Profile dst-oam-aware enable Switch(ciscoY1564)# setY1564Profile y1564Profile dwell-time 100-10000 Switch(ciscoY1564)# setY1564Profile y1564Profile eir-test enable Switch(ciscoY1564)# setY1564Profile y1564Profile meg-level 0-7 Switch(ciscoY1564)# setY1564Profile y1564Profile performance-test enable Switch(ciscoY1564)# setY1564Profile y1564Profile traffic-policing-test dm-interval 100-10000 Switch(ciscoY1564)# setY1564Profile y1564Profile traffic-policing-test duration <cr> Switch(ciscoY1564)# setY1564Profile y1564Profile traffic-policing-test duration start enable	<ul style="list-style-type: none"> • profileName— Enter the name of the profile for Y1564 . • description— Enter a brief description about the profile . • acceptable-fdv— Enter frame delay variation in milliseconds to configure Y1564. Acceptable limit is 0-10000. The default value is 0, which disables the test. • acceptable-flr— Enter frame loss ratio per mile to configure Y1564. Acceptable limit is 0-1000. The default value is 0 and 1000 disables the test. • acceptable-ftd— Enter frame transfer delay in milliseconds to configure Y1564. Acceptable limit is 0-10000. Acceptable limit is 0-10000. The default value is 0, which disables the test. • cir-test— Enter frame delay variation in milliseconds to configure Y1564. Acceptable limit is 0-10000. <ul style="list-style-type: none"> ◦ dm-interval— Enter the interval of between sending delay measurement frame. Acceptable limit is 100-10000. ◦ duration— Enter the duration of one step. ◦ step-count— Enter the number of steps to configure CIR. Acceptable limit is 1-1000 ◦ start— Enter enable or disable to configure CIR test. • dst-oam-aware— Enter enable or disable to configure remote end Y.1731 OAM aware. • dwell-time— Enter the time frame of execution, pauses in milliseconds after each trial before reading counters, and status from hardware. Acceptable limit is 100-10000. Default value is 500. • eir-test— Enter EIR configuration test and optionally set its parameters to configure Y1564. Parameters are dm-interval, duration and start.

	Command or Action	Purpose
	<pre>Switch(ciscoY1564) # setY1564Profile y1564Profile traffic-type Switch(ciscoY1564) # setY1564Profile y1564Profile traffic-type customer-simulated <cr> Switch(ciscoY1564) # setY1564Profile y1564Profile traffic-type oam <cr> Switch(ciscoY1564) # setY1564Profile y1564Profile emix Switch(ciscoY1564) # setY1564Profile y1564Profile e emix U Switch(ciscoY1564) # setY1564Profile y1564Profile user-defined-frame-size 10000</pre>	<ul style="list-style-type: none"> • meg-level— Enter the profile MEG level to configure Y1564 . Acceptable limit is 0-7. • performance-test— Enter the performance test parameters. <ul style="list-style-type: none"> ◦ dm-interval— Enter the time interval in milliseconds between sending delay measurement frame. Acceptable limit is 100-10000. ◦ duration— Enter the duration of performance test. ◦ start—Enter enable or disable to start the performance test. • traffic-policing-test— Enter the traffic policing test parameters.. <ul style="list-style-type: none"> ◦ dm-interval— Enter the time interval in milliseconds between sending delay measurement frame. Acceptable limit is 100-10000. ◦ duration— Enter the duration of traffic policing test. ◦ start—Enter enable or disable to start the traffic policing test. • traffic-type— Enter the type of traffic generated at the near end. <ul style="list-style-type: none"> ◦ customer-simulated— Enter the frames that simulate real customer traffic as background traffic. ◦ oam— Enter the duration of traffic policing test. • emix— select the frame size(EMIX letter-encoded) that the enabled tests will use. Encoding is as follows: a: 64, b: 128, c: 256, d: 512, e: 1024,f: 1280, g: 1518, h: MTU, u: user-defined. • user-defined-frame-size— Enter the frame size if emix is set to 'U'. Acceptable limit is 64-10236
Step 3	<p>review</p> <p>Example: Switch(ciscoY1564) # setY1564Profile review</p>	Reviews the ciscoY1564 profile configuration parameters.
Step 4	<p>commit</p> <p>Example: Switch(ciscoY1564) # setY1564Profile commit</p>	Sends the ciscoY1564 profile parameters to the NID.

	Command or Action	Purpose
Step 5	exit Example: Switch(ciscoY1564) # exit	Exits ciscoY1564 profile configuration mode.

Getting the Profile Configuration using Profile Name

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: Switch# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 2	getY1564ProfilegetY1564ProfileReq Example: Switch(ciscoY1564) # getY1564Profile getY1564ProfileReq	Retrieves the Profile configuration.
Step 3	getY1564Profilereview Example: Switch(ciscoY1564) # getY1564Profile review	Displays the Y.1564 profile configuration.
Step 4	getY1564Profilecommit Example: Switch(ciscoY1564) # getY1564Profile commit	Sends the Y.1564 profile configuration information to the NID.
Step 5	exit Example: Switch(ciscoY1564) # exit	Exits ciscoY1564 profile configuration mode.

The following example shows the Profile Configuration using the Profile Name:

```
Switch# getY1564Profile commit
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.profileName = 'cisco123456'
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.description = 'oamunaware'
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.acceptable_fdv = 0
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.acceptable_ftd = 0
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.acceptable_flr = 0
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.dst_oam_aware = false
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.dwell_time = 500
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.emix = '1024'
```

```

GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.meg_level = 7
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.traffic_type.t = 1
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.traffic_type.u.oam = '0'
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.user_defined_frame_size = 2000
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.cir_test.start = true
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.cir_test.duration = 60
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.cir_test.dm_interval = 500
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.cir_test.step_count = 4
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.eir_test.start = true
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.eir_test.duration = 60
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.eir_test.dm_interval = 500
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.performance_test.start = true
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.performance_test.duration = 10
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.performance_test.dm_interval = 100
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.traffic_policing_test.start = true
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.traffic_policing_test.duration =
10
GetY1564Profile_Output.y1564Profile.y1564Profile_ELEM_0.traffic_policing_test.dm_interval
= 100

GetY1564Profile Commit Success
    
```

Viewing Profile Names

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: Switch# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 2	showY1564showY1564Req{profiles reports} Example: Switch(ciscoY1564)# showY1564 showY1564Req	Displays existing profiles or report information.
Step 3	showY1564review Example: Switch(ciscoY1564)# showY1564 review	Displays the profile configurations.
Step 4	exit Example: Switch(ciscoY1564)# exit	Exits ciscoY1564 profile configuration mode.

The following example shows the configurations to display a particular Profiles using the profile name or description:

```

Switch(ciscoY1564)#showY1564 commit
ShowY1564_Output.showY1564Resp.t = 1
ShowY1564_Output.showY1564Resp.u.profile[0].profileName = 'NewProfile1'
ShowY1564_Output.showY1564Resp.u.profile[0].description = ''
ShowY1564_Output.showY1564Resp.u.profile[1].profileName = 'cisco123456'
ShowY1564_Output.showY1564Resp.u.profile[1].description = 'oamunaware'
ShowY1564 Commit Success
    
```

Managing Y.1564 Profile Names

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: Switch# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 2	y1564ProfileManagement old-y1564ProfileManagmentReq {delete rename {new-name old-name} } Example: Switch(ciscoY1564)# y1564ProfileManagement y1564ProfileManagmentReq rename old-name cisco123456 Switch(ciscoY1564)# y1564ProfileManagement y1564ProfileManagmentReq rename new-name cisco Switch(ciscoY1564)# y1564ProfileManagement y1564ProfileManagmentReq delete cisco	<ul style="list-style-type: none"> • rename—Set rename to rename a old profile name. • delete—Set delete to delete an existing profile.
Step 3	review Example: Switch(ciscoY1564)# y1564ProfileManagement review	Reviews the ciscoY1564 profile names.
Step 4	commit Example: Switch(ciscoY1564)# y1564ProfileManagement commit	Sends the changed or deleted ciscoY1564 profile names to the NID .
Step 5	exit Example: Switch(ciscoY1564)# exit	Exits ciscoY1564 profile configuration mode.

Configuring Y.1564 Test Parameters

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: Switch# ciscoY1564	Enters ciscoY1564 configuration mode.

	Command or Action	Purpose
Step 2	<p>setY1564TestParamsy1564TestsReq { dei description dscp ece evc interface pcp peer-mac profile-name report-name vlan <i>vlan-id</i> }</p> <p>Example:</p> <pre>Switch(ciscoY1564)# setY1564TestParams y1564TestsReq profile-name cisco123456 Switch(ciscoY1564)# setY1564TestParams y1564TestsReq report-name controllerreport123456 Switch(ciscoY1564)# setY1564TestParams y1564TestsReq description dstmodeno Switch(ciscoY1564)# setY1564TestParams y1564TestsReq evc 1 Switch(ciscoY1564)# setY1564TestParams y1564TestsReq ece 1 Switch(ciscoY1564)# setY1564TestParams y1564TestsReq interface 3 Switch(ciscoY1564)# setY1564TestParams y1564TestsReq peer-mac 00-00-00-00-00-01 Switch(ciscoY1564)# setY1564TestParams y1564TestsReq pcp 2 Switch(ciscoY1564)# setY1564TestParams y1564TestsReq vlan untagged Switch(ciscoY1564)# setY1564TestParams y1564TestsReq dei 0 Switch(ciscoY1564)# setY1564TestParams review Switch(ciscoY1564)# setY1564TestParams commit</pre>	<ul style="list-style-type: none"> • dei— Enter the DEI number of the profile. The valid range is 0-1. • description— Enter the description about the test. • dscp— Enter the DSCP number of the profile. The valid range is 0-63. • ece— Enter the ECE ID number of the profile, on which the test needs to be executed. The valid range is 1-1024. • evc— Enter the EVC ID number of the profile. The valid range is 1-1024. • interface— Enter the UNI port. The valid range is 1-125. • pcp— Enter the PCP number of the profile. The valid range is 0-7. • peer-mac— Enter peer MAC address. • profile-name— Enter the name of the existing profile, that needs to be tested. • report-name— Enter a unique name for the test report. • vlan— Enter the Vlan ID.
Step 3	<p>review</p> <p>Example:</p> <pre>Switch(ciscoY1564)# setY1564TestParams review</pre>	Reviews the ciscoY1564 profile test parameters.
Step 4	<p>commit</p> <p>Example:</p> <pre>Switch(ciscoY1564)# setY1564TestParams commit</pre>	Sends the test parameter reports to the NID.
Step 5	<p>exit</p> <p>Example:</p> <pre>Switch(ciscoY1564)# exit</pre>	Exits ciscoY1564 profile configuration mode.

Configuration Example

when profile is configured as DST, then OAM-aware port and peer-mac address need to be specified in setY1564TestParams.

```
Switch# ciscoY1564
Switch(ciscoY1564)# setY1564TestParams y1564TestsReq
```

```

Switch(ciscoY1564)# setY1564TestParams y1564TestsReq profile-name cisco123456
Switch(ciscoY1564)# setY1564TestParams y1564TestsReq report-name controllerreport123456
Switch(ciscoY1564)# setY1564TestParams y1564TestsReq description dstmodeno
Switch(ciscoY1564)# setY1564TestParams y1564TestsReq peer-mac 00-02:01:00:01:03
Switch(ciscoY1564)# setY1564TestParams y1564TestsReq evc 1
Switch(ciscoY1564)# setY1564TestParams y1564TestsReq ece 1
Switch(ciscoY1564)# setY1564TestParams y1564TestsReq interface 3
Switch(ciscoY1564)# setY1564TestParams review
Switch(ciscoY1564)# setY1564TestParams commit

```

Viewing Y.1564 Test Parameters

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: Switch# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 2	getY1564TestParamsgetY1564TestsReq Example: Switch(ciscoY1564)# getY1564TestParams getY1564TestsReq	Retrieves the parameters set for latest tet.
Step 3	review Example: Switch(ciscoY1564)# getY1564TestParams review	Reviews the ciscoY1564 profile configuration parameters.
Step 4	commit Example: Switch(ciscoY1564)# getY1564TestParams commit	Sends the test parameter reports to the NID.
Step 5	exit Example: Switch(ciscoY1564)# exit	Exits ciscoY1564 profile configuration mode.

Saving Y.1564 Test Report

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: Switch# ciscoY1564	Enters the ciscoY1564 configuration mode.

	Command or Action	Purpose
Step 2	y1564ReportManagement y1564ReportManagementReqsave stop Example: <pre>Switch(ciscoY1564)# y1564ReportManagemen y1564ReportManagementReq save reportName controllerreport Switch(ciscoY1564)# y1564ReportManagemen y1564ReportManagementReq save tftpPath tftp://202.153.144.25/auto/tftp-blr-users1/sharsh</pre>	<ul style="list-style-type: none"> • Save—Set save to save a profile test report. • Stop—Set stop to stop an ongoing profile test .
Step 3	review Example: <pre>Switch(ciscoY1564)#y1564ReportManagement review</pre>	Reviews the ciscoY1564 profile test report.
Step 4	commit Example: <pre>Switch(ciscoY1564)#y1564ReportManagement commit</pre>	Sends the ciscoY1564 profile test report to the NID.
Step 5	exit Example: <pre>Switch(ciscoY1564)# exit</pre>	Exits ciscoY1564 profile configuration mode.

Deleting Y.1564 Test Report

DETAILED STEPS

	Command or Action	Purpose
Step 1	ciscoY1564 Example: <pre>Switch# ciscoY1564</pre>	Enters the ciscoY1564 configuration mode.
Step 2	y1564ReportManagement y1564ReportManagementReq {delete stop} Example: <pre>Switch(ciscoY1564)# y1564ReportManagemen y1564ReportManagementReq delete controlerreport</pre>	<ul style="list-style-type: none"> • delete—Set delete to delete an existing profile test report. • Stop—Set stop to stop an ongoing profile test .
Step 3	review Example: <pre>Switch(ciscoY1564)# y1564ReportManagement review</pre>	Reviews the ciscoY1564 profile test report.

	Command or Action	Purpose
Step 4	commit Example: Switch(ciscoY1564)# y1564ReportManagement commit	Sends the ciscoY1564 profile test report to the NID.
Step 5	exit Example: Switch(ciscoY1564)# exit	Exits ciscoY1564 profile configuration mode.