

Reduce Your TCO with Effective Visibility Architecture Management

Deployment Scenario: Inline & Out-of-Band Visibility

Operating expenditures (OPEX) are important to any network monitoring solution. The OPEX for monitoring equipment can make or break a solution's total cost of ownership (TCO) because there are lots of hidden costs that are often not factored in with the cost of the equipment purchase, like productivity (ease of use) and the management capabilities of the device, i.e., the element management system (EMS). Common examples include the time needed to create data filters, filter edits and maintenance, learning curve (training) to operate the equipment, and the time involved with deploying product updates.

The most important component of any EMS is the ease of use of the user interface (UI), because filter creation and filter changes are common practice for visibility equipment, like network packet brokers (NPBs). To keep costs down, the UI needs to be simple to understand to allow fast creation of filters but powerful enough to automate filter rules.

A second critical component of a visibility architecture is the long-term management of the solution. According to the 2015 Dimension Data Network Barometer Report, proper remote management of devices can reduce troubleshooting time by up to 75%. The EMS component contributes heavily to the TCO of a monitoring solution, because it is used to configure individual network elements (NPBs, virtual taps, etc.) that are part of the visibility architecture. It is also used to set up the inline and out-of-band architecture components and programming.

Benefits

- Lower the total cost of ownership for your monitoring solution
- Simplify equipment updates and management
- Reduce troubleshooting time by up to 75%



Solution Components:

- Keysight Network Packet Brokers
- Keysight NetStack
- Keysight Fabric Controller

Solution Overview

This solution allows you to:

- Create a single pane of glass interface, which makes managing multiple NPBs easier
- Implement improved remote management of devices to potentially reduce troubleshooting time by up to 75%
- Introduce a visual drag-and-drop interface that reduces the filter creation time to ¼ that of alternatives like a CLI
- Potentially save hours of downtime per year

The Power of a Single Pane of Glass

One of the most important benefits of an EMS is that it provides you with a single viewpoint (i.e., a single pane of glass) from which you can perform filter, policy, user, and device management. Once you have this consolidated view, the interface can be used for configuring one or more elements and element types (NPBs, bypass switches, application intelligence, Secure Sockets Layer (SSL) decryption, etc.).

The EMS also needs to solve other problems, like remote access, role-based permissions for added security, and monitoring data statistics and event information. Device access and filter creation can be performed directly or remotely. This saves a significant amount of time because the engineer or information technology (IT) administrator does not need to drive into the office to make software changes.

In addition, the EMS should allow you to set up groups and attach permissions to groups and filters. This allows you to create role-based permissions for filters so that others cannot alter those filters without permission. It also eliminates unexpected surprises during troubleshooting and other activities. In a separate instance, filters can be created and placed in a library so that everyone can access them and use the same filters to guarantee accuracy and create repeatable results.

The EMS should also allow for creation of teams to be set up so that different groups within the organization (monitoring, security, compliance, etc.) can have access to create or modify specific filters and devices based on their roles within the organization. This reduces contention among the different groups while allowing all groups to share the same equipment and remove silos.



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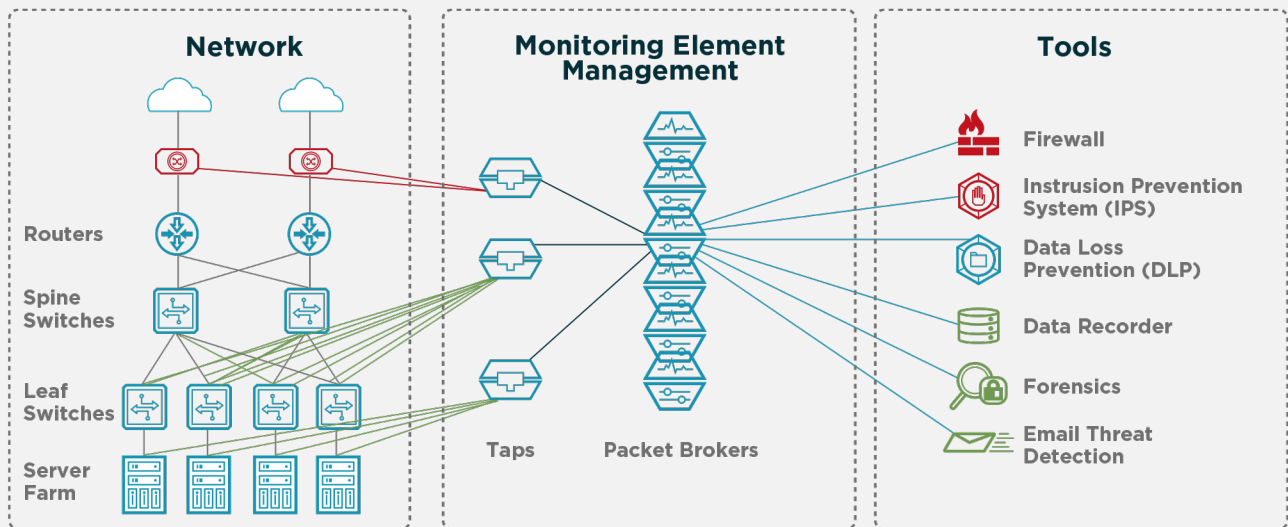


Figure 1. Network monitoring example

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In this solution, the EMS (Keysight's Fabric Controller (IFC)) is a software defined networking (SDN) controller for visibility that allows multiple NPBs to work collectively within a single pane of glass. The IFC extends a full set of API controls and integrates with Cisco ACI and other SDN architectures.

Intuitive Means Lower Cost

An easy-to-use, intuitive drag-and-drop NPB interface allows operators to make connections from taps or Switch Port Analyzer (SPAN) ports to their connected tools. When using this solution, the configuration of these filters are streamlined and easy, with the overall setup requiring minimal time and effort, even for large shops and complicated networks. The visual interface and Keysight's patented Dynamic Filter engine technology can be four times, or more, faster than using a command line interface (CLI) method. This significantly reduces the time required for filter creation, validation, and maintenance.

No professional services or expensive training is required to learn and implement Keysight visibility solutions. This eliminates the need to use a time-consuming CLI or Web user interface (WebUI) dialogs or invest hours or days designing complex logic.

Summary

The EMS of a visibility and monitoring solution solves some of the biggest problems facing network administrators—remote access, a single interface to see and program multiple devices and filters, role-based permissions for improved security and compliance policy adherence, and capture of monitoring data statistics and event information. Choosing the right solution will determine whether it hits specified cost targets or if the direct and indirect costs badly miss the target.

Visibility Architecture Solution from Keysight

Keysight's network visibility solution involves using NPBs in conjunction with application intelligence and taps. Learn more about Keysight's **Network Packet Brokers**, **NetStack**, and **Keysight Fabric Controller** technology along with our technical partner solutions.



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Learn more at: www.keysight.com

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