Software Diversified Services

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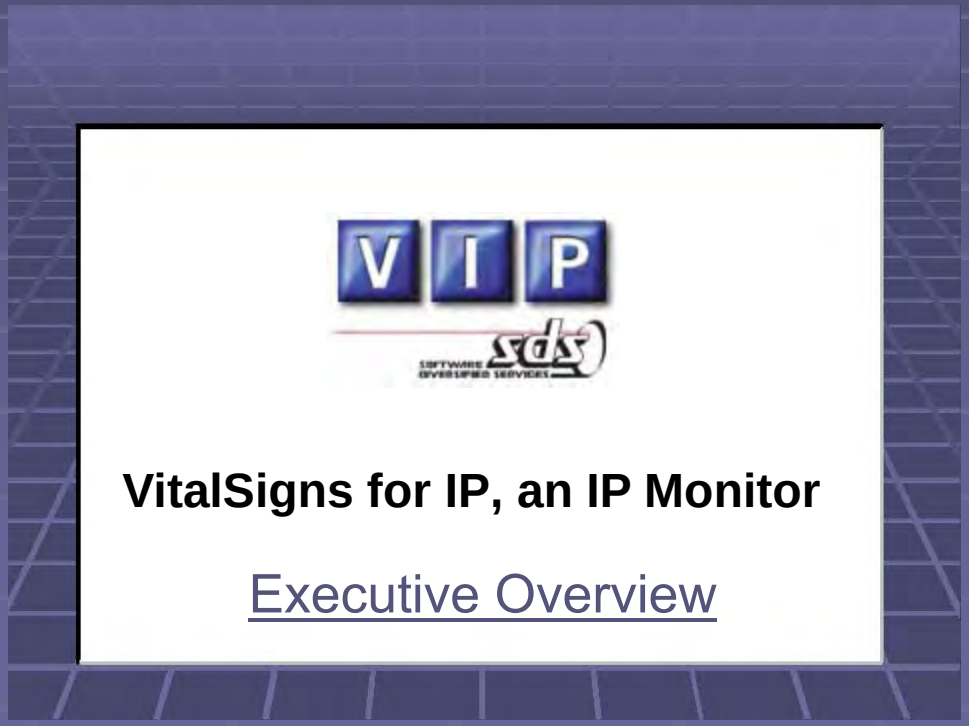


September 21, 2008

Company Background

- Over 25 years mainframe software experience
- Over 1,000 satisfied customers worldwide
- Over 20 VM, VSE, and MVS mainframe systems products
- 6- 8 month major release cycle

VIP's Record of Excellence

- Aug. '08, VIP 7.0 – Sysplex Distributor, HPR, EE traceroute, Improved Apps at a Glance, Application Connection Monitor.
- Nov. '07, VIP 6.0 – Full SAF security integration for VIP functions.
- Oct. '06, VIP 5.0 – Batch management reports delivered via email or FTP.
- Mar. '06 – VIP 4.6 – HTTP performance monitoring, use of NMI for EE monitoring, TCP Traceroute.
- Sep. '05 – VIP 4.5 – Fragmentation monitoring, easier to navigate alerting.
- Feb. '05 – VIP 4.0 – TN3270 response-time monitoring, charting, and alerts, use of IBM NMI.
- Oct. '04 – VIP 3.5 – Batch jobs to report history, conduct packet traces.
- Jun. '04 – VIP 3.0 – At-a-Glance summaries of FTP, telnet, and OSA traffic.

VIP 7.0 Advantages

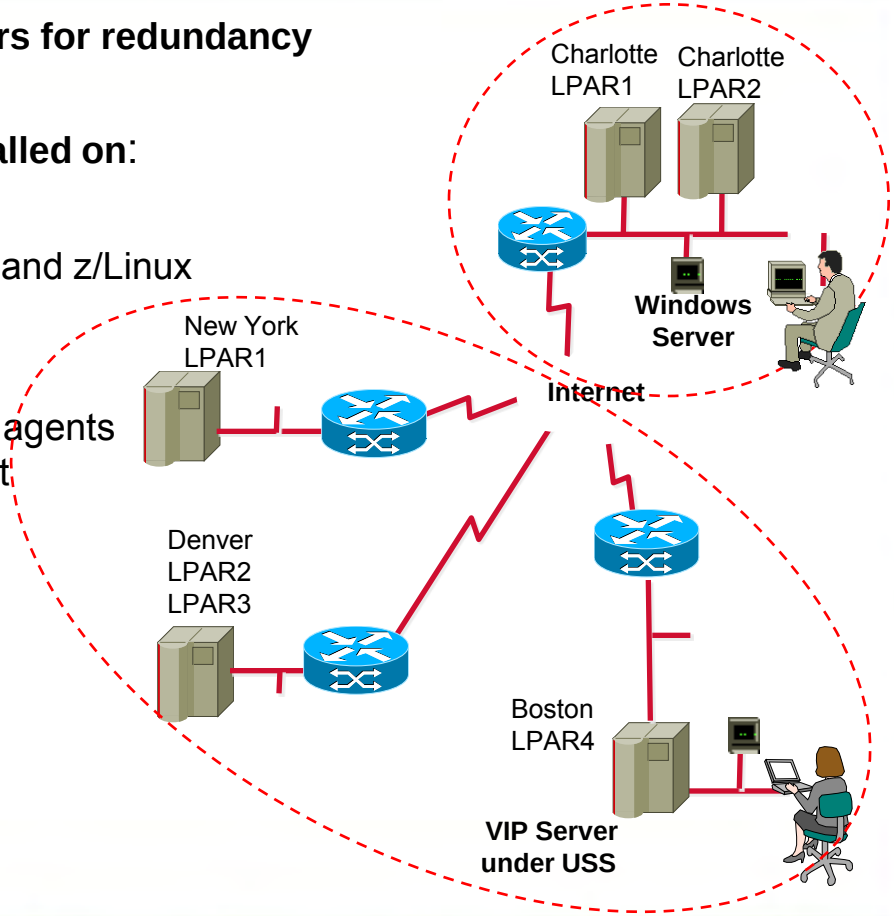
- ***DESIGNED & BUILT*** **from the Ground-Up with intuitive *Java browser-based GUI***
  - Modern design technology for *Real Time* IP monitoring**.**
  - Less need for training. A tool for all – help desk, operations, network systems programmers.
- ***EXTREMELY*** **CPU Efficient and Customizable**
  - Multiple Collection Methods, Enable / Disable functions, Modify Timers to customer needs.
- ***PROACTIVE*** **Real Time & Historical Monitor**
  - Including Online Reports, Charts and Graphs
- ***Batch Reporting***
  - Graphical and tabular reports
  - z/OS batch jobs send performance history to e-mail and/or file servers.
- ***Monitor TN3270 and HTTP response times***
  - Monitor end to end response times and break into network and server components.
- ***SAF Security interface***
  - Access to product, as well as features such as trace, drop command, command tool, administrative functions, add/remove Remote Host, HTTP, and TN3270 monitors, are all controlled by ACF2/RACF/Top Secret

VIP 7.0 Advantages (continued)

- ***Monitor all LPARs with a single at-a-glance instance***
  - Auto-discovery of TCP Connections, Interfaces, Applications, and stacks. Point/click monitoring for Enterprise Extender, OSA, FTP, telnet, TN3270, HTTP
  - Quickly switch between systems. Sort & rank heavy system activity.
- ***Comprehensive Tools***
  - Issue system commands and MIB enquiries
  - TCP, UDP, EE, and ICMP traceroutes
  - UDP and ICMP Pings
- ***Live formatted trace***
  - Format headers, trace full payload, view output online, save to file, convert to .enc format.
  - Compatible with IBM IPCS and shareware and third party analysis products (after .enc conversion).
- ***Fragmentation monitor***
  - Discover excessive fragmentation and it's source
- ***Remote host monitoring***
  - Monitor remote entities via SNMP, UDP pings or traceroutes
- ***Comprehensive alert processing***
  - Verbose alert descriptions for probable cause and recommended actions.
  - View by entity, ISO class, and forward via email, WTO, SNMP traps, or PPI interface.

VIP Server / Agent Architecture

- **Single or multiple servers for redundancy**
- **VIP Servers can be installed on**:
  - Windows, Linux, UNIX
  - Mainframe under USS and z/Linux
- **A single VIP Server** can
- monitor multiple agents and VIP Agents can report to multiple servers
- **Install VIP agents** on each monitored LPAR



VIP Efficiency

- VIP is very CPU efficient and customizable.
  - Disable functions you don't use, e.g. Enterprise Extender
  - Adjust timers and thresholds to meet your requirements
  - Activate/deactivate functions as you need them.
- VIP does NOT use SNMP to monitor the stack.
- VIP makes use of the efficient Network Management API.
- VIP servers can monitor multiple agents. Consolidate/segregate as needed.
- A single VIP address space can monitor every stack on an LPAR.
- If an LPAR comes down, we discover it and notify you.
- When the stack recovers VIP automatically discovers it and monitors again.
- VIP has a small operational footprint, exploiting the analysis done by the stack rather than "re-creating" it, and VIP runs independent of any particular stack
- Multiple collection methods insure no blind spots
- VIP packet traces can serve multiple users running concurrent traces.

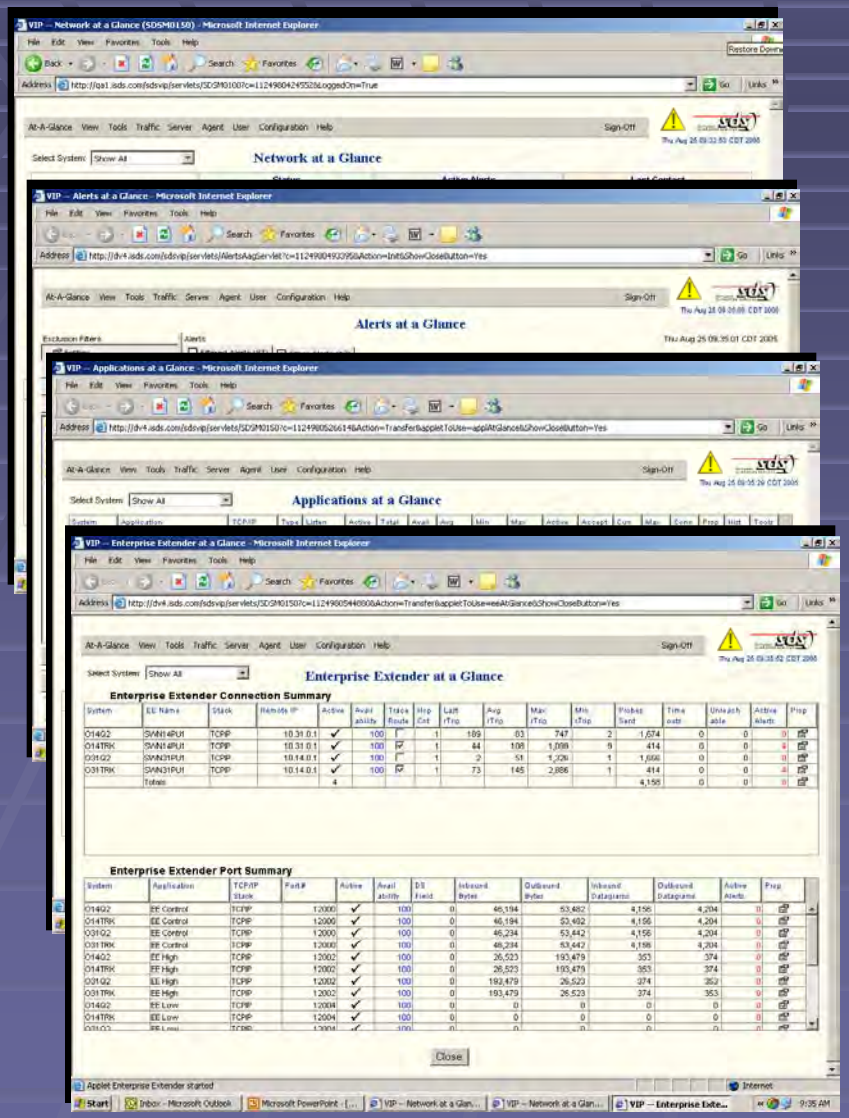
VIP Cost Effectiveness

- Intuitive interface means minimal training costs (if any)
- Enhancements included with current maintenance. Major new releases each year
- Low CPU utilization – VIP's interface is both safe and highly efficient, keeping CPU usage low with no unsupported hooks
- Packaged with VSV – VIP's companion VTAM monitor. Replace Netspy or NPM functionality. **Savings will often justify purchase of VIP.**

VIP Scalability – Reliability – Compatibility

- **Scalability** – Monitor as many, or as few systems as needs dictate
  - Agent-server architecture allows you to deploy additional agents and servers where they are most needed with no limitations
  - VIP is installed at sites as large as 80 LPARs
-
- **Compatibility** – Adapt to mainframe/server architectures with minimal disruption.
  - VIP Agents run on z/OS hosts – close to the data
  - VIP Servers run on Windows, Linux/Unix, Mainframes under USS or z/Linux
  - VIP can forward alerts to:
    - NetView® through a standard program to program interface
    - HP OpenView, CA Unicenter, and other network based monitors through SNMP traps
    - Email / text messages
    - MVS console messages (WTOs)
- **Reliability** – Designed from the ground-up as a browser-based GUI with a solid architectural design and plan from the start, enabling us to capitalize on technology improvements and avoid last-minute, ad-hoc program changes. Now in its 7th major release.

Monitor your Mainframes – “At A Glance”



Network at a Glance

VIP’s easy to use GUI interface lets you see your entire MVS network from a single “at a glance” screen. No need to launch multiple browser or application instances.

Alerts at a Glance

The “Alerts At A Glance” screen provides you with a quick and easy system-wide snapshot of active and resolved alerts. Operators can drop, ignore, reinstate, or resolve alerts with the click of a button.

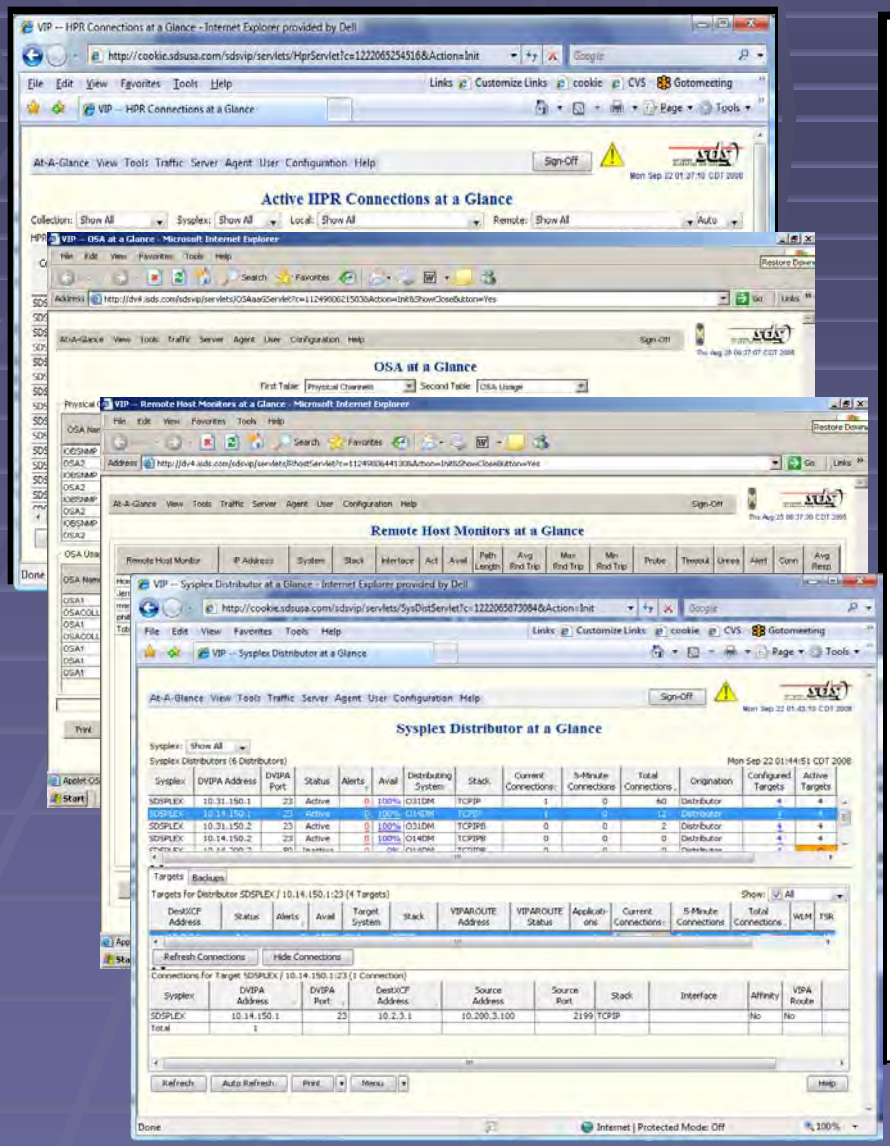
Applications at a Glance

The “Applications At A Glance” screen provides you with a useful summary view of your applications, UDP and TCP, across all systems or filtered for just one. Information includes backlog, HWM backlog, dropped connections, current connections, HWM connections, RTT, alerts, CPU time, and SEF.

Enterprise Extender

VIP’s Enterprise Extender view provides a real-time monitor of EE connections and ports.

Monitor your Mainframes – “At A Glance”



HPR Connections at a Glance

Monitor High Performance Routing over APPN and EE. Color coded ARB pacing. ARB rate reductions. Path Switches. Much more.

OSA at a Glance

VIP provides information for physical channel, LPAR utilization, and local OSA usage. Both QDIO and non-QDIO OSA devices *are supported*.

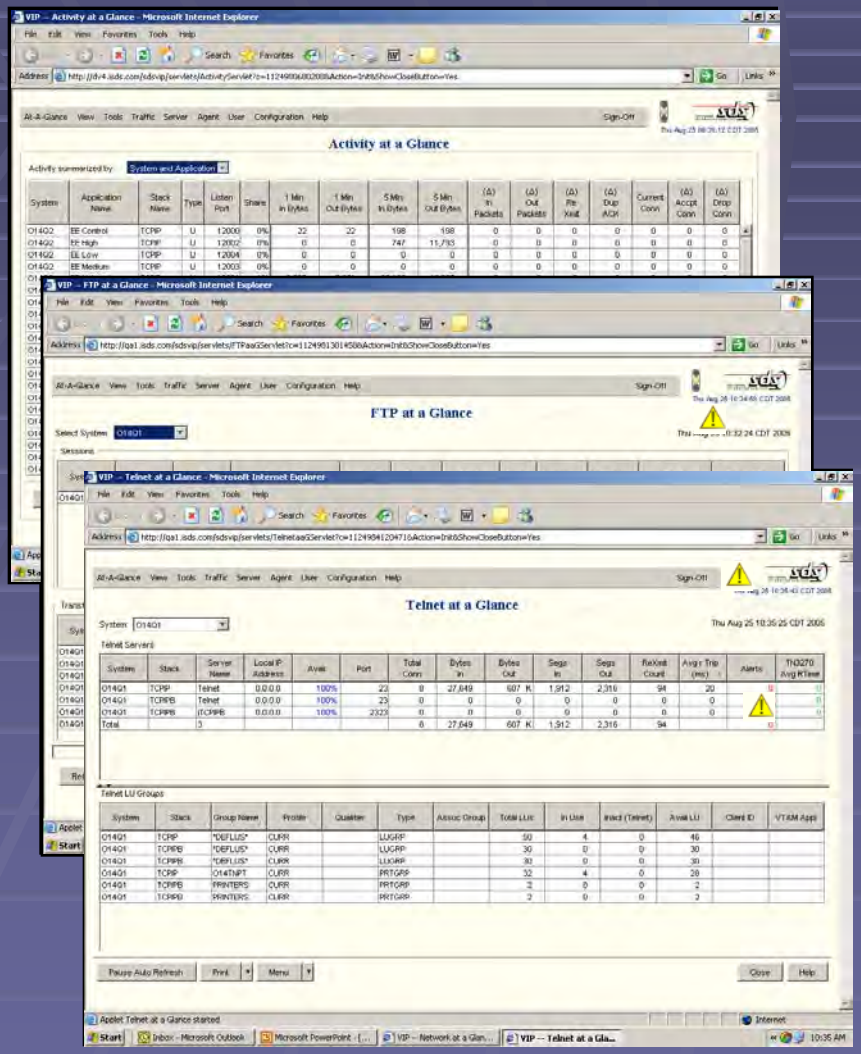
Remote Host Monitor

Monitor any IP-enabled device that can be reached by the z/OS stack! With VIP, you can monitor response times, path lengths, and paths between the z/OS stack and remote hosts and be alerted when thresholds are exceeded.

Sysplex Distributor at a Glance

See how workload is distributed. See targets, backups, drill into connections. See WLM, SEF, TSR, TCSR, and CER stats.

Monitor your Mainframes – “At A Glance”



Activity at a Glance

Quickly identify heavy traffic loads at a glance! Summarize by system, stack, and application; rank by interface or connection.

FTP at a Glance/FTP History

VIP reports on both control and data connections for both z/OS client and server. It tracks current FTP users, bytes transferred, transfer rates, and file names.

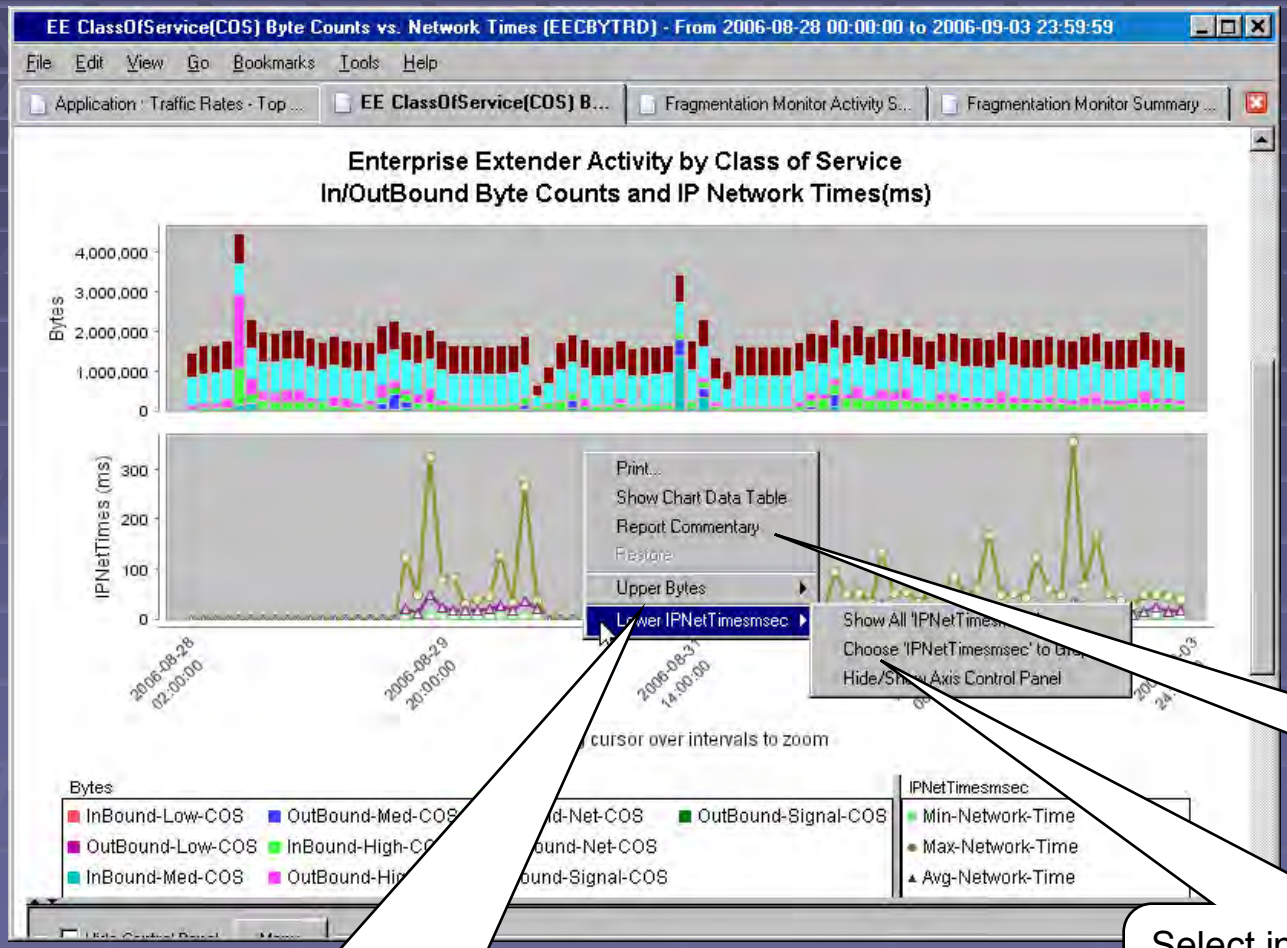
Telnet at a Glance/Telnet History

Key telnet/TN3270 resource and performance metrics are provided including inbound / outbound bytes and segments transferred, retransmission counts, and LUs – inactive, in use, and available.

Identify unauthorized use of a particular interface, and the applications or sockets being used on that interface.

Vip is more than a monitor, it is an interactive productivity tool

Graphic Reports by e-mail, web browser



Graphic History Reports

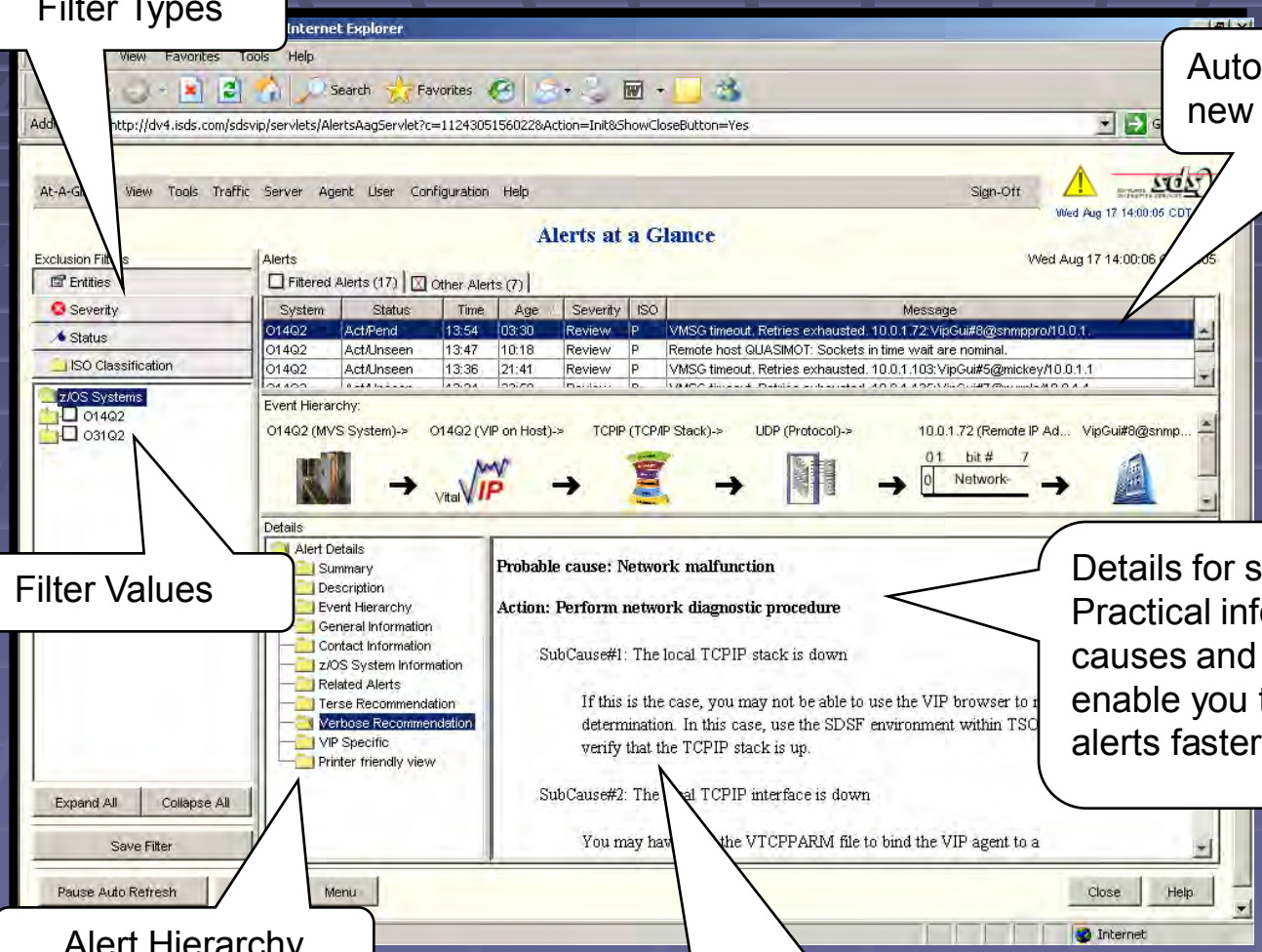
Schedule z/OS batch jobs to analyze network performance and send graphic reports or data tables to users by e-mail, and/or post them to file servers by FTP.

Define reports with explanation of their meaning.

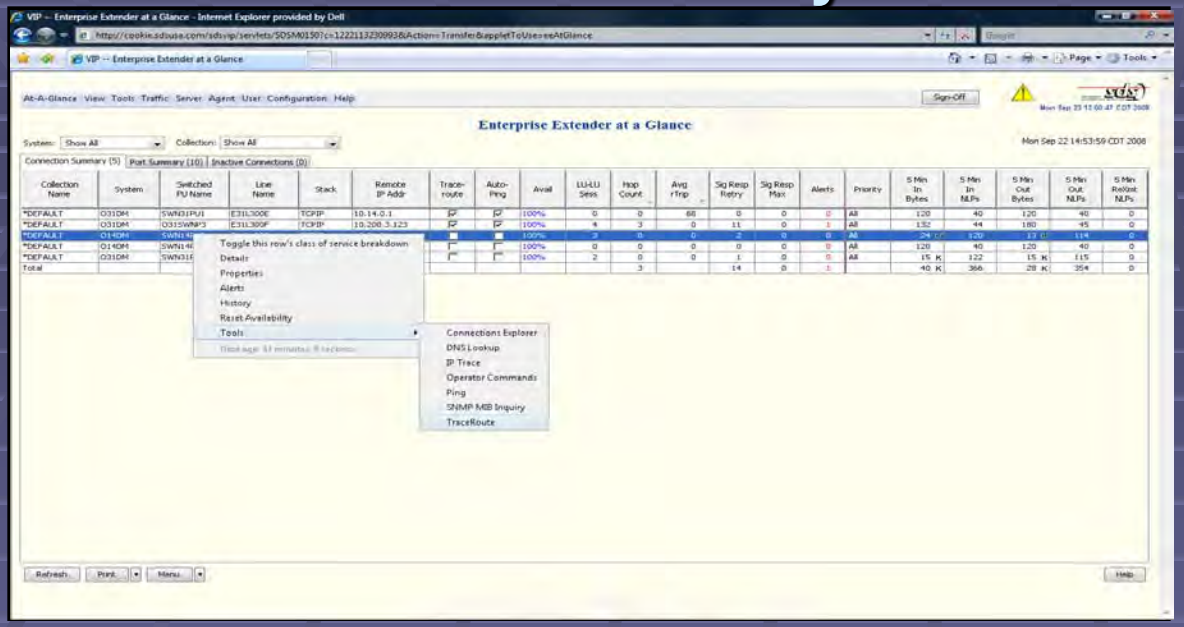
Select individual objects to include or hide from the plot.

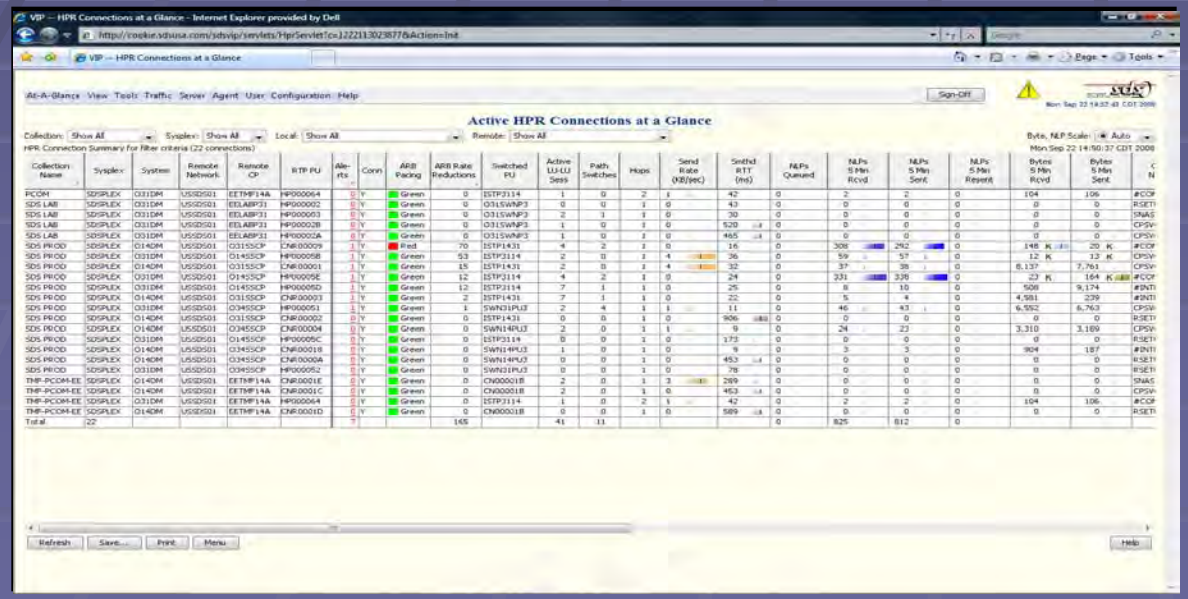
See the data in table format, export comma-separated data.

Practical and Comprehensive Alerting



Powerful EE and HPR Analysis





Enterprise Extender

Real-time monitor of EE connections, ports, and inactive connections.

Click to linked alerts and click to history.

Highlight a connection and click to launch context sensitive EE traceroute

HPR Connections at a Glance

Monitor High Performance Routing over APPN and EE.

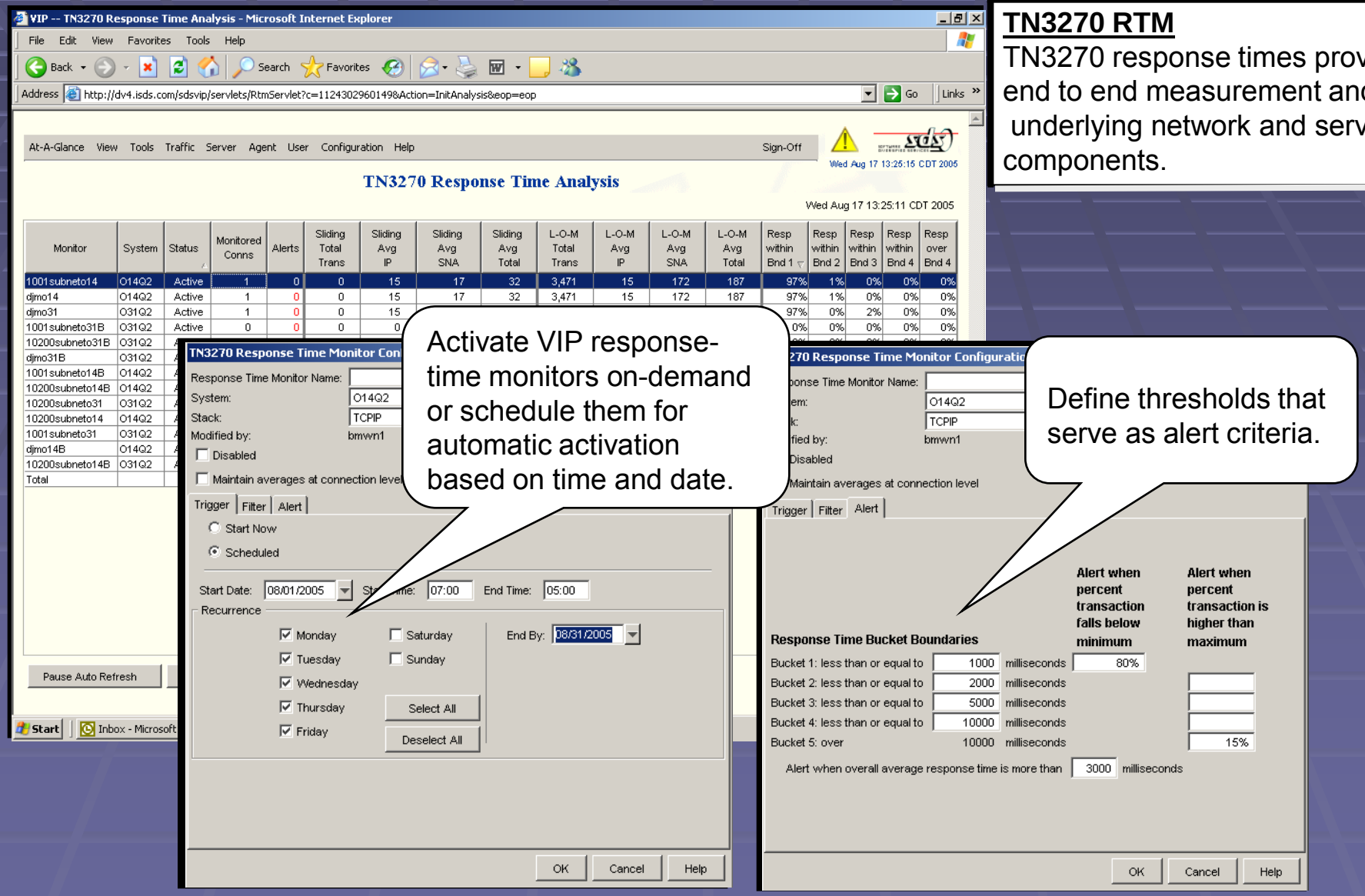
Color coded ARB pacing. ARB rate reductions. Path Switches.

Click to linked alerts, click to history

User defined “collection name” to group HPR connections.

Ability to filter displayed connections.

Dynamic TN3270 Response Time Monitor



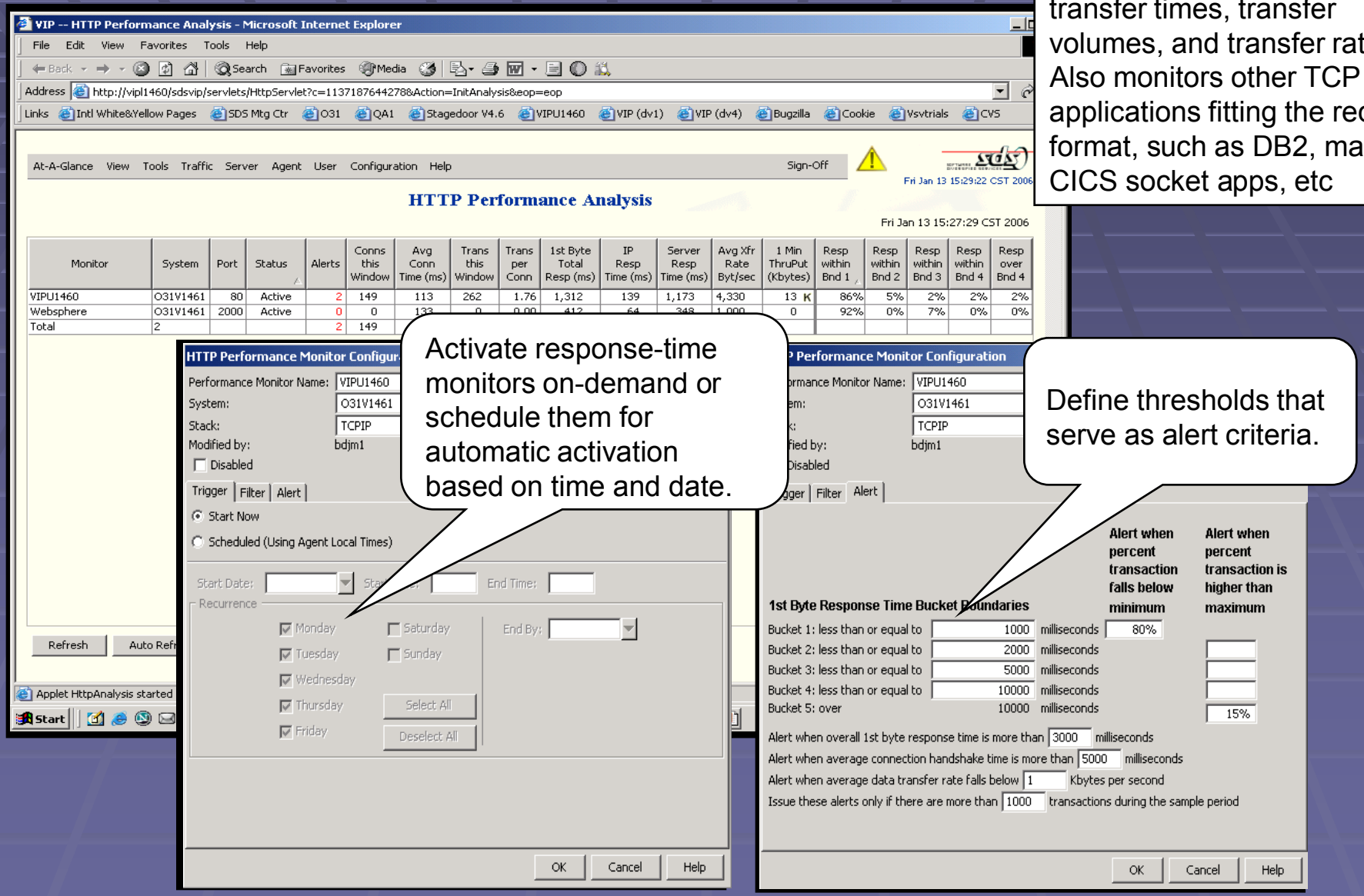
TN3270 RTM

TN3270 response times provide end to end measurement and the underlying network and server components.

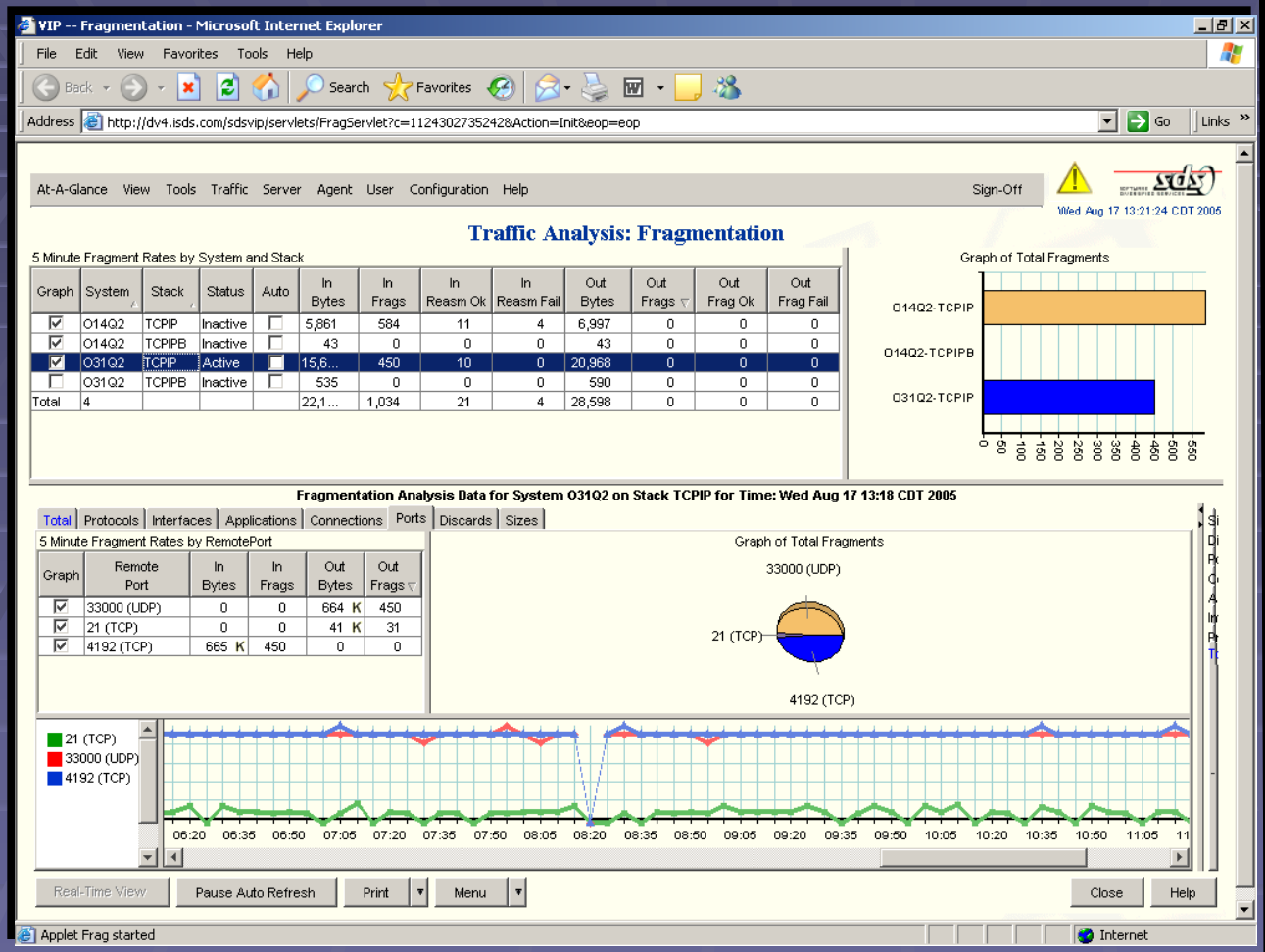
Dynamic HTTP Analyzer

HTTP Performance Analyzer

Profile the performance of HTTPapplications/servers, including response times (total, network, and server), data-transfer times, transfer volumes, and transfer rates. Also monitors other TCP applications fitting the req/rsp format, such as DB2, many CICS socket apps, etc



Powerful Fragmentation Analysis



Fragmentation Analysis

All networks must deal with some level of fragmentation but when it reaches excessive levels it can result in:

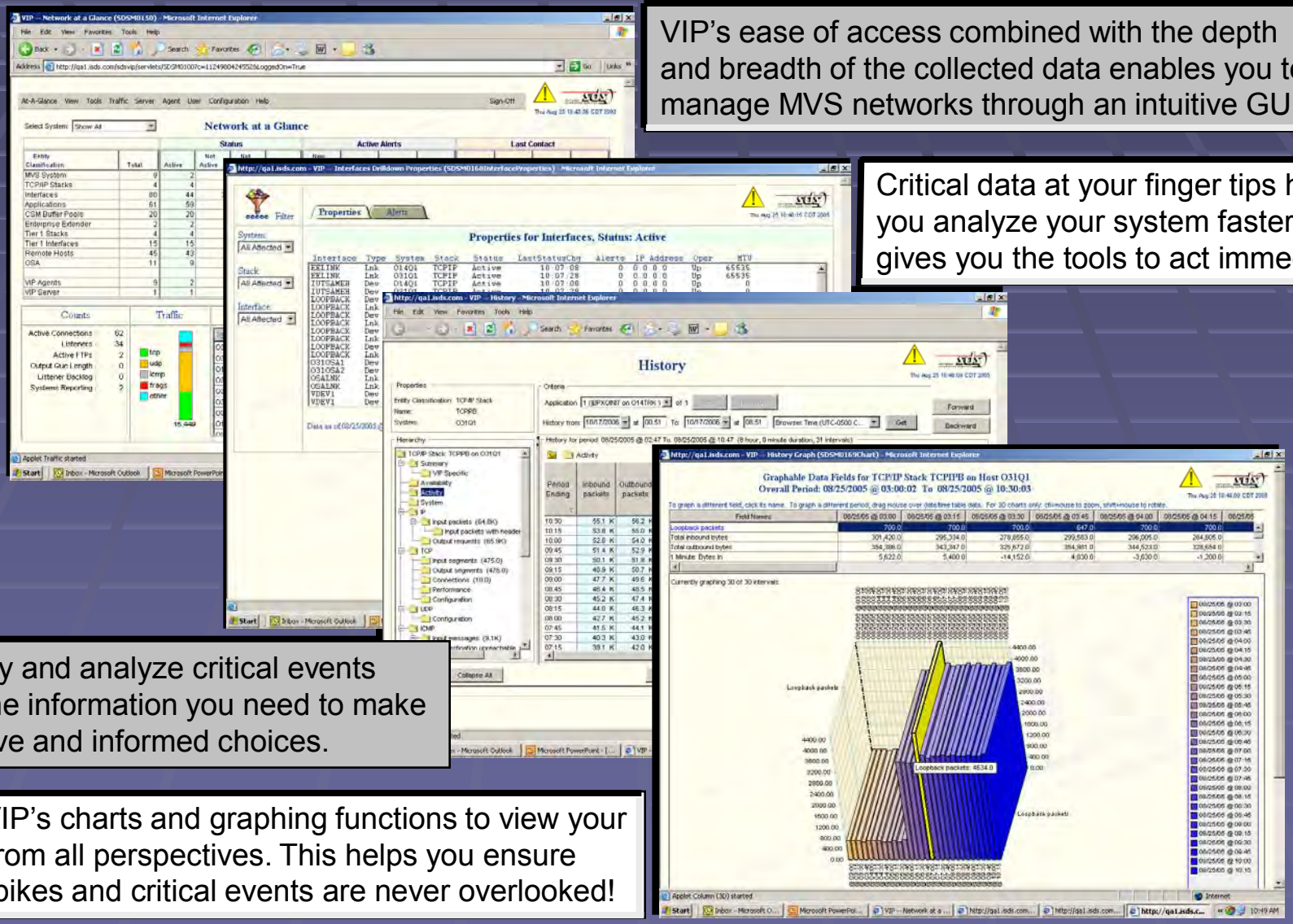
- Increased CPU and storage utilization in hosts/routers
- Decreased throughput
- Increased bandwidth demand
- Exposure to attacks

VIP's fragmentation analysis feature helps administrators to isolate the origin and cause of IP fragmentation.

VIP provides a breakdown of all inbound and outbound fragments by:

- Size
- Protocol
- Interface
- Application
- TCP connection and remote TCP/UDP ports

4 levels for viewing critical data



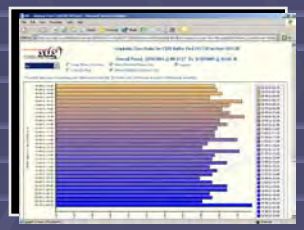
VIP's ease of access combined with the depth and breadth of the collected data enables you to manage MVS networks through an intuitive GUI.

Critical data at your finger tips helps you analyze your system faster and gives you the tools to act immediately.

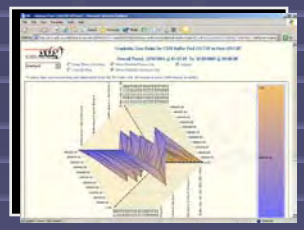
Identify and analyze critical events with the information you need to make decisive and informed choices.

Use VIP's charts and graphing functions to view your data from all perspectives. This helps you ensure that spikes and critical events are never overlooked!

Chart and Graphing – 17 formats – Export to Excel



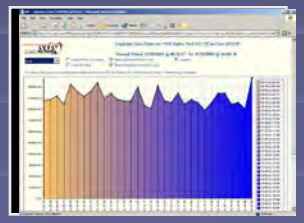
Bar Chart



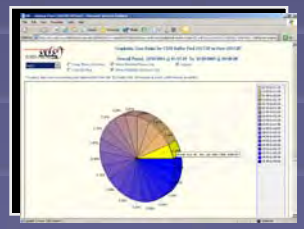
Heat 3D

Line Chart

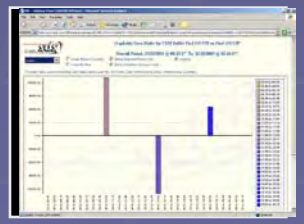
Line 3D



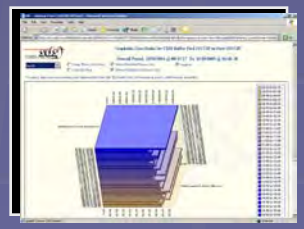
Area Chart



Pie 3D



Column Chart



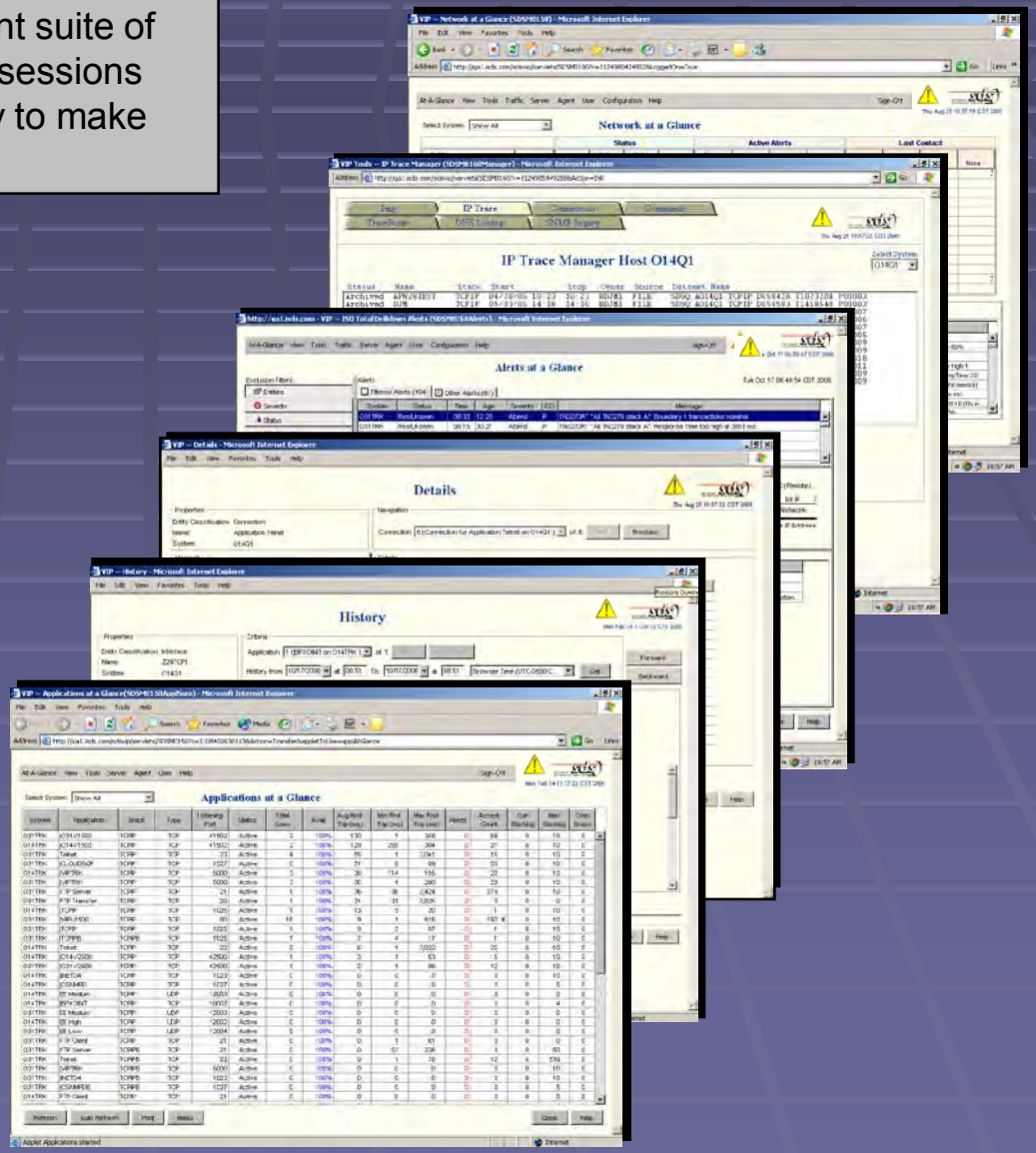
Bar 3D

- VIP provides seventeen different charting options, all accessible from history details screens for any entity, such as TCP/IP stacks, interfaces, CSM buffer pools, and applications.
- Comprehensive functionality enables you to select, see, and compare data based on your preferences. Select contiguous or non-contiguous time frames to compare deltas.
- Charted data can easily be exported to Excel for further manipulation and analysis.
- All 3D charts can be manipulated for easy viewing. Rotate, zoom in and out to modify the size or select specific elements in the chart with easy point/click mouse functionality.

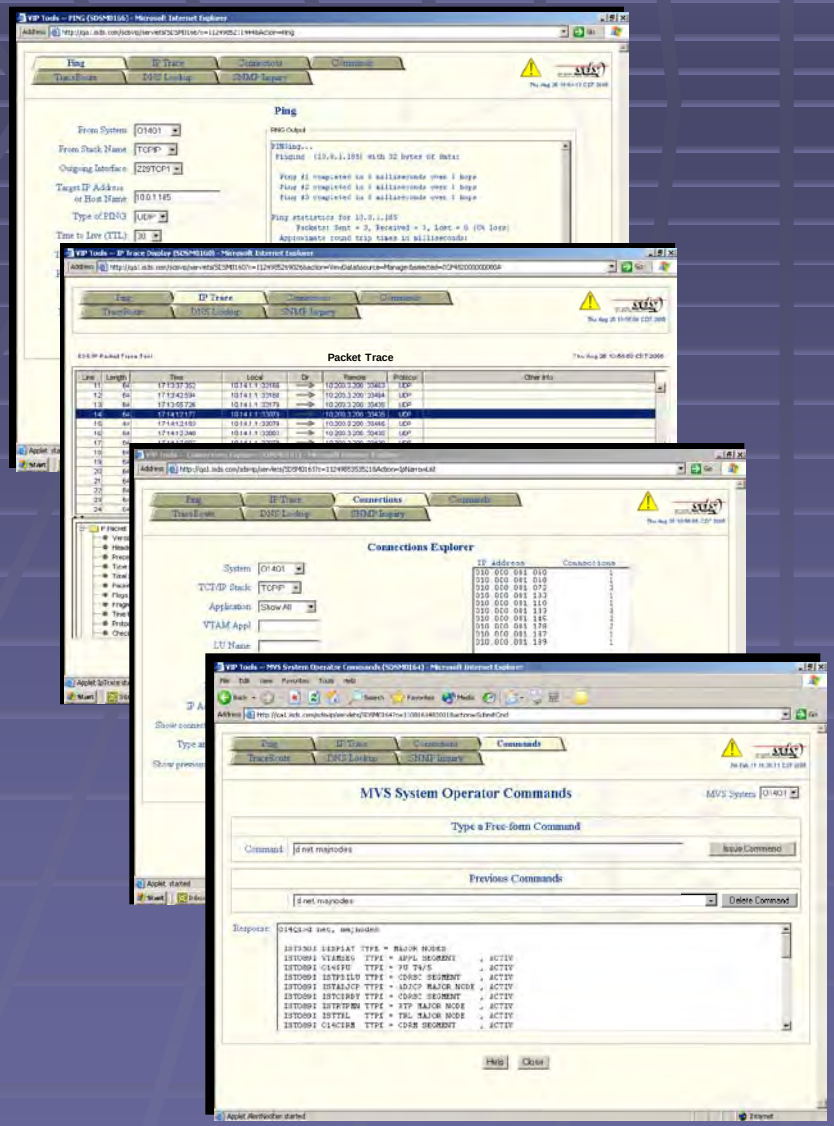
Comprehensive FTP and Telnet Support

VIP provides a comprehensive and convenient suite of tools to track your current and historical FTP sessions system wide – at the level of detail necessary to make informed decisions. For example:

1. **Use Network at a Glance** to see the count of active FTP / telnet sessions system-wide or drill down on a specific MVS system and see system specific telnet sessions.
2. **Use the Connections Explorer** to collect and display information about your FTP server and/or active FTP/telnet sessions. Details include local and remote IP addresses, connection ID, and more.
3. **Use Applications At A Glance** to view all of your FTP/telnet sessions, including response times, backlog counts, associated alerts, and more!
4. **VIP's *real-time* IP packet trace** displays EBCDIC and ASCII data payloads. Trace data and control sessions, ports 20 and 21, in both directions automatically, with the protocol pull-down feature.



Practical Diagnostic Tools



Ping

Issue ICMP or UDP pings to get a more accurate representation of actual traffic flow from your designated MVS system, TCP/IP stack, and interface! Users have full control over a wide array of ping characteristics.

Real-Time IP Packet Trace

Real-time packet traces that interface with IBM's packet trace utility with trace data already in IPCS format. View traces interactively or save them to an MVS dataset. Start, stop, pause, and view traces without changing screens or entering complex command strings.

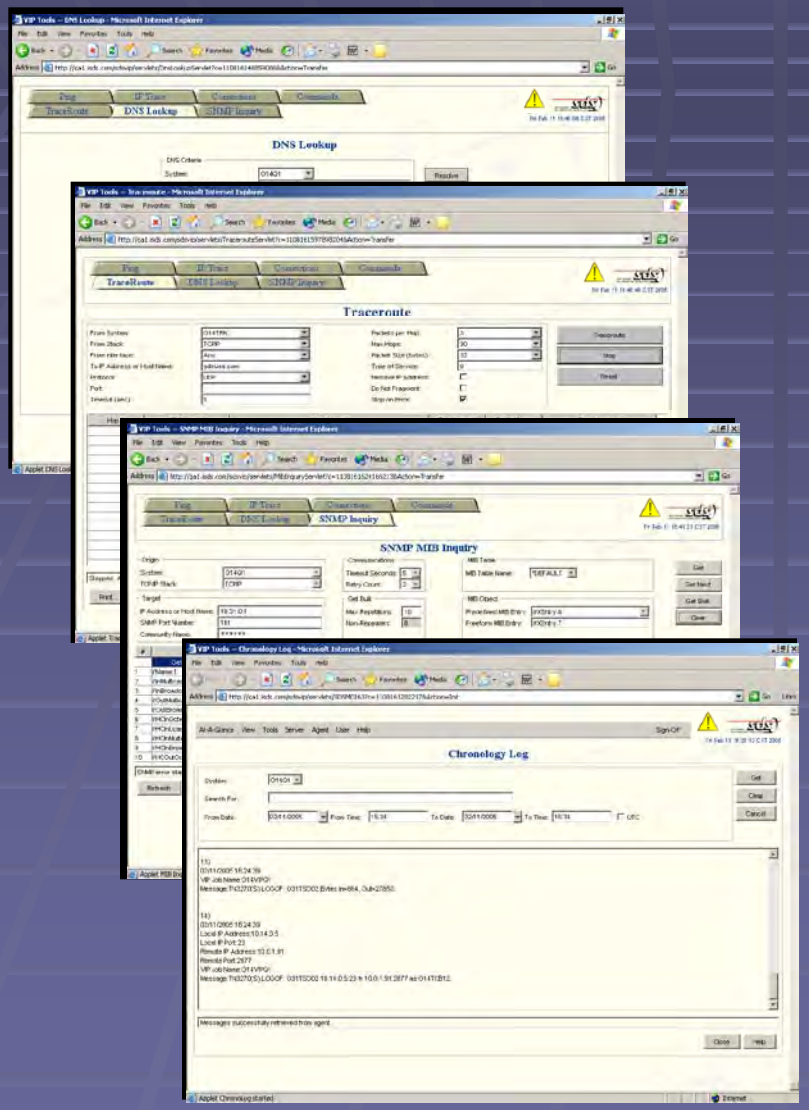
Connections Explorer

Large business installations can have tens of thousands of IP system connections. VIP's sophisticated user interface allows the user, through a variety of filters, to easily locate specific connections.

MVS System Operator Command Console

VIP's MVS Operator Command screen allows users to enter free-form commands to a specific user-selected MVS system. VIP remembers up to 30 recently used commands.

Diagnostic Tools (continued)



DNS Lookup

Quickly resolve host name to IP address or IP address to hostname. Compare resolutions on different systems from dropdown selection.

Traceroute

We support UDP, ICMP, ***and TCP*** protocols.
New with 7.0, EE traceroute generates real EE traffic across an EE connection.
The traceroute utility provides an easy-to-use interface to estimate a path's maximum transmission unit (MTU), identify timings along the path, and, with TCP traceroute, verify that a remote application is listening.

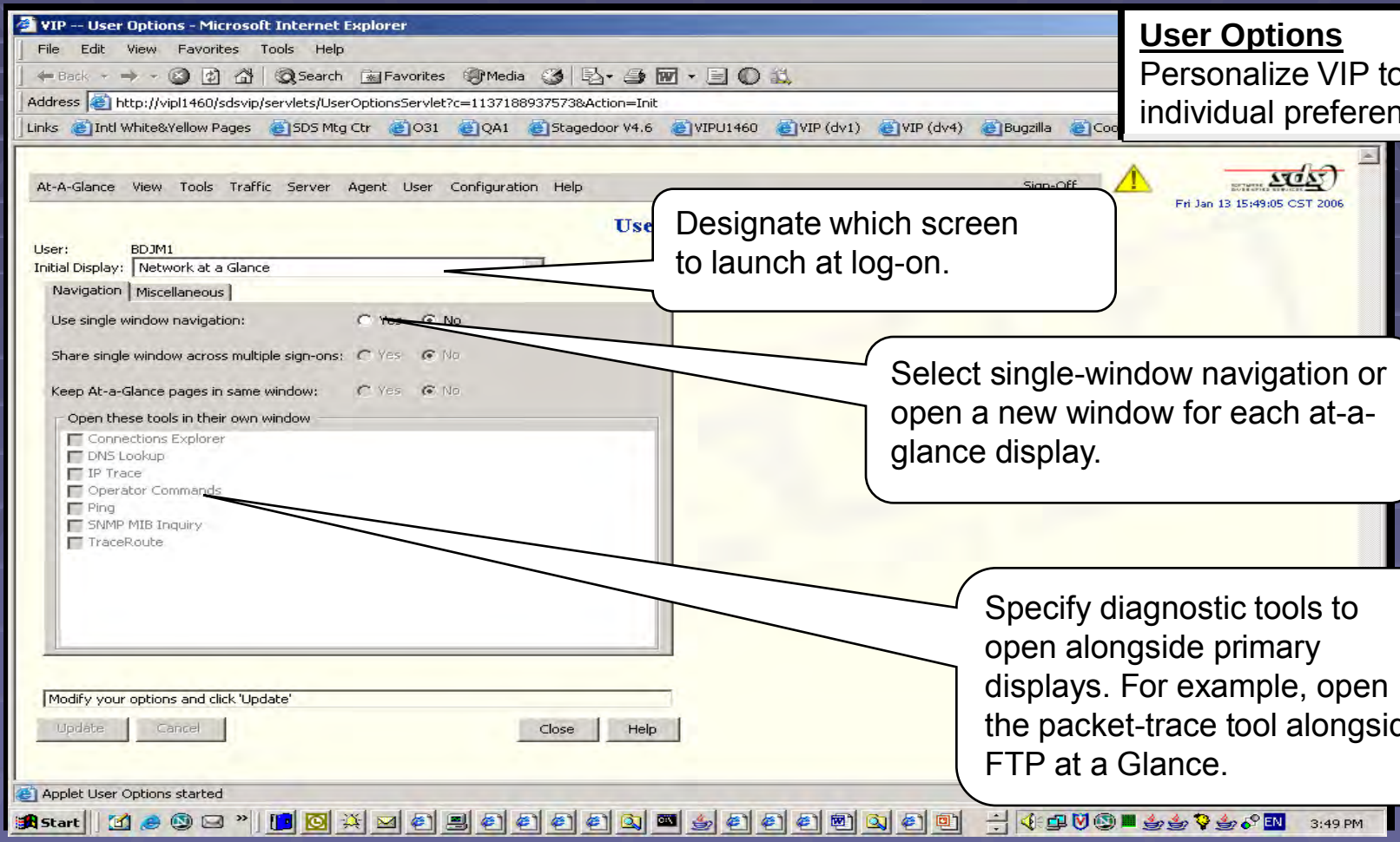
SNMP MIB Inquiry

Interrogate mandatory MIBs, IBM Enterprise MIBs, and OSA MIBs. Get, Get Next, and Get Bulk capability with an easy-to-use pull-down menu for accessing pre-defined MIB objects.

Chronology Log

View past events that have occurred during a certain span of time to reveal events that contributed to an outage or commands that had been issued resulting in current abnormal or error conditions.

User Customization



User Options
Personalize VIP to suit your individual preferences.

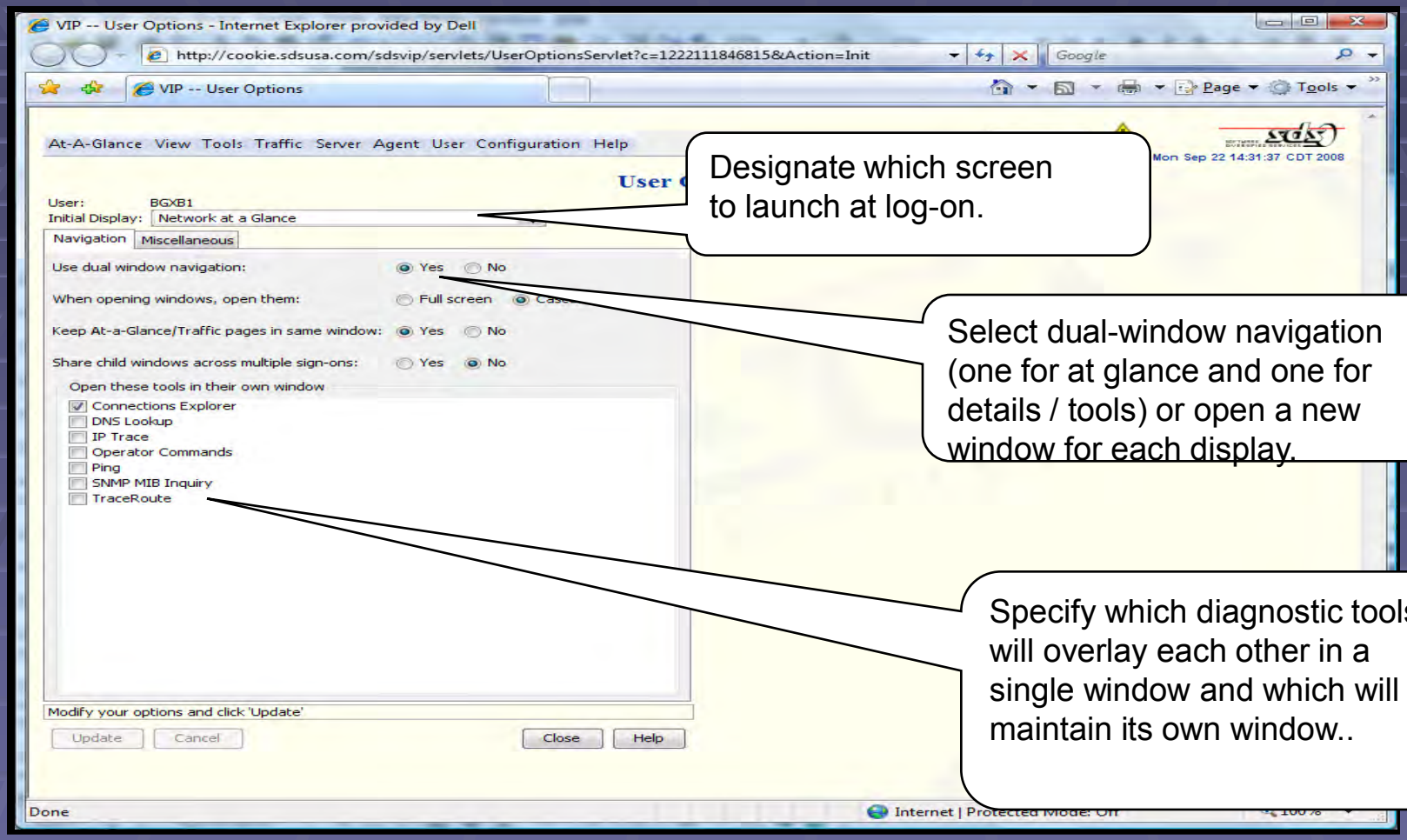
Designate which screen to launch at log-on.

Select single-window navigation or open a new window for each at-a-glance display.

Specify diagnostic tools to open alongside primary displays. For example, open the packet-trace tool alongside FTP at a Glance.

User Customization

User Options
Personalize VIP to suit your individual preferences.

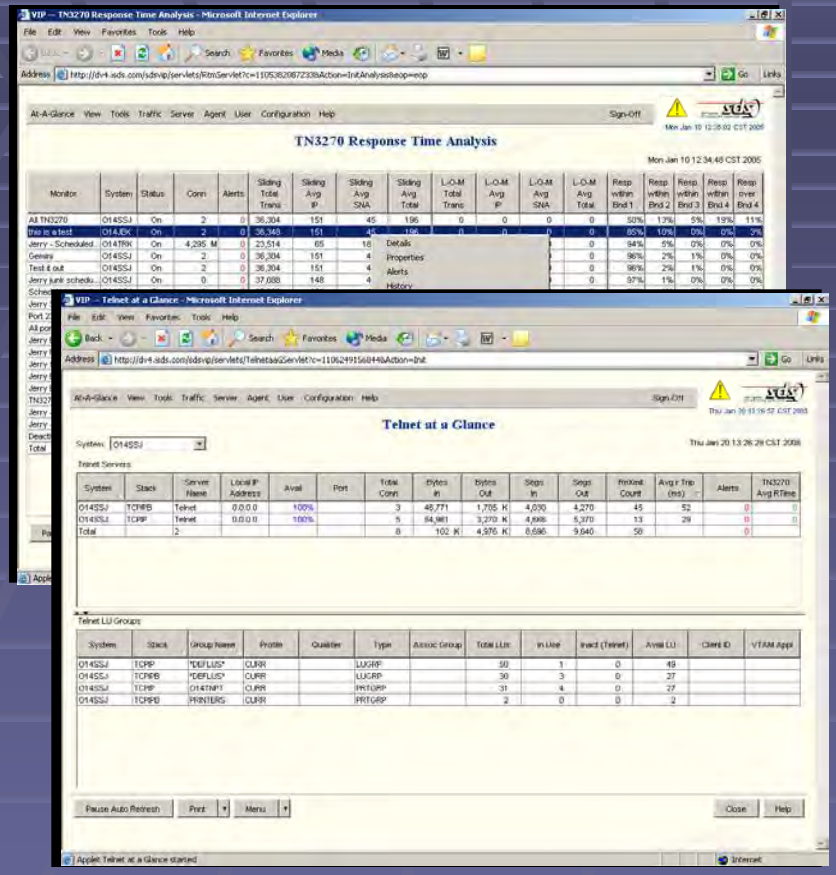


Designate which screen to launch at log-on.

Select dual-window navigation (one for at glance and one for details / tools) or open a new window for each display.

Specify which diagnostic tools will overlay each other in a single window and which will maintain its own window..

Additional VIP Functionality



Telnet at a Glance
Telnet server and telnet LU group information.

Batch Trace Facility
Run traces on host systems via batch jobs. A PKTFILTER=FRAGMENTS option filters out everything but IP fragments. This level of detail allows the batch trace to augment VIP's fragmentation monitor.

Customization Utility and User Interface
Improved management facility for controlling and applying updates and upgrades.

60+ Pre-defined report templates
Generate reports in HTML or Excel formats for major topics such as FTP, telnet, TN3270, applications, and more…

Summary

- CPU-EFFICIENT data collection ensures low CPU consumption, responsiveness, redundancy, and no blind spots.
- REAL-TIME IP packet traces–header **and** PAYLOAD can be viewed online, as well as with IBM's Packet Trace Facility, shareware, or 3rd party products, so you don't need to purchase multiple products.
- Designed from the ground-up as an INTUITIVE browser-based GUI with *Point and Click* access to critical information and alerts.
- *Comprehensive* –14 dashboards and 7 diagnostic tools covering Enterprise Extender, HPR, Sysplex Distributor, OSA, FTP, telnet, HTTP, IP fragmentation, TN3270 response time, and 60+ report templates.
- AUTO-DISCOVERY of TCP applications, stacks, interfaces, and connections–Capable of monitoring remote nodes such as routers, switches, Linux/Unix/AIX/Windows servers, and printers

A few noteworthy VIP customers

Experian	*"One of the top 3 credit bureaus did a head-to-head comparison between VIP and other IP monitors. After examination of VIP strengths, features, and functionality, they purchased VIP."*
TransUnion	*"A leading global provider of business intelligence services supported by more than 3600 employees, in more than 24 countries worldwide, has purchased multiple SDS products including VitalSigns for VTAM and VitalSigns for IP."*
Al Rajhi Banking	*Al Rajhi purchased VIP after product comparisons, and cited ease of navigation, non-complicated documentation and installation, and VIP's support for OSA, Enterprise Extender, applications and the new TN3270 response-time monitor feature as key elements.*
First Fire Marine Ins.	*VIP batch reporting combined with on-line charting capabilities were identified as critical to the purchase decision. VIP provides over 16 pre-defined templates.*
AllData	*VIP was trialed against another IP monitor product and was selected in part due to **VIP's low CPU** consumption and access to detailed information throughout the product.*
Unitrin	*Purchased both VIP and VSV for their history and reporting facilities, support for OSA and Enterprise Extender.*
Government of Quebec	*After a thorough budget and needs analysis, replaced a competing product with VIP.*

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- Over 25 years mainframe software experience
- Over 1,000 clients worldwide
- 20+ VM, VSE, & MVS mainframe systems products
- Major new releases each year