

Software Diversified Services

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VitalSigns and IP Monitor

Executive Overview

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

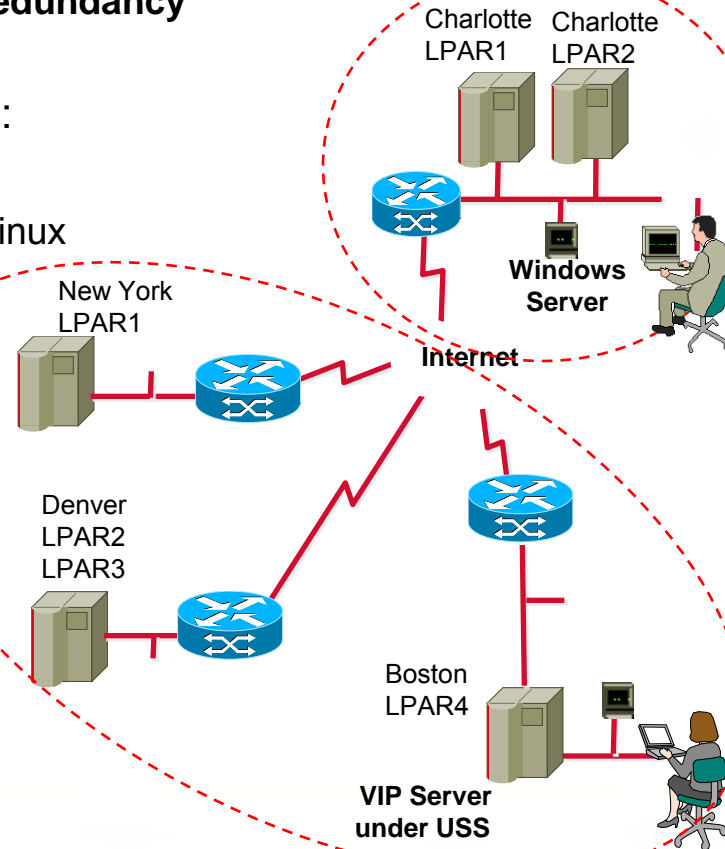


- **Comprehensive alert processing**

- 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.

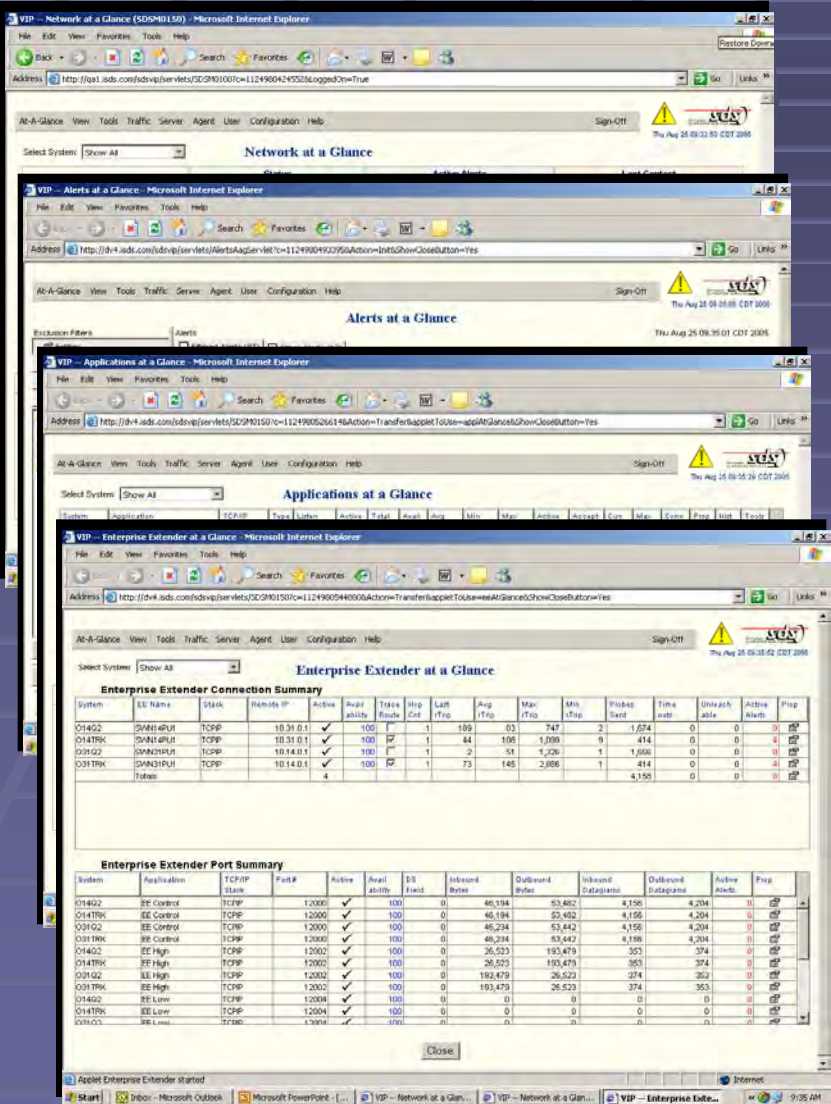
VIP Cost Effectiveness

- 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”

The screenshot displays the VIP web interface in Internet Explorer. It features several overlapping windows:

- Active IPR Connections at a Glance:** Shows a table of active connections with columns for System, Stack, Interface, Act, Avail, Path Length, Avg. Rnd Trip, Min. Rnd Trip, Max. Rnd Trip, Probe, Timeout, Ures, Alert, Conn, and Avg. Resp.
- OSA at a Glance:** Displays OSA usage information, including physical channel, LPAR utilization, and local OSA usage.
- Remote Host Monitors at a Glance:** Provides a table of remote host monitors with columns for IP Address, System, Stack, Interface, Act, Avail, Path Length, Avg. Rnd Trip, Min. Rnd Trip, Max. Rnd Trip, Probe, Timeout, Ures, Alert, Conn, and Avg. Resp.
- Sysplex Distributor at a Glance:** Shows Sysplex distributor information with columns for Sysplex, DVIPA Address, DVIPA Port, Status, Alerts, Avail, Distributing System, Stack, Current Connections, 5-Minute Connections, Total Connections, Origination, Configured Targets, and Active Targets. Below this, it lists targets for distributor SDSPLEX / 10.14.150.1-23 (4 Targets) and connections for target SDSPLEX / 10.14.150.1-23 (1 Connection).

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”

The image displays three overlapping screenshots of the VFP (Vip at a Glance) software interface, which is used for monitoring mainframe activity. The top screenshot shows the 'Activity at a Glance' page, which provides a summary of system and application activity. The middle screenshot shows the 'FTP at a Glance' page, which displays FTP user activity and file transfer statistics. The bottom screenshot shows the 'Telnet at a Glance' page, which provides detailed information about Telnet sessions and LU groups.

System	Application Name	Stack Name	Type	Listen Port	Share	1 Min In Bytes	1 Min Out Bytes	5 Min In Bytes	5 Min Out Bytes	(Δ) In Packets	(Δ) Out Packets	(Δ) In Bytes	(Δ) Out Bytes	Current Conn	(Δ) Accept Conn	(Δ) Drop Conn
01402	BE Control	TCPP	U	12000	0%	22	22	198	198	0	0	0	0	0	0	0
01402	BE High	TCPP	U	12002	0%	0	0	747	15,783	0	0	0	0	0	0	0
01402	BE Low	TCPP	U	12004	0%	0	0	0	0	0	0	0	0	0	0	0
01402	BE Medium	TCPP	U	12006	0%	0	0	0	0	0	0	0	0	0	0	0

System	Stack	Server Name	Local IP Address	Avail	Port	Total Conn	Bytes In	Bytes Out	Segs In	Segs Out	ReConn Count	Avg Trip (sec)	Alerts	TN3270 Avg RTIME
01402	TCPP	Telnet	0.0.0.0	100%	23	0	27,649	607 K	1,912	2,316	94	20	0	0
01401	TCPPB	Telnet	0.0.0.0	100%	25	0	0	0	0	0	0	0	0	0
01402	TCPPB	TCPPB	0.0.0.0	100%	2325	0	0	0	0	0	0	0	0	0
Total						0	27,649	607 K	1,912	2,316	94	20	0	0

System	Stack	Group Name	Profile	Queue	Type	Assoc Group	Total LU	In Use	Inad (Telnet)	Avail LU	Client ID	VTAM App
01401	TCPP	TCPP.LUS	CLRR		LUGRP		50	4	0	46		
01401	TCPPB	TCPPB.LUS	CLRR		LUGRP		30	0	0	30		
01401	TCPPB	TCPPB.LUS	CLRR		LUGRP		30	0	0	30		
01401	TCPP	TCPP.PRINT	CLRR		PRTCGRP		32	4	0	28		
01401	TCPPB	TCPPB.PRINTERS	CLRR		PRTCGRP		2	0	0	2		
01401	TCPPB	TCPPB.PRINTERS	CLRR		PRTCGRP		2	0	0	2		

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.

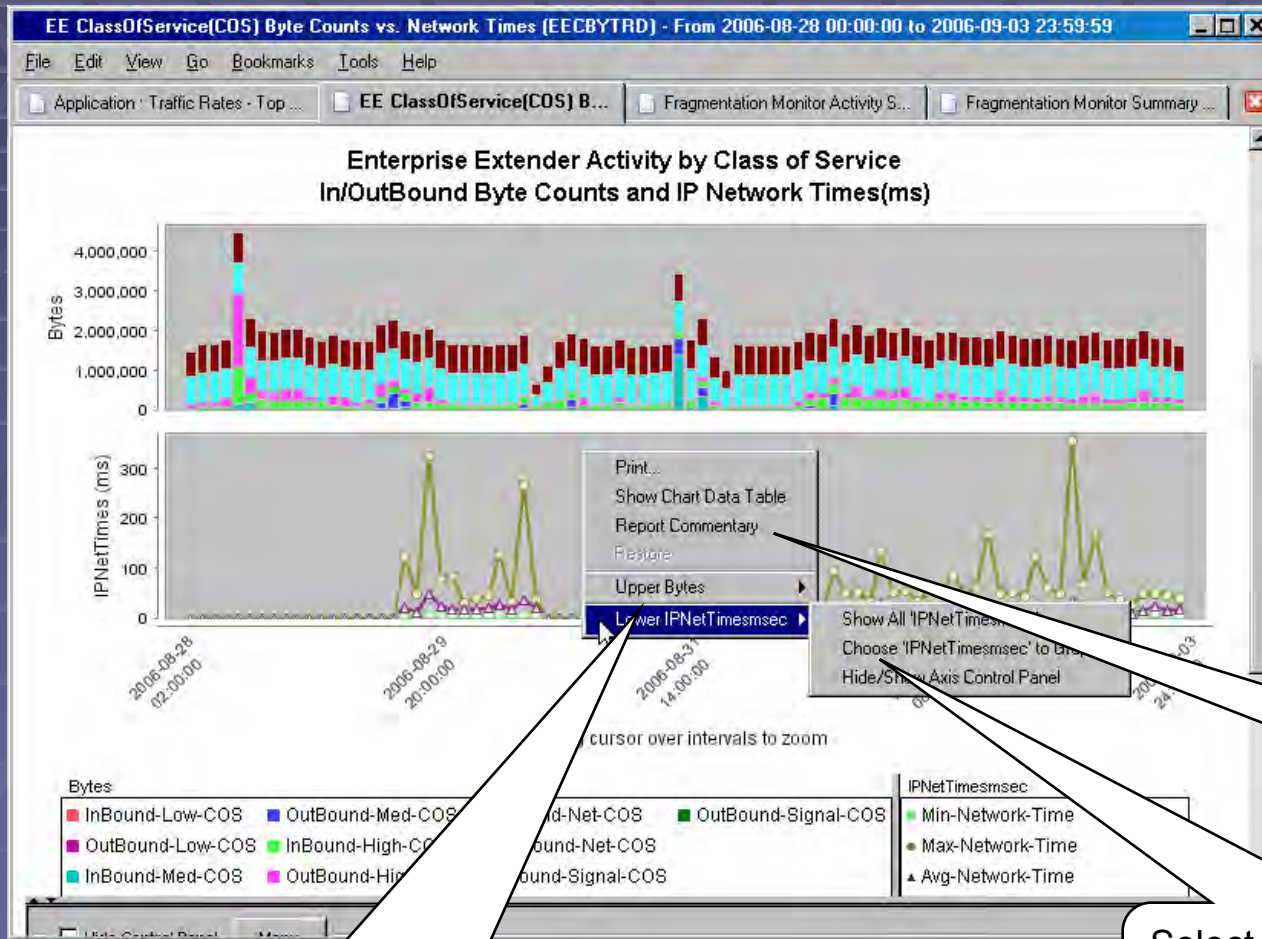
Telnet at a Glance/Telnet History

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.

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

Define reports with explanation of their meaning.

Select individual objects to include or hide from the plot.

Practical and Comprehensive Alerting

Filter Types

Automatic display of new alerts

The screenshot displays the 'Alerts at a Glance' web interface. At the top, there's a navigation bar with 'View', 'Tools', 'Traffic', 'Server', 'Agent', 'User', 'Configuration', and 'Help'. Below this is a table of alerts with columns for System, Status, Time, Age, Severity, ISO, and Message. The table shows several alerts from system O14Q2, with statuses like 'Act/Pend' and 'Act/Unseen'. Below the table is an 'Event Hierarchy' section showing a flow from 'O14Q2 (MVS System)' to 'O14Q2 (VIP on Host)' to 'TCPIP (TCP/IP Stack)' to 'UDP (Protocol)' to '10.0.1.72 (Remote IP Ad...)' to 'VipGui#6@snmp...'. A 'Details' section is open for a selected alert, showing 'Probable cause: Network malfunction' and 'Action: Perform network diagnostic procedure'. The details include sub-causes: 'SubCause#1: The local TCPIP stack is down' and 'SubCause#2: The local TCPIP interface is down'. A 'Filter Types' callout points to the left sidebar, which includes 'Exclusion Filters', 'Entities', 'Severity', 'Status', 'ISO Classification', and 'z/OS Systems'. A 'Filter Values' callout points to the 'z/OS Systems' section, which shows a tree view with 'O14Q2' and 'O31Q2'. An 'Alert Hierarchy' callout points to the 'Event Hierarchy' section. A 'Detail Viewing Tree' callout points to the 'Details' section. A 'Pause Auto Refresh' button is visible at the bottom left, and 'Close' and 'Help' buttons are at the bottom right.

System	Status	Time	Age	Severity	ISO	Message
O14Q2	Act/Pend	13:54	03:30	Review	P	VMSC timeout. Retries exhausted. 10.0.1.72:VipGui#6@snmppro/10.0.1.
O14Q2	Act/Unseen	13:47	10:18	Review	P	Remote host GUASIMOT: Sockets in time wait are nominal.
O14Q2	Act/Unseen	13:36	21:41	Review	P	VMSC timeout. Retries exhausted. 10.0.1.103:VipGui#5@mickey/10.0.1.1
O14Q2	Act/Unseen	13:34	22:59	Review	P	VMSC timeout. Retries exhausted. 10.0.1.103:VipGui#5@mickey/10.0.1.1

Event Hierarchy:
O14Q2 (MVS System)-> O14Q2 (VIP on Host)-> TCPIP (TCP/IP Stack)-> UDP (Protocol)-> 10.0.1.72 (Remote IP Ad...)-> VipGui#6@snmp...

Details:
Alert Details
Summary
Description
Event Hierarchy
General Information
Contact Information
z/OS System Information
Related Alerts
Terse Recommendation
Verbose Recommendation
VIP Specific
Printer friendly view

Probable cause: Network malfunction
Action: Perform network diagnostic procedure

SubCause#1: The local TCPIP stack is down

If this is the case, you may not be able to use the VIP browser to determine the status of the network. In this case, use the SDSF environment within TSO to verify that the TCPIP stack is up.

SubCause#2: The local TCPIP interface is down

You may have to edit the VTCPPARM file to bind the VIP agent to a

Filter Values

Details for selected alert display here. Practical information about probable causes and recommended actions enable you to diagnose and resolve alerts faster.

Alert Hierarchy

Detail Viewing Tree

Powerful EE and HPR Analysis

Enterprise Extender at a Glance

System: Show All | Collection: Show All

Connection Summary (5) | Part Summary (10) | Inactive Connections (0)

Collection Name	System	Switched PU Name	Line Name	Stack	Remote IP Addr	Trans-Info	Auto-Info	Avail	LULU Sess	HPR Cnt/Ftp	Avg Freq	Sig Kbps	Sig Kbps Max	Alerts	Priority	S Min In Bytes	S Min In MBps	S Min Out Bytes	S Min Out MBps	S Min Retain MBps
DEFAULT	031DM	SWN01PU1	E311300E	TCRP	10.14.0.1	DP	DP	100%	0	0	66	0	0	0	All	100	40	120	40	0
DEFAULT	031DM	0315WNP3	E311300F	FCRP	10.200.3.123	DP	DP	100%	4	3	0	11	0	1	All	120	40	180	40	0
DEFAULT	031DM	SWN11E						100%	0	0	0	0	0	0	All	24	120	120	12	11
DEFAULT	031DM	SWN11E						100%	0	0	0	0	0	0	All	15 K	122	28 K	115	0
Default								100%	2	0	0	1	0	0	All	40 K	366	28 K	354	0

Toggle this row's class of service breakdown

Details: Properties, Alerts, History, Rest Availability, Tools

Connect Explorer, DNS Lookup, IP Trace, Operator Commands, Ping, SNMP MIB Inquiry, Traceroute

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

Active HPR Connections at a Glance

System: Show All | Local: Show All

HPR Connection Summary for filter criteria (22 connections)

Collection Name	System	System	Remote Network	Remote CP	RTP PU	Alerts	Conn	ARB Pacing	ARB Rate Reductions	Switched PU	Active LULU Sess	Path	Hops	Send Rate (KB/sec)	Sntd Btt (ms)	NPLs	NPLs Rcvd	NPLs Snt	NPLs Rpt	Bytes Rcvd	Bytes Snt	C N
PCOM	SDSLEX	031DM	US0201	EETHP14A	HP000064	0	Green	0	0	ISTP2114	1	0	2	42	0	2	0	0	0	104	106	#COP
SDS LAM	SDSLEX	031DM	US0201	EELABP3	HP000002	0	Green	0	0	0315WNP3	0	0	0	43	0	0	0	0	0	0	0	#SETI
SDS LAM	SDSLEX	031DM	US0201	EELABP3	HP000003	0	Green	0	0	0315WNP3	2	1	0	30	0	0	0	0	0	0	0	#SNAG
SDS LAM	SDSLEX	031DM	US0201	EELABP3	HP000028	0	Green	0	0	0315WNP3	1	0	0	520	0	0	0	0	0	0	0	0
SDS LAM	SDSLEX	031DM	US0201	EELABP3	HP000028	0	Green	0	0	0315WNP3	1	0	0	465	0	0	0	0	0	0	0	0
SDS PROO	SDSLEX	031DM	US0201	0315SCP	CN600009	1	Red	70	0	ISTP1431	4	2	1	16	0	306	242	0	0	146 K	20 K	#COP
SDS PROO	SDSLEX	031DM	US0201	0145SCP	HP000008	1	Green	93	0	ISTP2114	2	0	1	4	36	0	59	57	0	12 K	13 K	#COP
SDS PROO	SDSLEX	031DM	US0201	0315SCP	CN600001	1	Green	15	0	ISTP1431	2	0	1	4	32	0	37	36	0	8.137 K	7.761 K	#COP
SDS PROO	SDSLEX	031DM	US0201	0145SCP	HP000006	1	Green	12	0	ISTP2114	4	2	1	0	24	0	231	339	0	23 K	164 K	#COP
SDS PROO	SDSLEX	031DM	US0201	0145SCP	HP000000	1	Green	12	0	ISTP2114	7	1	0	0	25	0	8	10	0	508	9.174	#DAT
SDS PROO	SDSLEX	031DM	US0201	0315SCP	CN600003	1	Green	2	0	ISTP1431	7	1	0	0	22	0	8	4	0	4.981	239	#SETI
SDS PROO	SDSLEX	031DM	US0201	0315SCP	HP000001	1	Green	1	0	SWN21PL3	2	4	1	1	11	0	46	43	1	8.552	6.763	#COP
SDS PROO	SDSLEX	031DM	US0201	0315SCP	CN600002	0	Green	0	0	ISTP1431	0	0	1	0	906	0	0	0	0	0	0	#SETI
SDS PROO	SDSLEX	031DM	US0201	0315SCP	CN600004	0	Green	0	0	SWN14P3	2	0	1	1	9	0	24	23	0	3.310	3.188	#COP
SDS PROO	SDSLEX	031DM	US0201	0145SCP	HP000005	0	Green	0	0	ISTP2114	0	0	1	0	173	0	0	0	0	0	0	#SETI
SDS PROO	SDSLEX	031DM	US0201	0145SCP	CN600018	0	Green	0	0	SWN14P3	1	0	1	0	9	0	3	3	0	904	187	#SETI
SDS PROO	SDSLEX	031DM	US0201	0315SCP	CN600008	0	Green	0	0	SWN14P3	0	0	1	0	453	0	0	0	0	0	0	#SETI
SDS PROO	SDSLEX	031DM	US0201	0315SCP	HP000002	0	Green	0	0	SWN21PL3	0	0	1	0	78	0	0	0	0	0	0	#SETI
TRF-PCOM-EE	SDSLEX	031DM	US0201	EETHP14A	CN60001E	0	Green	0	0	CH000018	2	0	1	3	269	0	0	0	0	0	0	#COP
TRF-PCOM-EE	SDSLEX	031DM	US0201	EETHP14A	CN60001C	0	Green	0	0	CH000018	2	0	1	0	453	0	0	0	0	0	0	0
TRF-PCOM-EE	SDSLEX	031DM	US0201	EETHP14A	HP000064	0	Green	0	0	ISTP2114	1	0	2	1	42	0	2	2	0	104	106	#COP
TRF-PCOM-EE	SDSLEX	031DM	US0201	EETHP14A	CN60001D	0	Green	0	0	CH000018	0	0	1	0	589	0	0	0	0	0	0	#SETI
Total								165			41	11	1				825	812				

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

VIP -- TN3270 Response Time Analysis - Microsoft Internet Explorer

Address: http://dv4.isds.com/sdsvip/servlets/RtmServlet?c=1124302960149&Action=InitAnalysis&eop=eop

At-A-Glance View Tools Traffic Server Agent User Configuration Help Sign-Off

TN3270 Response Time Analysis

Wed Aug 17 13:25:11 CDT 2005

Monitor	System	Status	Monitored Conns	Alerts	Sliding Total Trans	Sliding Avg IP	Sliding Avg SNA	Sliding Avg Total	L-O-M Total Trans	L-O-M Avg IP	L-O-M Avg SNA	L-O-M Avg Total	Resp within Bnd 1	Resp within Bnd 2	Resp within Bnd 3	Resp within Bnd 4	Resp over Bnd 4
1001subneto14	O14Q2	Active	1	0	0	15	17	32	3,471	15	172	187	97%	1%	0%	0%	0%
djmo14	O14Q2	Active	1	0	0	15	17	32	3,471	15	172	187	97%	1%	0%	0%	0%
djmo31	O31Q2	Active	1	0	0	15	17	32	3,471	15	172	187	97%	0%	2%	0%	0%
1001subneto31B	O31Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
10200subneto31B	O31Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
djmo31B	O31Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
1001subneto14B	O14Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
10200subneto14B	O14Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
10200subneto31	O31Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
1001subneto14	O14Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
1001subneto31	O31Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
djmo14B	O14Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
10200subneto14B	O31Q2	Active	0	0	0	0	0	0	0	0	0	0	0%	0%	0%	0%	0%
Total																	

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

Activate VIP response-time monitors on-demand or schedule them for automatic activation based on time and date.

Define thresholds that serve as alert criteria.

TN3270 Response Time Monitor Configuration

Response Time Monitor Name: []

System: O14Q2

Stack: TCPIP

Modified by: bmwn1

Disabled

Maintain averages at connection level

Trigger Filter Alert

Start Now

Scheduled

Start Date: 08/01/2005 Start Time: 07:00 End Time: 05:00

Recurrence

Monday Saturday

Tuesday Sunday

Wednesday

Thursday

Friday

End By: 08/31/2005

Select All

Deselect All

OK Cancel Help

TN3270 Response Time Monitor Configuration

Response Time Monitor Name: []

System: O14Q2

Stack: TCPIP

Modified by: bmwn1

Disabled

Maintain averages at connection level

Trigger Filter Alert

Alert when percent transaction falls below minimum

Alert when percent transaction is higher than maximum

Response Time Bucket Boundaries

Bucket 1: less than or equal to 1000 milliseconds 80%

Bucket 2: less than or equal to 2000 milliseconds

Bucket 3: less than or equal to 5000 milliseconds

Bucket 4: less than or equal to 10000 milliseconds

Bucket 5: over 10000 milliseconds 15%

Alert when overall average response time is more than 3000 milliseconds

OK Cancel Help

Dynamic HTTP Analyzer

HTTP Performance Analyzer

Profile the performance of HTTP applications/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

VIP -- HTTP Performance Analysis - Microsoft Internet Explorer

Address: http://vip1460/sdsvip/servlets/HttpServlet?c=1137187644278&Action=InitAnalysis&eop=eop

At-A-Glance View Tools Traffic Server Agent User Configuration Help Sign-Off

HTTP Performance Analysis

Fri Jan 13 15:27:29 CST 2006

Monitor	System	Port	Status	Alerts	Conns this Window	Avg Conn Time (ms)	Trans this Window	Trans per Conn	1st Byte Total Resp (ms)	IP Resp Time (ms)	Server Resp Time (ms)	Avg Xfr Rate Byt/sec	1 Min ThruPut (Kbytes)	Resp within Bnd 1	Resp within Bnd 2	Resp within Bnd 3	Resp within Bnd 4	Resp over Bnd 4
VIPU1460	O31V1461	80	Active	2	149	113	262	1.76	1,312	139	1,173	4,330	13 K	86%	5%	2%	2%	2%
Websphere	O31V1461	2000	Active	0	0	133	0	0.00	412	64	348	1,000	0	92%	0%	7%	0%	0%
Total	2			2	149													

Activate response-time monitors on-demand or schedule them for automatic activation based on time and date.

HTTP Performance Monitor Configuration

Performance Monitor Name: VIPU1460
 System: O31V1461
 Stack: TCP/IP
 Modified by: bdjm1

Disabled

Trigger Filter Alert

Start Now
 Scheduled (Using Agent Local Times)

Start Date: [] Start Time: [] End Time: []

Recurrence

Monday Saturday
 Tuesday Sunday
 Wednesday
 Thursday
 Friday

End By: []

OK Cancel Help

Define thresholds that serve as alert criteria.

Performance Monitor Configuration

Performance Monitor Name: VIPU1460
 System: O31V1461
 Stack: TCP/IP
 Modified by: bdjm1

Disabled

Trigger Filter Alert

Alert when percent transaction falls below minimum

Alert when percent transaction is higher than maximum

1st Byte Response Time Bucket Boundaries

Bucket 1: less than or equal to	1000 milliseconds	80%
Bucket 2: less than or equal to	2000 milliseconds	
Bucket 3: less than or equal to	5000 milliseconds	
Bucket 4: less than or equal to	10000 milliseconds	
Bucket 5: over	10000 milliseconds	15%

Alert when overall 1st byte response time is more than 3000 milliseconds

Alert when average connection handshake time is more than 5000 milliseconds

Alert when average data transfer rate falls below 1 Kbytes per second

Issue these alerts only if there are more than 1000 transactions during the sample period

OK Cancel Help

Applet HttpAnalysis started

Start

Powerful Fragmentation Analysis

VIP -- Fragmentation - Microsoft Internet Explorer

Address: http://dv4.isds.com/sdsvip/servlets/FragServlet?c=1124302735242&Action=Init&eop=eop

At-A-Glance View Tools Traffic Server Agent User Configuration Help Sign-Off Wed Aug 17 13:21:24 CDT 2006

Traffic Analysis: Fragmentation

5 Minute Fragment Rates by System and Stack

Graph	System	Stack	Status	Auto	In Bytes	In Frags	In Reasm Ok	In Reasm Fail	Out Bytes	Out Frags	Out Frag Ok	Out Frag Fail
<input checked="" type="checkbox"/>	O14Q2	TCPIP	Inactive	<input type="checkbox"/>	5,861	584	11	4	6,997	0	0	0
<input checked="" type="checkbox"/>	O14Q2	TCPIPB	Inactive	<input type="checkbox"/>	43	0	0	0	43	0	0	0
<input checked="" type="checkbox"/>	O31Q2	TCPIP	Active	<input type="checkbox"/>	15,6...	450	10	0	20,968	0	0	0
<input type="checkbox"/>	O31Q2	TCPIPB	Inactive	<input type="checkbox"/>	535	0	0	0	590	0	0	0
Total	4				22,1...	1,034	21	4	28,598	0	0	0

Graph of Total Fragments

Fragmentation Analysis Data for System O31Q2 on Stack TCPIP for Time: Wed Aug 17 13:18 CDT 2005

Total Protocols Interfaces Applications Connections Ports Discards Sizes

5 Minute Fragment Rates by RemotePort

Graph	Remote Port	In Bytes	In Frags	Out Bytes	Out Frags
<input checked="" type="checkbox"/>	33000 (UDP)	0	0	664 K	450
<input checked="" type="checkbox"/>	21 (TCP)	0	0	41 K	31
<input checked="" type="checkbox"/>	4192 (TCP)	665 K	450	0	0

Graph of Total Fragments

Real-Time View | Pause Auto Refresh | Print | Menu | Close | Help

Applet Frag started

Fragmentation Analysis

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

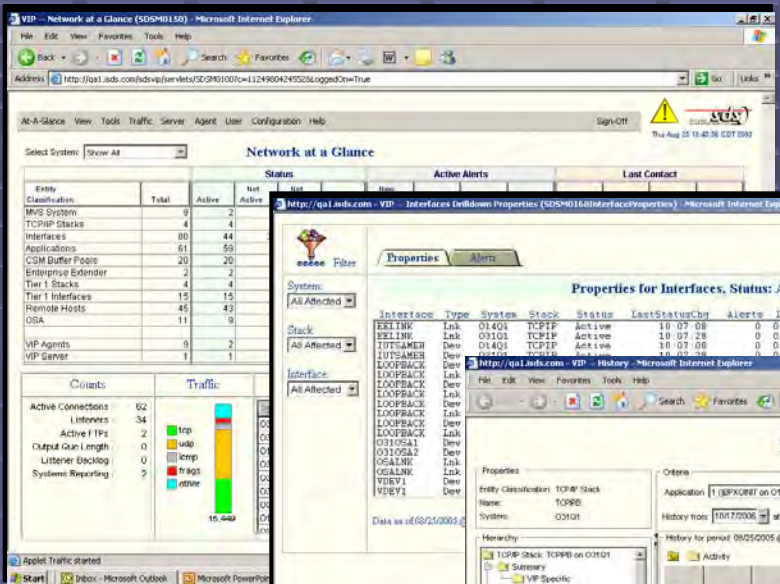
- Increased CPU and storage utilization in hosts/routers
- Decreased throughput
- Increased bandwidth demand
- Exposure to attacks

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

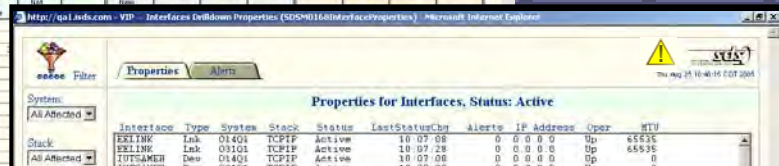
VIP provides a breakdown of all inbound and outbound fragments by:

- 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!

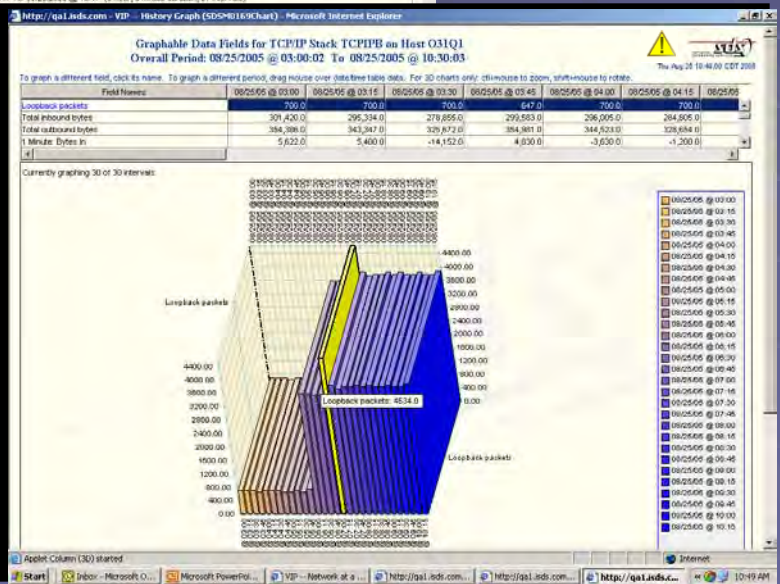
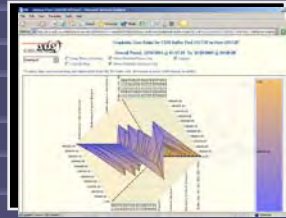


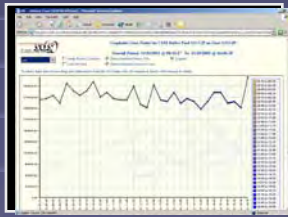
Chart and Graphing – 17 formats – Export to Excel



Bar Chart



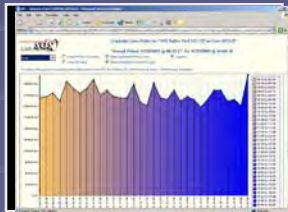
Heat 3D



Line Chart



Line 3D



Area Chart



Pie 3D



Column Chart



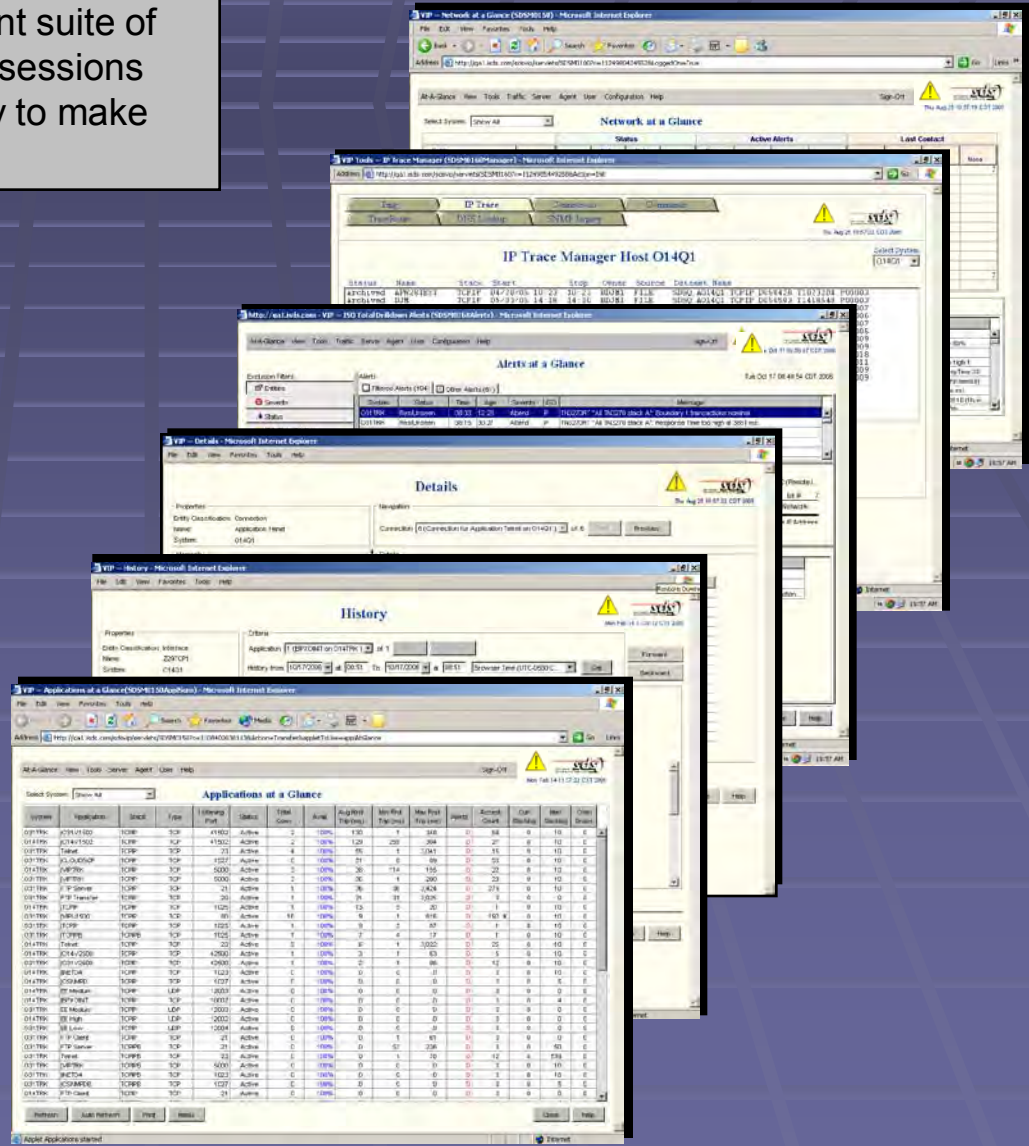
Bar 3D

- 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.

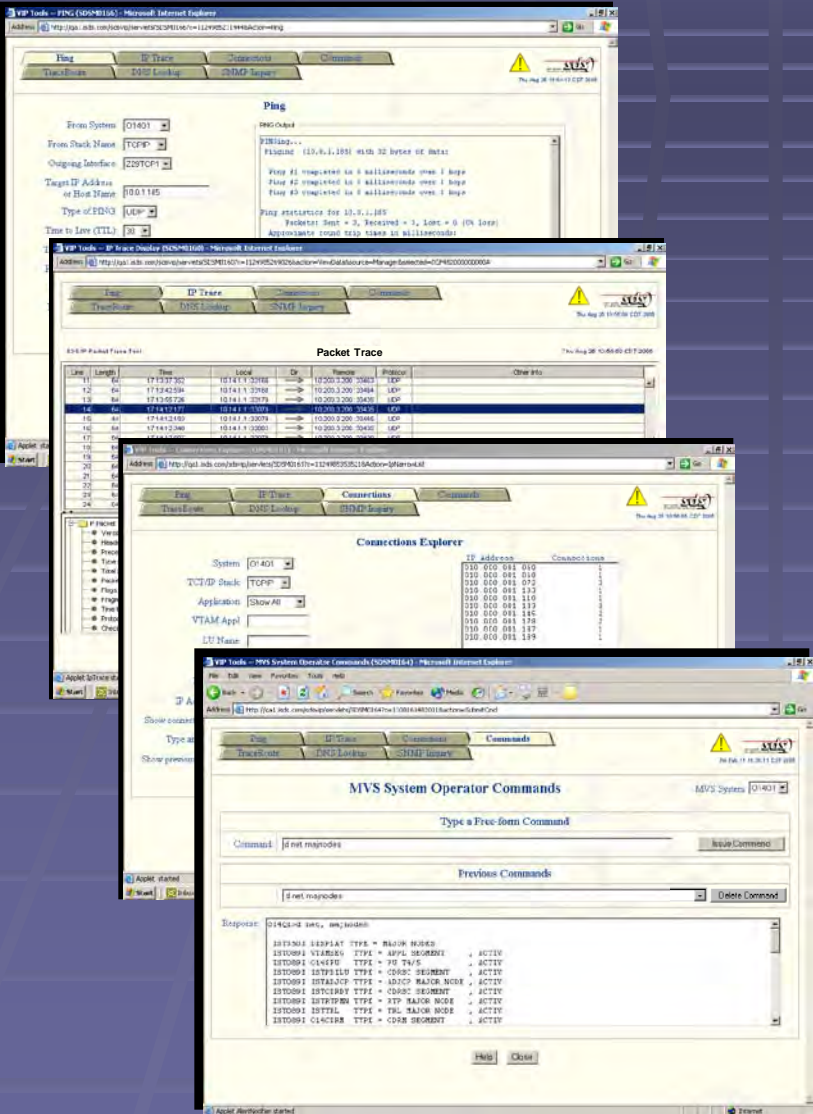
Comprehensive FTP and Telnet Support

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.

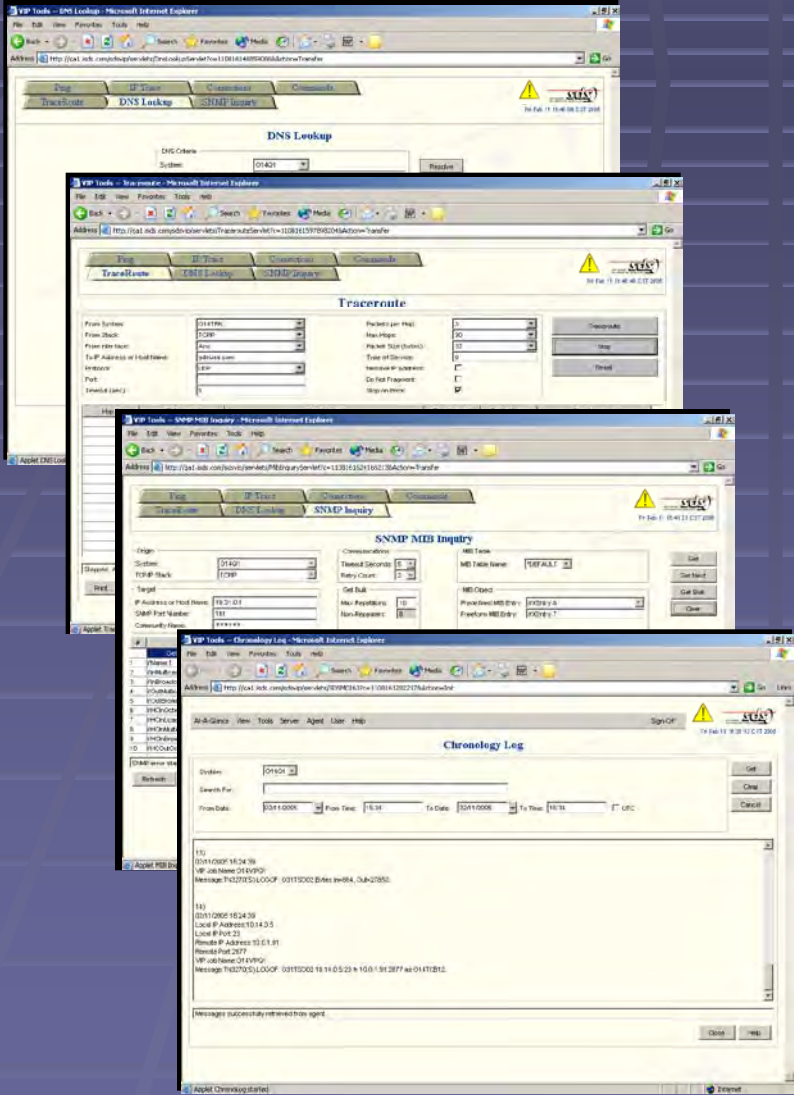
Connections Explorer

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.

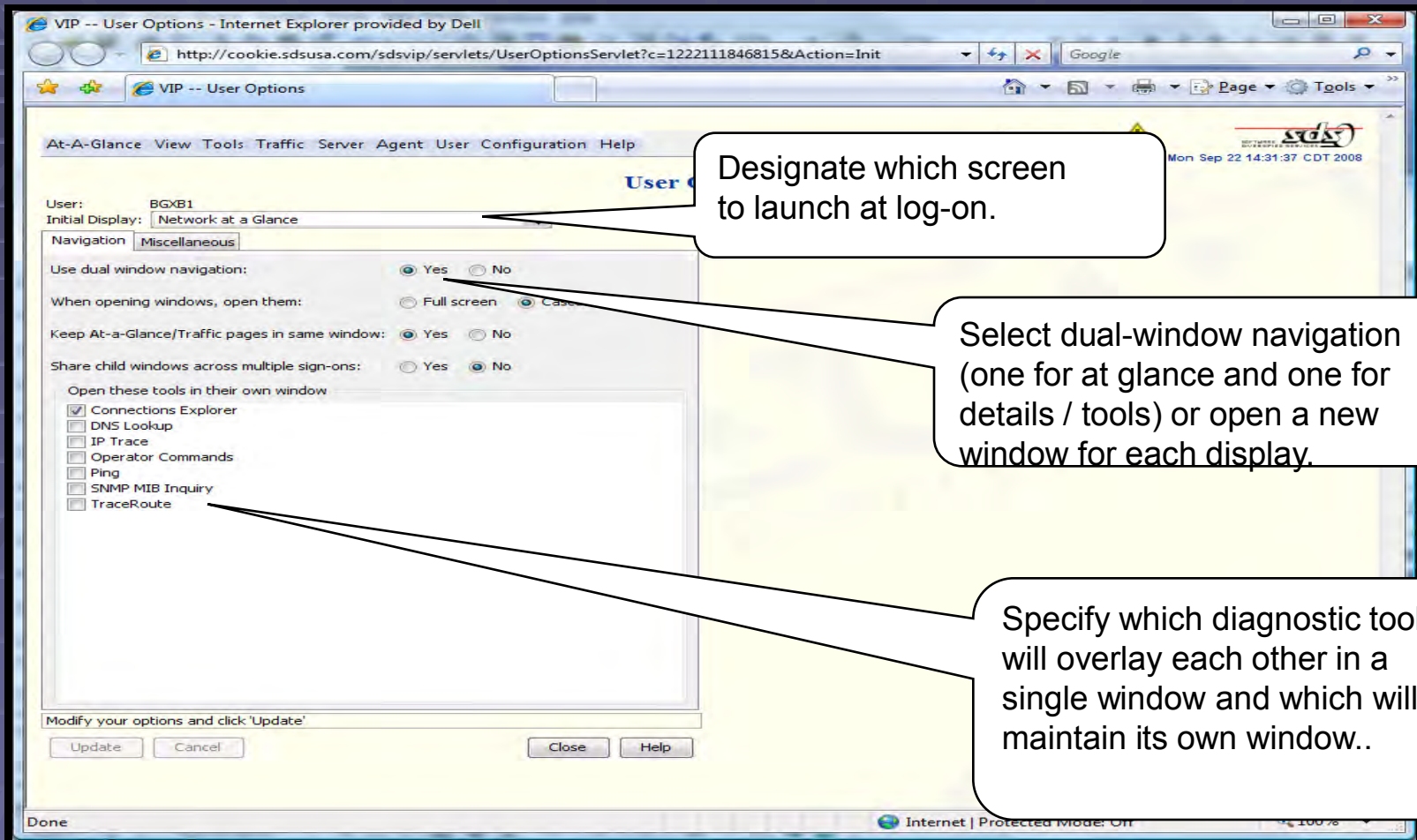
Designate which screen to launch at log-on.

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.

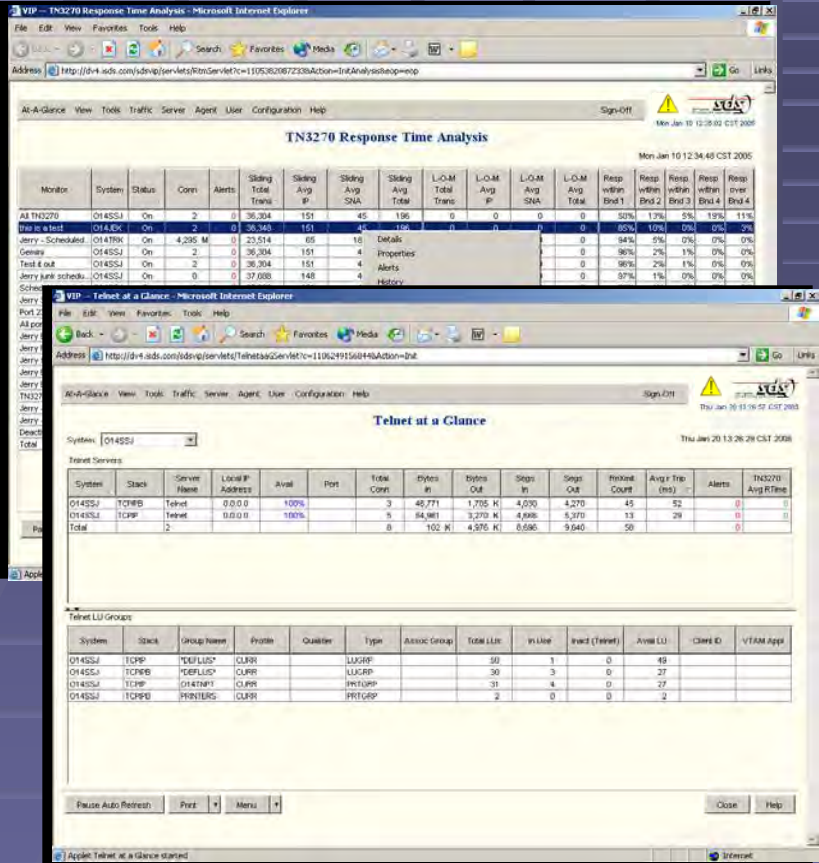


Designate which screen to launch at log-on.

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...

- **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	<i>"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."</i>
TransUnion	<i>"A leading global provider of business intelligence services supported by more than 3600 employees, in more than 24 countries worldwide, has <u>purchased multiple SDS products including VitalSigns and Vici</u>."</i>
Al Rajhi Banking	<i>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.</i>
First Fire Marine Ins.	<i>VIP batch reporting combined with on-line charting capabilities were identified as critical to the purchase decision. VIP provides over 16 pre-defined templates.</i>
AllData	<i>VIP was trialed against another IP monitor product and was selected in part due to <u>VIP's low CPU</u> consumption and access to detailed information throughout the product.</i>
Unitrin	<i>Purchased both VIP and VSV for their history and reporting facilities, support for OSA and Enterprise Extender.</i>
Government of Quebec	<i>After a thorough budget and needs analysis, replaced a competing product with VIP.</i>

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