

**66th IETF - Montreal, Quebec,  
Canada**

**Implementation Status of  
draft-ietf-ippm-twamp-01.txt**

**TWAMP**

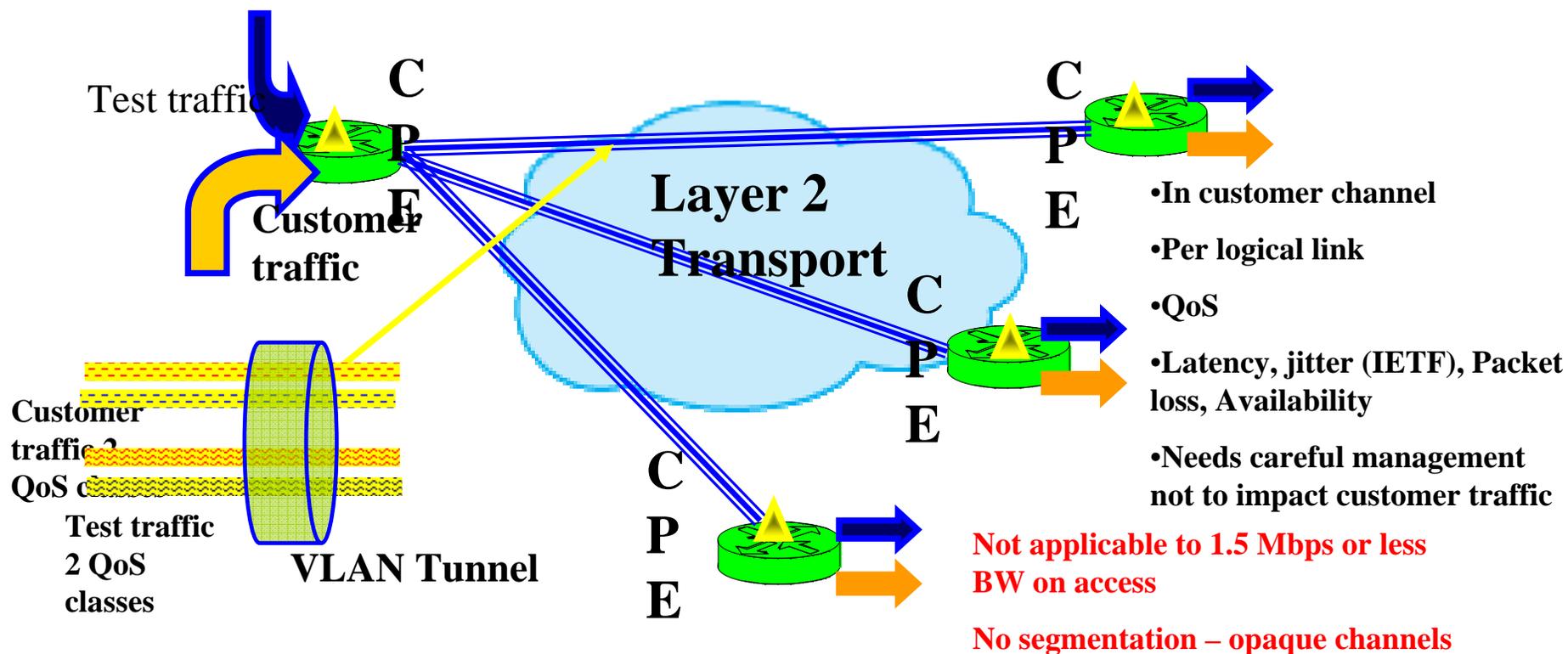
**for**

**In channel per customer PM (ICPM)**

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# In channel per customer PM (ICPM)



# Performance Measuring Deployment ICPM Today – ICMP+

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- **Network Performance Testing conducted from the Ethernet Demarcation Device**
  - **Canoga Perkins 9145 NID running Network Performance Assurance (NPA) Software Option**
  - **Uses ICMP Ping with Originator and Responder NID Ingress and Egress Time Stamps Placed in the User Data Field**
    - **4 Time Stamps allow local processing time to be extracted**
  - **Latency, Jitter & Frame Loss Test Metrics**
  - **Configurable Test Parameters**
    - **Test Frequency, Test Duration, Test Rate, Frame Size**
  - **Compatible with Generic IP Devices as Responders**
    - **Round Trip Measurements Only**
  - **Operates across Multiple Networks (NNIs)**

# Performance Measuring Deployment: Results Management

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- **9145 NID Test Results Capture**
  - Test Identity Information
  - Number of Lost Frames
  - Latency Range – 10 Buckets, User Configurable for Time Values
  - Jitter Range – 9 Buckets, User Configurable for Time Values
- **Performance Collection System (PCS)**
  - CanogaView SEM Application Plug-in
  - Collects Results from 9145 NIDs
  - Compiles Reports Information for Distribution
  - Manages Test Profiles allowing a common policy, scheduling, synchronization and provisioning tool for all Network NIDs

# Performance Measuring Deployment

## ICPM

## TWAMP

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- **TWAMP accomplishes Performance Monitoring similar to Canoga Perkins' NPA**
  - Principle Differences is TWAMP provides for negotiation of UDP Port usage and Encryption of Frame Contents
- **Canoga Perkins plans to Schedule TWAMP implementation upon ratification**
  - NPA will continue to be supported
  - Separate Originator NPA and TWAMP Options (exclusive)
  - Combined and Concurrent NPA and TWAMP Reflector
  - Performance Collection System will collect both NPA and TWAMP Test Results from the NIDs for consolidation and distribution to Higher Order Systems.
  - Canoga is coordinating TWAMP implantation with Brix Networks for interoperability
- **TWAMP provides the interoperability with other TWAMP implementations as well as standard measure of performance**