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## JDSU SAMComplete

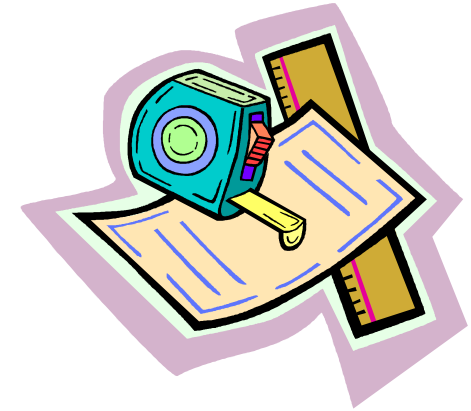
Y.1564 based Service Activation Methodology

... and more

# ITU-T Y.1564 Methodology Overview

# Y.1564 Overview

- Mainly an Ethernet Installation Tool
  - Verifies multi-service SLA compliance
  - Good Test for Access Side of Metro Network
  
- Ideal Use Cases
  - Multi-Service **LTE/4G Cell Site** traffic
  - Triple Play Testers
  
- New Y.1564 Terminology
  - Bandwidth profiles
    - CIR – throughput committed to conform to KPIs
    - EIR – throughput may conform to SLA but may also be dropped entirely
    - CBS, EBS – data burst parameters
  
  - Key Performance Indicators (KPIs) or Parameters in SLA
    - Frame Delay (FD) – Latency
    - Frame Delay Variation (FDV) – Jitter
    - Frame Loss Rate (FLR)



# High-Level View of ITU-T Y.1564



## Objectives

- To validate the typical SLA of Carrier Ethernet-based services
  - Against a Bandwidth Profile
  - Against KPIs
- Offer a quick repeatable **Multi-Stream** test with pass/fail results

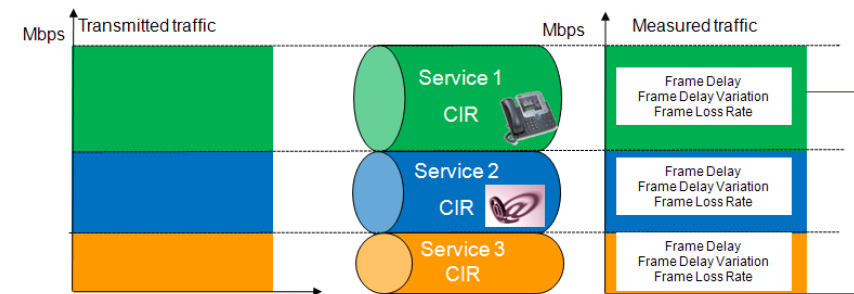
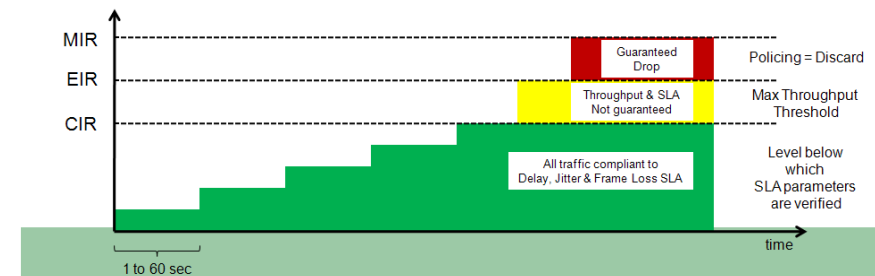
## Two Phase Test Methodology

### Service Configuration Test

- Each stream/service is validated individually
- Results compared to
  - KPIs
  - Bandwidth Parameters

### Service Performance Test

- All services tested concurrently at CIR
- Results compared to KPIs
  - Frame Delay (Latency)
  - Frame Delay Variation (Packet Jitter)
  - Frame Loss rate





## JDSU SAMComplete

- Y.1564 based Service Activation Methodology
- ... and more

# SAMComplete Key Benefits



- 1 Boost customer satisfaction and network quality**
  - *reliable and repeatable*
  - *independent of technicians skill level*

- 2 Reduce OPEX for service delivery**
  - faster and more complete test execution
  - Integrated with J-Complete



- 3 Increase your ROI (Return on Investment)**
  - **SAMComplete comes for FREE** units running multiple streams
  - **Works on new units and installed base JDSU's MTS testers (MSAM, 5800, Transport Module V3)**

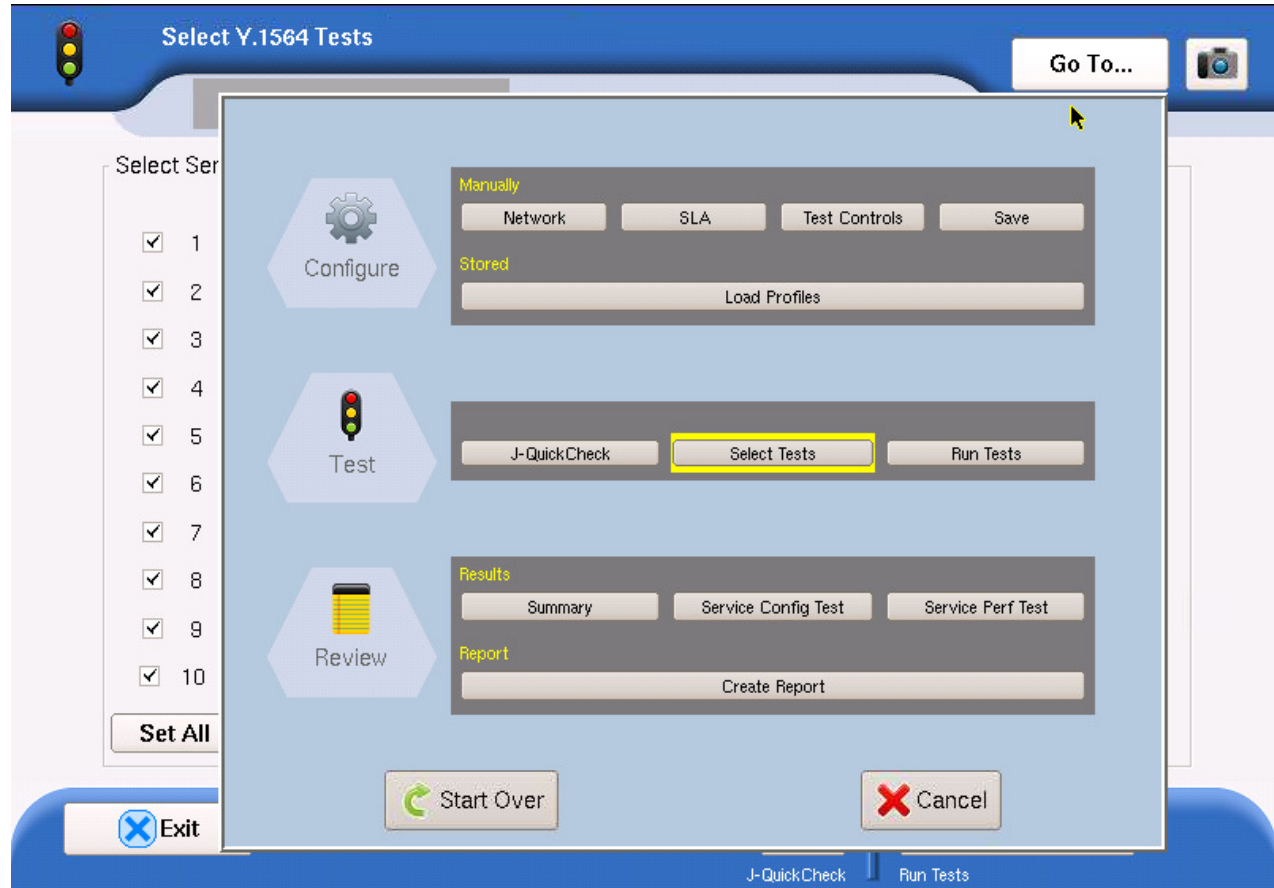
# Three Easy Steps for Field Engineers ...



1. Load Profile

2. Run Test

3. Create Report



... Workflow Based Configuration for Easy Profile Creation & Troubleshooting

# Time Saving Configuration and Execution



## Work Flow Based Configuration for Easy Test Setup

### Integrated J-QuickCheck

- Pre-test before starting
- Saves time on end-to-end setup

### Time Saving Throughput Test

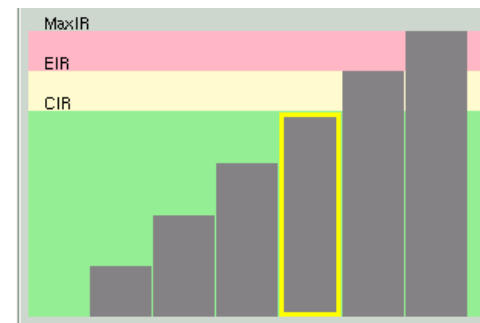
- Start at CIR
- If CIR fails start at -0- and step up

### Time Saving Troubleshooting

- RFC 2544 Zeroing-In Algorithm

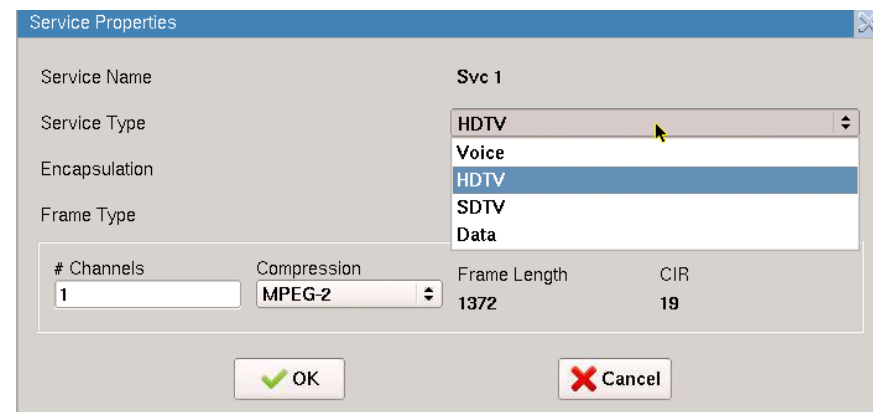
### Triple Play Stream Configuration

- Configure by # of TV or VoIP Streams
- Same as Triple Play Test



• Steps to CIR X Time per Step

• Ex: 3 steps x 60 seconds = 3 Minutes





## **SAMComplete - taking a closer look**

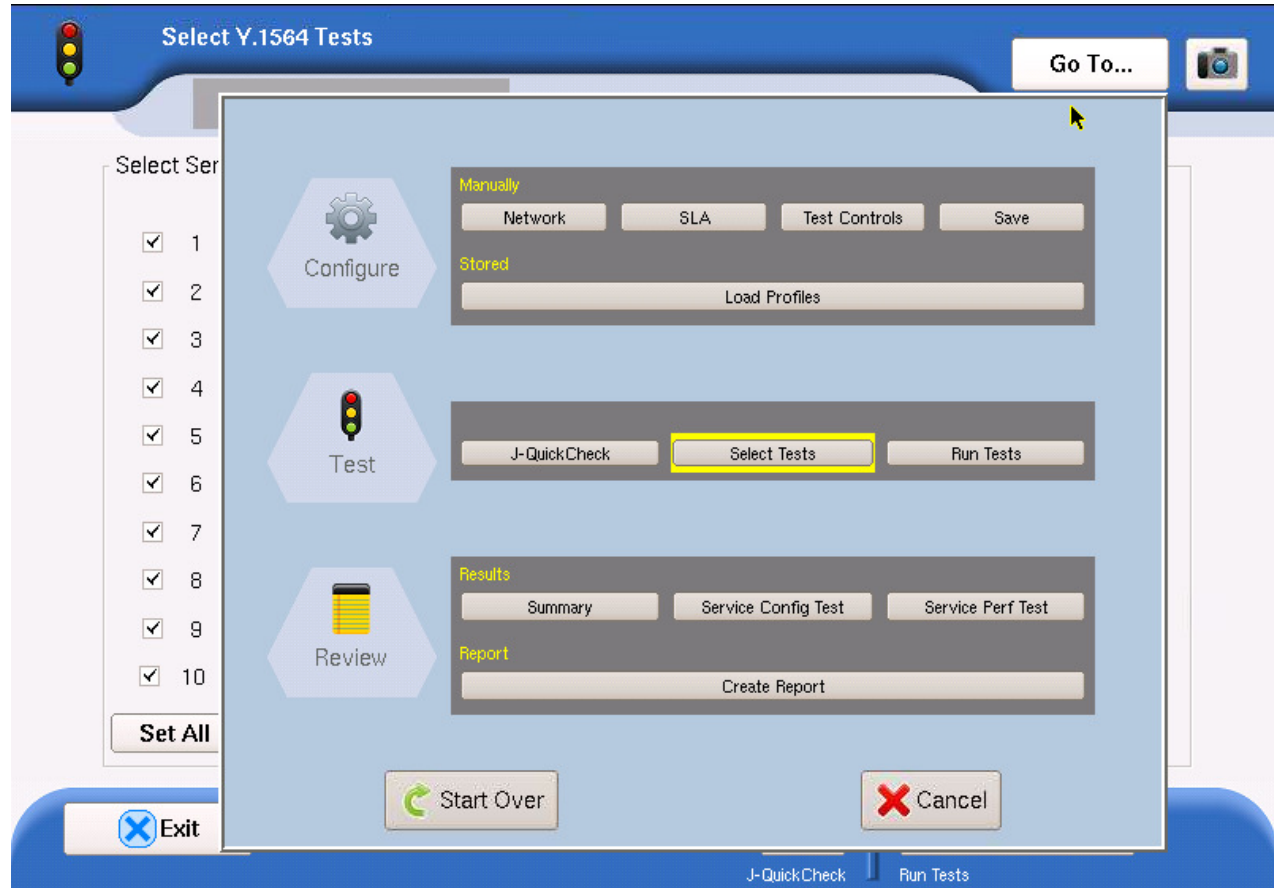
# Three Easy Steps for Field Engineers ...



1. Load Profile

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... Workflow Based Configuration for Easy Profile Creation & Troubleshooting

# Step 1 – Intelligent Profile Loading



## Load Network Profile Only

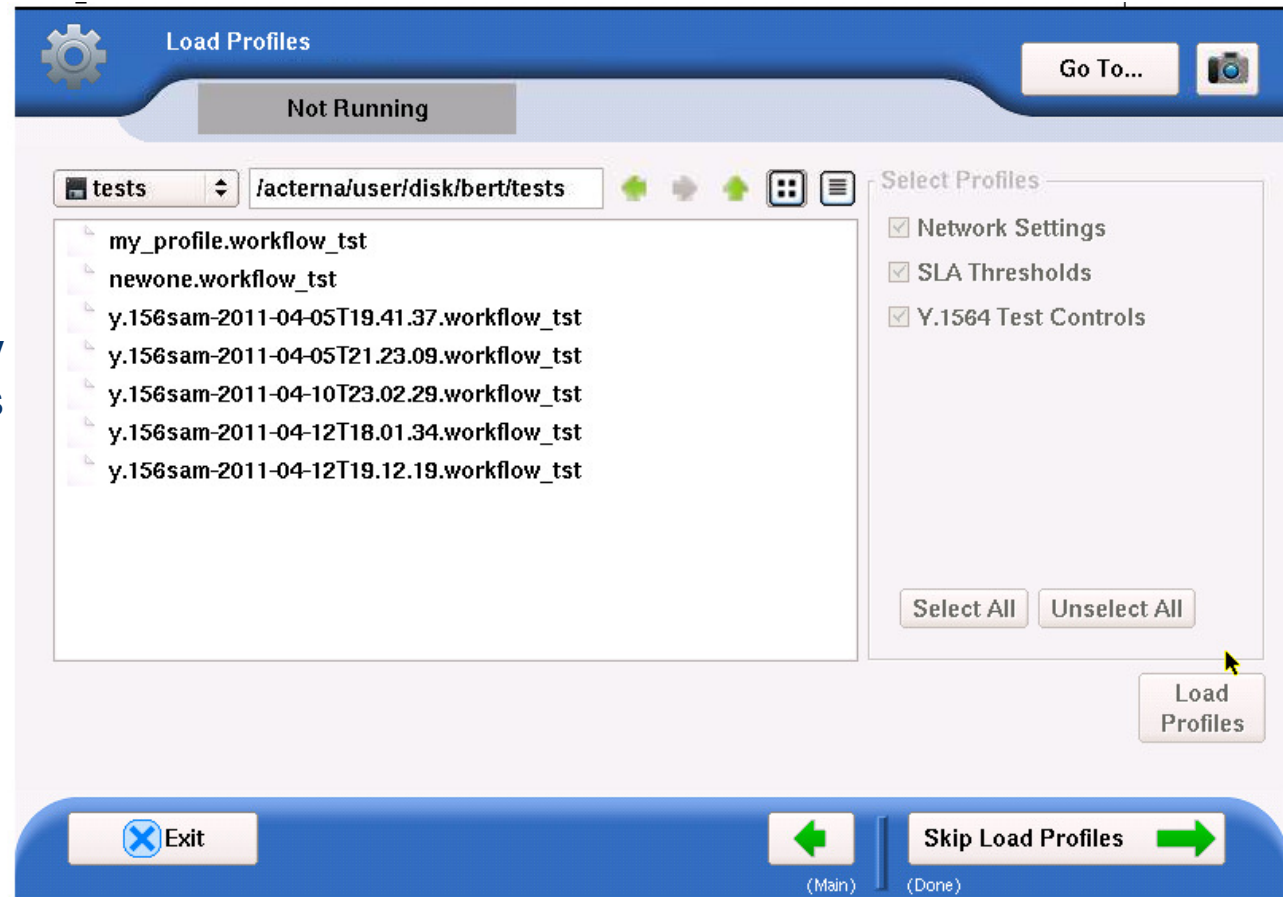
- Addressing
- Frame/Packet Length
- Priority Markings

## Load Per Service SLAs Only

- Throughput Parameters
  - CIR, EIR, MIR
- Delay
- Jitter
- Frame Loss

## Load Controls Only

- Test Durations
- Number of Ramp Steps



# Step 2 – Run Test



## Continuous & Easy to Understand Test Status

- Per Service
- Per SLA Parameter

## Stop on Failure

- Avoid lost time

Run Y.1564 Tests

Go To...

Not Running

Start

Stop on failure

Test Status Key

- Pass
- Fail
- Running
- Scheduled

Service Configuration

1	Svc 1	...
2	Svc 2	...
3	Svc 3	...
4	Svc 4	...
5	Svc 5	...
6	Svc 6	...
7	Svc 7	...
8	Svc 8	...
9	Svc 9	...
10	Svc 10	...

Service Performance

- Throughput
- Frame Loss
- Delay
- Delay Var

Exit

Select Tests

Skip Y.1564 Tests

(Done)

# Step 3 – Create Report

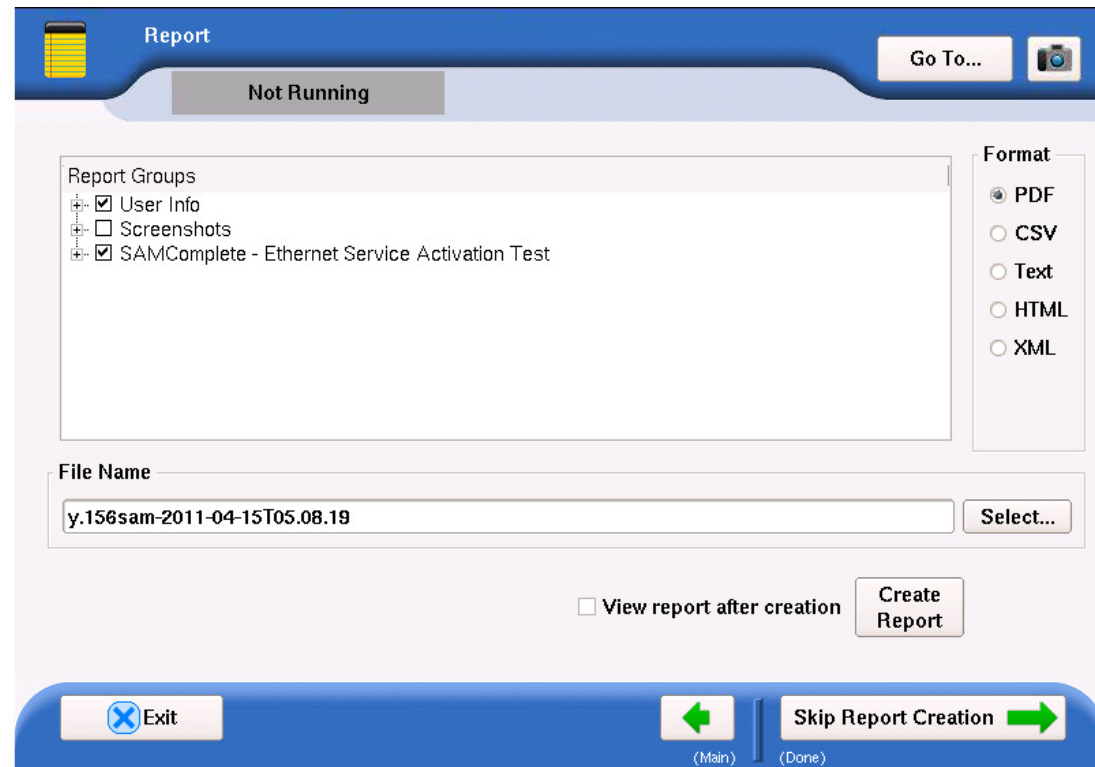


**Select Information to Save**

**Multiple File Formats**

- PDF, CSV, Text, HTML & XML

**View Report After Creation**



# Easy to Troubleshooting



Per SLA View

Per Step Drill Down

Service Performance Results

OK Test Complete

Go To...

Overview IR Frame Loss Frame Delay Delay Variation Availability

	Service	IR, Avg. (Mbps)	Frame Loss Ratio	Frame Delay Avg. (ms)	Delay Var. Avg. (ms)	DoS Count
✓ 1	HDTV	18.00	0.000	0.004	0.000	0
✓ 2	SDTV	8.00	0.000	0.004	0.000	0
✓ 3	Voice	30.00	0.000	0.004	0.000	0
✓ 4	Data	200.00	0.000	0.004	0.000	0
✓ 5	Data 2	300.00	0.000	0.004	0.000	0
✓ 6	Data 3	10.00	0.000	0.004	0.000	0
✓ 7	Data 4	30.00	0.000	0.004	0.000	0
✓ 8	Data 5	100.00	0.000	0.004	0.000	0
✓ 9	Data 6	20.00	0.000	0.004	0.000	0
✓ 10	Data 7	54.00	0.000	0.004	0.000	0

Exit Service Config Test Next End: Detailed Results

Service Configuration Results

OK Test Complete

1 2 3 4 5 6 7 8 9 10

Voice ✓

M  
EIR  
CIR

CIR All

IR (Mbps)  
Frame Loss Ratio  
Frame Delay (ms)  
Frame Delay Variation (ms)

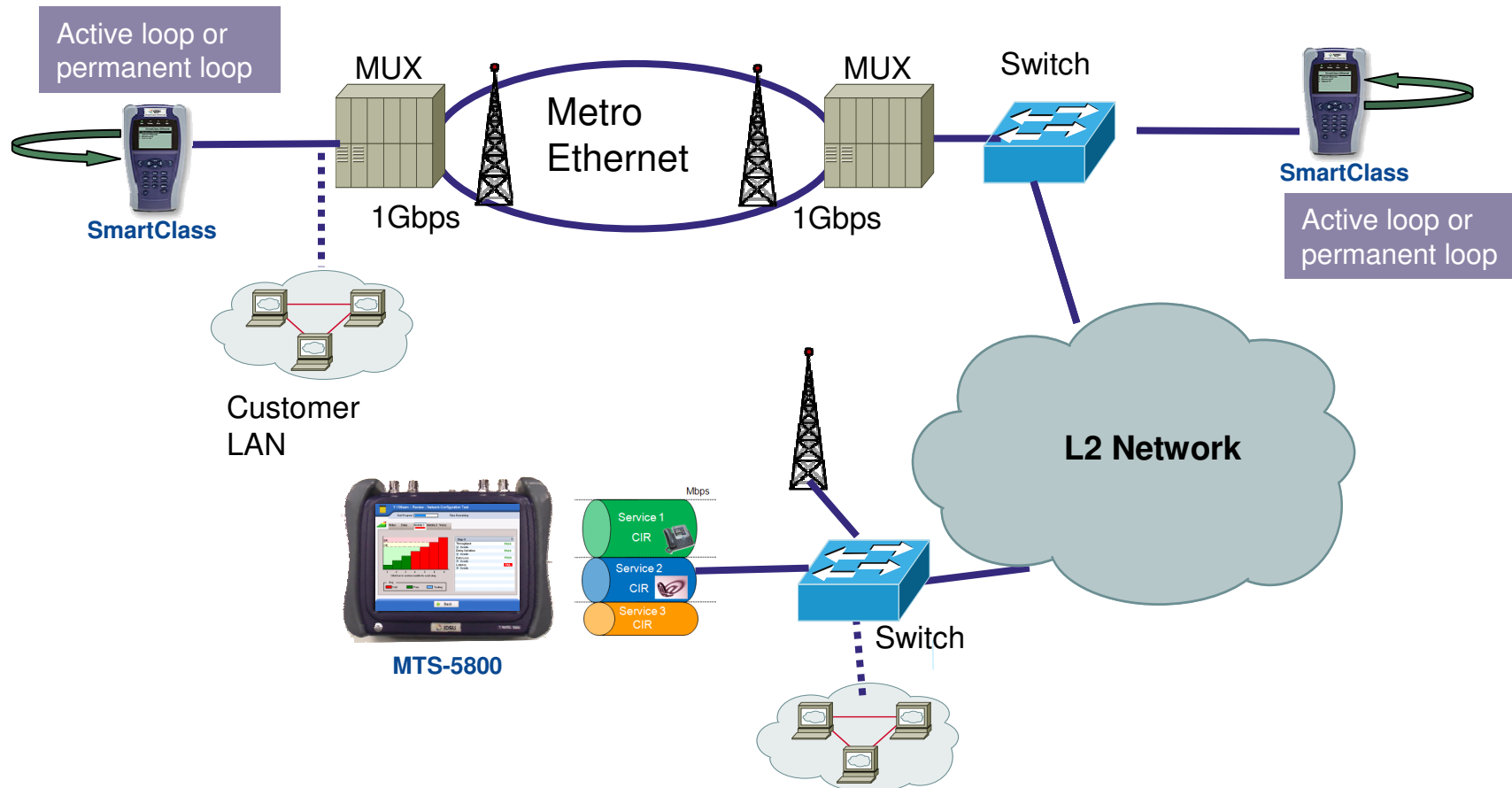
SLA Thresholds  
Committed Information Rate (CIR) (Mbps): 30.00  
Frame Loss Rate: 0.1  
Frame Delay (ms): 0.300  
Frame Delay Variation (ms): 0.300

Click bars to review results for each step.

Exit Summary Next Service Perf Test

SLA Parameter Reminder

# SAMComplete in the Network



- 1 **Initiate SAMComplete**
- 2 **Test against an active or permanent loop**



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