



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.

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.

Configuring New Y.1564 Profile

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid1/NID_ID Example: Switch(config)# controller nid 1/1	Enters the controller configuration mode.
Step 3	ciscoY1564 Example: Switch(config-controller)# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 4	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(config-controller-ciscoY1564)# setY1564Profile y1564Profile profileName Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile description Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile acceptable-fdv 0-10000 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile acceptable-flr 0-1000 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile acceptable-ftd 0-10000 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile cir-test start enable Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile cir-test dm-interval 100-10000 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile cir-test duration <cr> Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile cir-test step-count 1-1000 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile dst-oam-aware enable Switch(config-controller-ciscoY1564)#	<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.

Command or Action	Purpose
<pre> setY1564Profile y1564Profile dwell-time 100-10000 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile eir-test enable Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile meg-level 0-7 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile performance-test enable Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile traffic-policing-test dm-interval 100-10000 Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile traffic-policing-test duration <cr> Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile traffic-policing-test duration start enable Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile traffic-type Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile traffic-type customer-simulated <cr> Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile traffic-type oam <cr> Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile emix Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile e emix U Switch(config-controller-ciscoY1564)# setY1564Profile y1564Profile user-defined-frame-size 10000 </pre>	<ul style="list-style-type: none"> • 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. • 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.

	Command or Action	Purpose
		<ul style="list-style-type: none"> • user-defined-frame-size— Enter the frame size if emix is set to 'U'. Acceptable limit is 64-10236
Step 5	review Example: Switch(config-controller-ciscoY1564) # setY1564Profile review	Reviews the ciscoY1564 profile configuration parameters.
Step 6	commit Example: Switch(config-controller-ciscoY1564) # setY1564Profile commit	Sends the ciscoY1564 profile parameters to the NID.
Step 7	exit Example: Switch(config-controller-ciscoY1564) # exit	Exits the config controller mode.

Getting the Profile Configuration using Profile Name

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid1/NID_ID Example: Switch(config)# controller nid 1/1	Enters the controller configuration mode.
Step 3	ciscoY1564 Example: Switch(config-controller)# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 4	getY1564ProfilegetY1564ProfileReq Example: Switch(config-controller-ciscoY1564) # getY1564Profile getY1564ProfileReq	Retrieves the Profile configuration.

	Command or Action	Purpose
Step 5	getY1564Profile review Example: Switch(config-controller-ciscoY1564)# getY1564Profile review	Displays the Y.1564 profile configuration.
Step 6	getY1564Profile commit Example: Switch(config-controller-ciscoY1564)# getY1564Profile commit	Sends the Y.1564 profile configuration information to the NID.
Step 7	exit Example: Switch(config-controller-ciscoY1564)# exit	Exits the config controller mode.

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

```
Switch(config-controller)# 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	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid1/NID_ID Example: Switch(config)# controller nid 1/1	Enters the controller configuration mode.
Step 3	ciscoY1564 Example: Switch(config-controller)# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 4	showY1564showY1564Req {profiles reports} Example: Switch(config-controller-ciscoY1564)# showY1564 showY1564Req	Displays existing profiles or report information.
Step 5	showY1564review Example: Switch(config-controller-ciscoY1564)# showY1564 review	Displays the profile configurations.
Step 6	exit Example: Switch(config-controller-ciscoY1564)# exit	Exits the config controller mode.

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

```
Switch(config-controller-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	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid1/NID_ID Example: Switch(config)# controller nid 1/1	Enters the controller configuration mode.
Step 3	ciscoY1564 Example: Switch(config-controller)# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 4	y1564ProfileManagement old-y1564ProfileManagmentReq {delete rename {new-name old-name}} Example: Switch(config-controller-ciscoY1564)# y1564ProfileManagement y1564ProfileManagmentReq rename old-name cisco123456 Switch(config-controller-ciscoY1564)# y1564ProfileManagement y1564ProfileManagmentReq rename new-name cisco Switch(config-controller-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 5	review Example: Switch(config-controller-ciscoY1564)# y1564ProfileManagement review	Reviews the ciscoY1564 profile names.
Step 6	commit Example: Switch(config-controller-ciscoY1564)# y1564ProfileManagement commit	Sends the changed or deleted ciscoY1564 profile names to the NID .
Step 7	exit Example: Switch(config-controller-ciscoY1564)# exit	Exits the config controller mode.

Configuring Y.1564 Test Parameters

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid1/NID_ID Example: Switch(config)# controller nid 1/1	Enters the controller configuration mode.
Step 3	ciscoY1564 Example: Switch(config-controller)# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 4	setY1564TestParamsy1564TestsReq { dei description dscp ece evc interface pcp peer-mac profile-name report-name vlan vlan-id } Example: <pre>Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq profile-name cisco123456 Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq report-name controllerreport123456 Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq description dstmodeno Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq evc 1 Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq ece 1 Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq interface 3 Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq peer-mac 00-00-00-00-00-01 Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq pcp 2 Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq vlan untagged Switch(config-controller-ciscoY1564)# setY1564TestParams y1564TestsReq dei 0 Switch(config-controller-ciscoY1564)# setY1564TestParams review Switch(config-controller-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.

	Command or Action	Purpose
Step 5	review Example: Switch(config-controller-ciscoY1564)# setY1564TestParams review	Reviews the ciscoY1564 profile test parameters.
Step 6	commit Example: Switch(config-controller-ciscoY1564)# setY1564TestParams commit	Sends the test parameter reports to the NID.
Step 7	exit Example: Switch(config-controller-ciscoY1564)# exit	Exits the config controller mode.

Configuration Example

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

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

Viewing Y.1564 Test Parameters

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid1/NID_ID Example: Switch(config)# controller nid 1/1	Enters the controller configuration mode.

	Command or Action	Purpose
Step 3	ciscoY1564 Example: Switch(config-controller)# ciscoY1564	Enters ciscoY1564 configuration mode.
Step 4	getY1564TestParamsgetY1564TestsReq Example: Switch(config-controller-ciscoY1564)# getY1564TestParams getY1564TestsReq	Retrieves the parameters set for latest tet.
Step 5	review Example: Switch(config-controller-ciscoY1564)# getY1564TestParams review	Reviews the ciscoY1564 profile configuration parameters.
Step 6	commit Example: Switch(config-controller-ciscoY1564)# getY1564TestParams commit	Sends the test parameter reports to the NID.
Step 7	exit Example: Switch(config-controller-ciscoY1564)# exit	Exits the config controller mode.

Saving Y.1564 Test Report

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid1/NID_ID Example: Switch(config)# controller nid 1/1	Enters the controller configuration mode.
Step 3	ciscoY1564 Example: Switch(config-controller)# ciscoY1564	Enters the ciscoY1564 configuration mode.

	Command or Action	Purpose
Step 4	y1564ReportManagement y1564ReportManagementReqsave stop Example: <pre>Switch(config-controller-ciscoY1564)# y1564ReportManagemen y1564ReportManagementReq save reportName controllerreport Switch(config-controller-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 5	review Example: <pre>Switch(config-controller-ciscoY1564)#y1564ReportManagement review</pre>	Reviews the ciscoY1564 profile test report.
Step 6	commit Example: <pre>Switch(config-controller-ciscoY1564)#y1564ReportManagement commit</pre>	Sends the ciscoY1564 profile test report to the NID.
Step 7	exit Example: <pre>Switch(config-controller-ciscoY1564)# exit</pre>	Exits the config controller mode.

Deleting Y.1564 Test Report

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: <pre>Switch# configure terminal</pre>	Enters global configuration mode.
Step 2	controller nid//NID_ID Example: <pre>Switch(config)# controller nid 1/1</pre>	Enters the controller configuration mode.
Step 3	ciscoY1564 Example: <pre>Switch(config-controller)# ciscoY1564</pre>	Enters the ciscoY1564 configuration mode.
Step 4	y1564ReportManagement y1564ReportManagementReq {delete stop}	<ul style="list-style-type: none"> • delete—Set delete to delete an existing profile test report.

	Command or Action	Purpose
	<p>Example:</p> <pre>Switch(config-controller-ciscoY1564)# y1564ReportManagemen y1564ReportManagementReq delete controllerreport</pre>	<ul style="list-style-type: none"> • Stop—Set stop to stop an ongoing profile test
Step 5	<p>review</p> <p>Example:</p> <pre>Switch(config-controller-ciscoY1564)# y1564ReportManagement review</pre>	Reviews the ciscoY1564 profile test report.
Step 6	<p>commit</p> <p>Example:</p> <pre>Switch(config-controller-ciscoY1564)# y1564ReportManagement commit</pre>	Sends the ciscoY1564 profile test report to the NID.
Step 7	<p>exit</p> <p>Example:</p> <pre>Switch(config-controller-ciscoY1564)# exit</pre>	Exits the config controller mode.