

## Avaya Visualization Performance and Fault Manager

The growing myriad of communications devices, the rising demand for anytime-anywhere connectivity and the increasing need for convergence have created new challenges to network operations — including how to manage the whole system from end to end.

Avaya understands network management and recognizes that offering you the right networking tools can lead to positive and significant benefits for your business. For example, network applications that automate tasks and reporting can improve efficiency. Having management tools within a single unifying framework can help improve workflow, reduce training requirements and decrease the complexity of managing a 'hyperconnected' network and provide you with a smooth path to unified communications.

To address the challenges of hyperconnectivity and the need for convergence, Avaya introduces the Visualization Performance and Fault Manager (VPFM) — a powerful Unified Communications Management (UCM) application that provides advanced network discovery, topology visualization, fault and performance management.

### End-to-end visibility in a multi-vendor environment

The VPFM can discover every device on your network, even if you deploy equipment from numerous vendors. The application transforms complex network topology into simple-to-use, hierarchy-based maps, giving you clear, end-to-end views that help you quickly determine if network issues are physical or logical in nature.

With insight into how devices are connected and performing, you can zero in on aspects of the network and reduce your meantime to repair. Personnel can be dispatched quickly, which can result in less downtime, greater productivity, higher user satisfaction and a proactive rather than reactive network management environment.

The VPFM can help increase productivity for support personnel as well as every user on the network. The application enables you to determine that a switch has gone down, view which users are connected to the switch, and perform impact analysis. For example, if an email server fails, the VPFM allows you to identify which users are affected and



### Unified Communications Management

The Visualization Performance and Fault Manager is an integral part of the Avaya Unified Communications Management (UCM) solution. This solution leads the industry in offering comprehensive, integrated management capabilities across data and voice over both wired and wireless networks. Solution benefits include:

- Sharing of information across applications helping reduce data entry and the potential for errors
- Web-based, centralized authentication with single sign-on helping ensure easy and secure access to all management applications
- Easy-to-use templates and wizards easing the ramp up on new technologies
- Common look and feel across applications helping decrease the learning curve for IT personnel
- Application co-residency allowing application hosting on the same servers

## Highlights of the Visualization Performance and Fault Manager

### Heterogeneous network discovery

- Support for standards-, proprietary-, application- and OS-based discovery
- Device information can be used to provide a network inventory listing

### Network visualization

- Hierarchy-based topology and service-based views
- Device connectivity and their relationships to each other

### Fault management

- SNMP Trap Receiver and Syslog Collector
- Event correlation
- Device status monitoring
- Event handling and scripting
- MIB compiler/browser

### Performance management

- Instance-based performance monitoring (MIB-browser based)
- Long-term (trending) performance monitoring

### Diagnostics management

- Layer 2 and 3 diagnostics management, including tools such as ICMP ping, SNMP Gets, MIB Walker/Browser, etc.
- Diagnostic information can be exported in graphical format

### Scopes (device classification)

- Devices can be classified based on their function in the network (e.g., core switches, Internet routers)
- Information gathered through the VPFM can be used for performance management trending and event handling

take proactive measures, such as sending a broadcast voicemail to say, “We’re aware of the issue, and working to resolve it.”

### Network discovery

The VPFM offers heterogeneous rather than domain-based network discovery with support for standards-, proprietary-, application- and OS-based discovery. Therefore, if a device is IP or SNMP-based, the VPFM can discover it. Discovery applies to servers, end nodes and operating systems.

The application discovers all IP devices and nodes attached to the network, including servers, storage servers, printer servers, switches, routers, user end nodes (e.g., PCs and laptops), IP phones and more. In addition, the VPFM identifies the relationships that exist among devices in the network, including topology and links. Operating systems and applications on servers can also be part of the discovery process if operating system security settings allow.

### Network visualization

Once devices are identified through discovery, VPFM takes complex network topologies — consisting of multiple geographic locations, multiple devices,

hundreds or even thousands of devices connected to the network — and transforms them into simple hierarchy-based topology views. It shows degrees of device connectivity based on device function and where it is located in the network (i.e., a layered environment approach).

The visualization function also includes VoIP service-based views that provide you with insight into the application. Having service-based views enables you to differentiate between physical connectivity and logical- or application connectivity issues.

Finally, the VPFM provides device-centric views that enable you to see the relationship between devices. For example, it can identify a switch and all the devices connected to it, enabling you to perform impact analysis.

### Fault management

Once the issue(s) have been identified through network visualization, you can use the VPFM to monitor the network for faults. Using information collected from the network and the devices themselves, the VPFM performs status monitoring and sends the information that you need to do event correlation and route-cause analysis (RCA). The VPFM determines what is

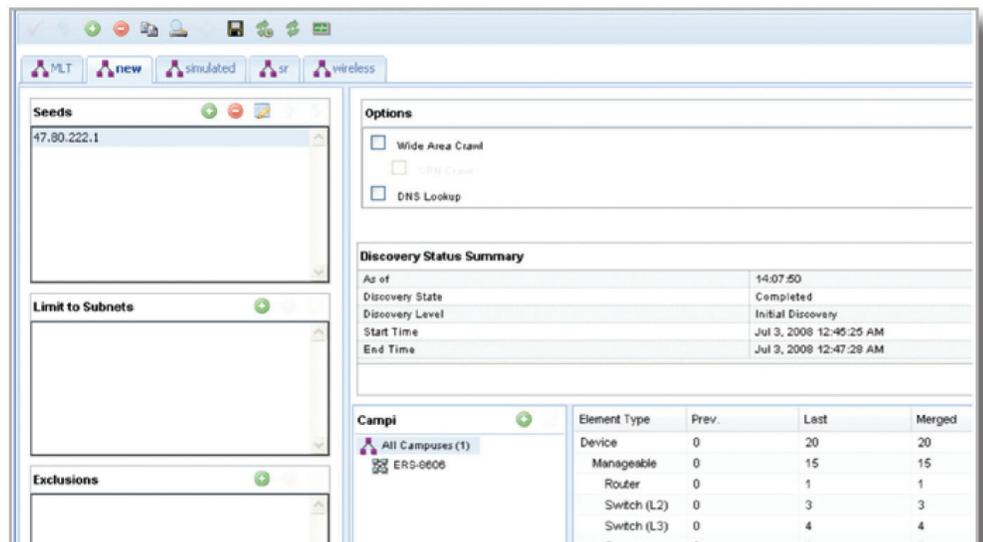


Figure 1. Discovery and Inventory Dialog Window

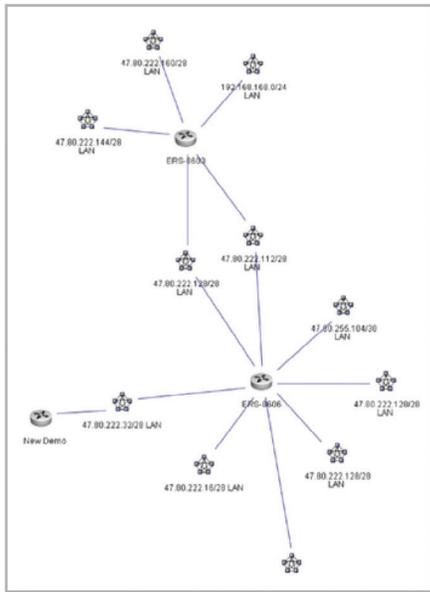


Figure 2. Network Connectivity View

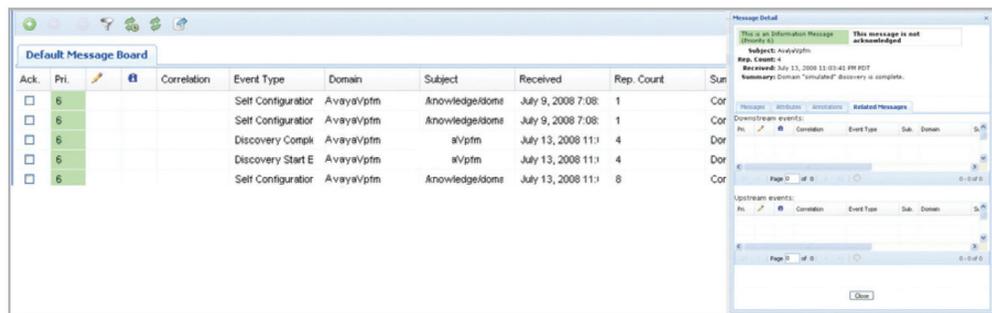


Figure 3. Fault Management

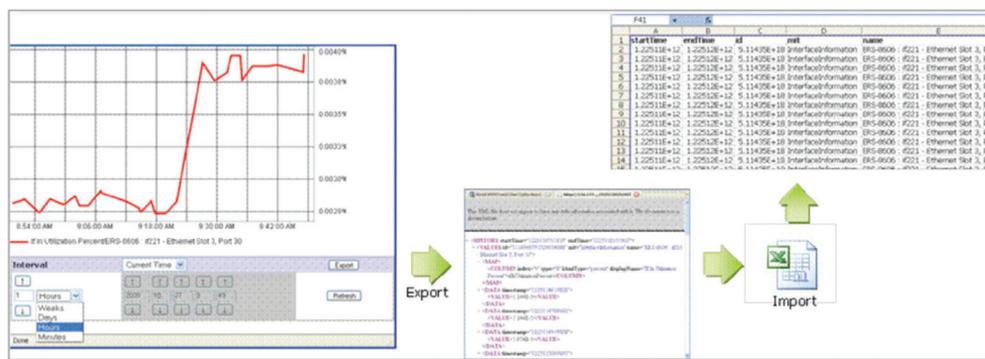


Figure 4. Performance Trending and Data Export for Capacity Planning

the most likely cause of the network outage by correlating all network events and determining the primary and secondary devices affected.

Fault management also performs event handling. If an event occurs on a specific device, the VPFM will know that it has to take a certain action — for example, send an email notification or page the appropriate personnel. The parameters and action required are defined by the administrator during the configuration phase.

### Performance management

Through the VPFM, you can use performance management for two key activities: capacity planning and change monitoring within the network. In the latter case, the VPFM enables you to monitor modifications to the network — such as the addition of a new switch — and observe how the device performs in the short term.

From a longer-term perspective, the VPFM performance management capability also provides crucial information that can

help you address your capacity planning requirements. For example, if traffic on a particular link begins to exceed a pre-determined threshold, such as 30 percent, the VPFM can record and report on the performance. If the trend continues, you can plan changes to your network accordingly to address growing traffic.

### Diagnostics management

Diagnostic management allows the network operator to run and collect diagnostic data from network devices. The VPFM provides Layer 2 and 3 diagnostic information in an end-to-end connectivity rather than a hierarchical view. Through this capability, you can also print and export the data in graphical format.

### Scope/device classification

The VPFM includes scope or device classification, a capability that provides a logical grouping of devices based on device type. By default, all devices are classified based on their discovered attributes, such as servers, routers and switches. You can also define the scope on a more granular basis that has relevance to your operations. Once grouped, you can treat the devices as a single unit for the purpose of collecting performance information, conducting events handling, status propagation, etc. For example, if a link fails for any of the devices within the defined logical unit (e.g., core switches), you can configure the VPFM to perform event handling on that classification.

Device scope can also be used for fault management and performance management and trending.

## Flexible licensing

VPFM is licensed on a node count and is available to you at three licensing levels:

- Base license
- Incremental license
- Enterprise license

## Supported devices

The VPFM can discover and monitor any IP/SNMP device on the network. For full device management, the device's Enterprise MIB must be compiled into VPFM.

## Summary

A Unified Communications Management application, the Avaya Visualization Performance and Fault Manager enables you to discover and visualize every aspect of your network, monitor existing performance, resolve issues quickly today — and make informed decisions for the future.

## Learn More

To learn more about Avaya Unified Communications Management solutions and Avaya Visualization Performance and Fault Manager, contact your Avaya Account Manager or Avaya Authorized Partner. Or, visit us online at [avaya.com](http://avaya.com).

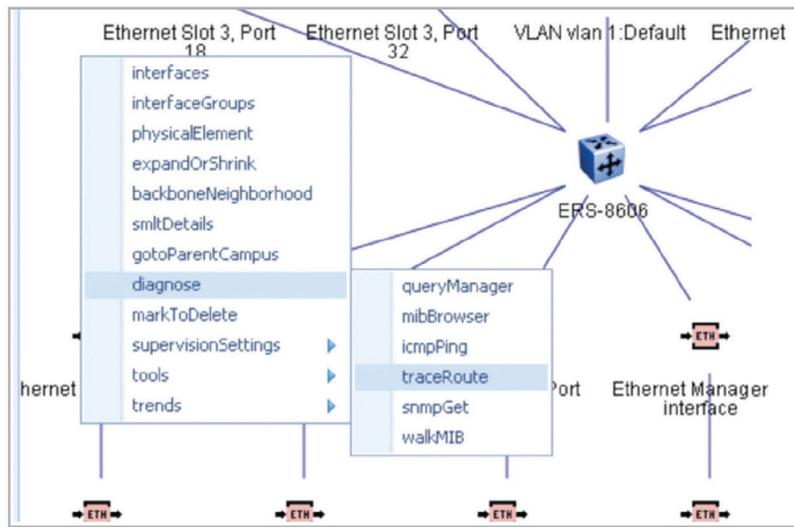
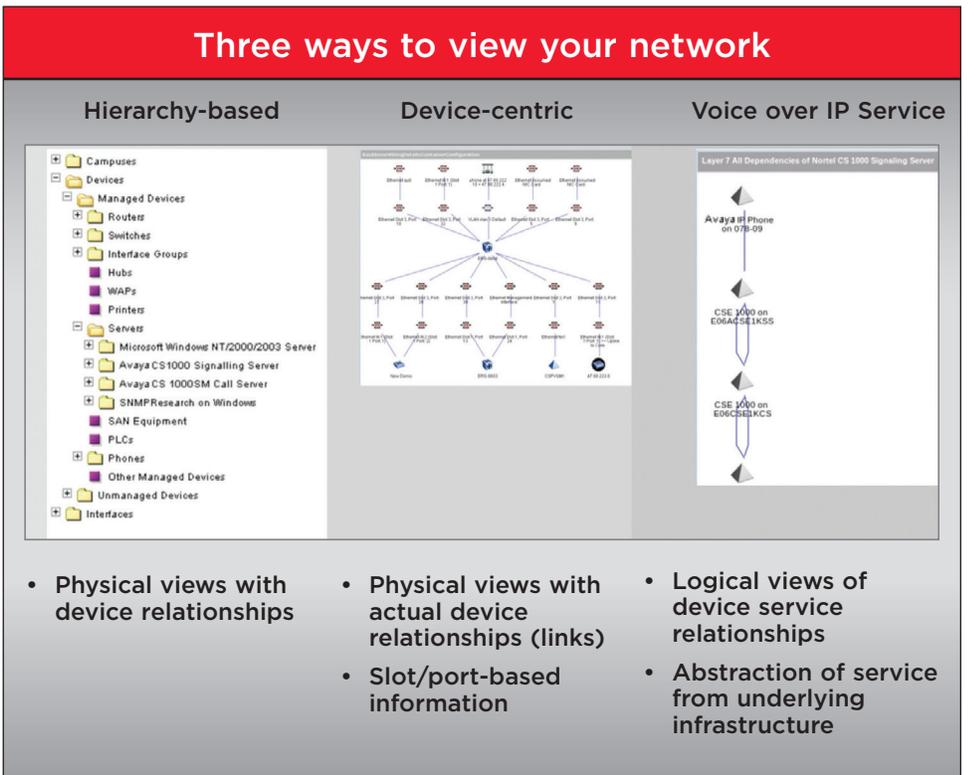


Figure 5. Diagnostics Management



## About Avaya

Avaya is a global provider of business collaboration and communications solutions, providing unified communications, contact centers, data solutions and related services to companies of all sizes around the world. For more information please visit [www.avaya.com](http://www.avaya.com).



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References to Avaya include the Nortel Enterprise business, which was acquired as of December 18, 2009.

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