Data sheet

ZEN
OSA MONITOR

Dedicated OSA Monitor or IP Monitor?

WILLIAM DATA SYSTEMS

Open Systems Adapters' (OSA) provide high-speed connectivity between System z mainframes and other computing platforms. The fact that all inbound and outbound mainframe traffic goes via OSAs makes them worthy of a "mission critical device" description and therefore the need to monitor these devices, to ensure they are performing to their optimum capability, should be without question. Since Internet Protocol (IP) is the predominant network transport protocol traversing the OSA it is only natural that IP Monitors should be 'OSA-aware'.

Under these circumstances it's perfectly reasonable for customers with an IP Monitor to ask "Why do I need a dedicated OSA monitoring product when I already have an IP Monitor?". The answer is, OSAs are complex devices capable of handling a variety of network protocols in addition to IP; SNA being the other protocol most likely to be found in the mainframe environment. An OSA can be shared across multiple LPARs, it has multiple Channels and multiple types and instances of Ports (OSAs support Fast Ethernet Ports, Token Ring Ports, [ATM ports] and Gigabit Ethernet Ports). In essence an OSA is really a collection of devices containing a plethora of information, all of which needs to be interrogated to gain a truly holistic view of OSA well-being. It is this complexity that makes proper monitoring far from straightforward.

The OSA MONITOR component of William Data Systems (WDS) ZEN Network Management suite, known as ZOM, is the only dedicated OSA monitor available. This document explains the relative merits of ZOM compared to IP Monitors in general, by highlighting 3 unique capabilities found only in ZOM, which can be summarized as:

Full disclosure — *ZOM takes a truly holistic view of all OSA data to ensure against blind spots*

Unique Insight — *ZOM Soft Reset capability provides clarity and prescience*

Assurance — *ZOM gives peace of mind with its on demand Heath Check feature*

FULL DISCLOSURE = NO BLINDSPOTS

OSAs are complex devices handling several different network protocols, overlapping TCP/IP, VTAM, SNMP and z/OS. These days, most IP monitors source their data from a variety of places using a number of different techniques. However, the salient point is that they only gather IP-related information.

The Management Information Base (MIB) is an excellent place to look for OSA-related information as it contains all current OSA set-up and state info. The MIB is a database and contains, literally, thousands of objects. The MIB can be queried via SNMP and most IP Monitors have this capability. However, IP Monitors focus on providing only the very high level details pertaining to an OSA, such as processor utilization and bytes in/out traffic counts, and ignore the vast majority of the fields in the MIB, any one of which could be the harbinger of a failure. Furthermore, IP Monitors tend to present their information delineated by LPAR or IP stack and do not present a view of the OSA as a complete entity.

ZOM understands the multi-faceted nature of the OSA. By taking a 'deep-dive` approach to data-gathering it learns and remembers the settings of all the MIB entries and is able to detect immediately state changes, congestion and queue depth issues, along with many, many other pointers not detected by IP Monitors, any of which could indicate an impending problem.

a syncsort company

Full disclosure

ZOM has customizable Alerts to over 60 specific MIB fields, queue depth and state conditions. These catch events like state changes, high and low thresholds exceeded and increases in error counts. ZOM provides a holistic view of OSA performance and capacity, complete with history and performance graphs, combining all of an OSA or Port's usage by all other LPARs and Systems.

By drawing on information from the MIB, z/OS Device Tables, VTAM Control blocks and the IP stack, ZOM uses every possible source to comprehend the OSA as an intimately interconnected set of devices, shared across LPARs, that is only truly explicable by referencing all available information.

INSIGHTFUL SOFT RESET FEATURE

There are a vast number of objects in the OSA MIB which describe in minute detail how all elements of this complex device are performing. Associated with these objects are counter fields, which indicate the number of times an event has occurred. These events could be a sign of some kind of retry or degradation, or in the worse case, imminent total failure. The counter fields are completely ignored by IP Monitors, which are only concerned with reporting on overall traffic throughput/byte count rate etc.

The SNMP MIB Browsers available in IP Monitors do allow the user to interrogate the MIB on an interactive basis, but the data is so vast and the fields so many that using a MIB browser to try and spot potential problems really is like searching for the proverbial needle in a haystack. Uniquely, ZOM monitors all of these values for you.

Unique Insight

However, an awareness of these counters is not the end of the story. While the counter fields are a symptom of something happening, unless you have some way of knowing the frequency with which the counter is being updated it is impossible to tell whether the error refers to a historical event or whether it is indicative of a trend, and therefore worthy of further investigation. One answer would be to reset the values in the fields but unfortunately this can only be done by taking the OSA completely offline; not an option for a high-availability datacenter.

Uniquely, ZOM introduces the concept of a 'soft reset'. At start-up ZOM captures the status of all OSAs; this is referred to as the Base State and the values captured are referred to as the Reference Values. ZOM will automatically alert you should there be any changes to the Reference Values and you can execute a 'Soft Reset' to reset the Base State values at any times. The Soft Reset feature is analogous to the trip meter in a car. Without it you can only see the total values since the OSA was first IPL'd, but with ZOM you can reset the counters whenever you wish to determine whether problems are new, old or ongoing. This capability, which is vital for determining the true wellbeing of the OSA, simply does not exist in any other monitoring product.

PEACE OF MIND WITH ZOM HEALTH CHECK

The Soft Reset capability is complemented by ZOMs unique Health Check facility. The ZOM Health Check provides complete peace of mind by giving you the ability to run, on-demand, a check against all error counts and state fields.

ZOM Health Check provides for three different types of check:

Assurance

Standard All OSA data changed since the last Soft Reset is checked and any increased error count or bad states detected will be highlighted for your attention.

Custom As Standard, except all data is checked regardless of the last Soft Reset.

Full Performs a complete scan of all OSA fields and highlights any that it determines should be brought to your attention. That is, all non-zero error counters and all bad state fields. This option therefore lets you know about all possible error conditions on your OSAs.

SUMMARY

If an OSA is analogous to a car, an IP Monitor can tell you how fast the car is going and provide details about fuel consumption, but that's about all. ZEN OSA MONITOR provides full telemetry about all aspects of the car, its engine and various components, including early warnings of component wear and impending failures. No IP Monitor comes close to providing the assurance and sense of well-being that is provided by ZEN OSA MONITOR.

ZEN
OSA MONITOR

FEATURES

CONFIGURATION

- Automatic detection of accessible OSAs
- Automatic Monitoring and History Collection
- Fully configurable alert monitoring
- Online Parameter and Configuration settings

SUMMARY INFORMATION

- Channels Summary
- OSA-Express LPARs Summary
- OSA-Express2 LPARs Summary
- OSA-Express3 Port Summary
- 10Gb Ethernet Port Summary
- Ethernet Port Summary
- Token Ring Ports Summary
- PE Table (IBM Use) Summary
- ATM Port Summary

FULL MIB DETAILS

Full descriptions of every value displayed, including:

- Channel Detail
- OSA-Express LPAR Detail
- OSA-Express2 LPAR Detail
- OSA-Express3 Port Detail
- 10Gb Ethernet Port Detail
- Ethernet Port Detail
- Token Ring Port Detail
- PE Table (IBM Use) Detail
- ATM Port Detail
- Hexadecimal and Formatted MIB displays available

HEALTH CHECK EXCEPTION MONITORING

- Highlights exceptions
- Provides early notification of impending problems:
  - Error count changes
  - Threshold exceeded
  - State changes
  - Congestion
  - Excessive Queue Length

ALERTING CAPABILITIES

- Integrated ZEN-managed alerting
- Routing options include:
  - Console messages
  - NMVTs (NetView)
  - SNMP (HP OpenView, etc.)
  - E-mail
- Alert options include:
  - Any OSA Field
  - State Changes
  - Errors
  - Congestion
  - Excessive Queue Length
- All alerts are archived and can be analyzed offline

MISCELLANEOUS FEATURES

- Browser-based, graphical user interface requiring no additional hardware or software
- Comprehensive product Help with detailed descriptions for all fields
- Enhanced SMF records and batch reporting
- Advanced historical data capture and retention via DIV technology
- Simplified OSAENTA trace launcher
- Full integration with ZEN Network Management suite

AT A GLANCE

The William Data Systems ZEN suite of network management solutions provides a comprehensive insight into z/OS network operations by offering targeted solutions, adapted to meet your unique business needs.

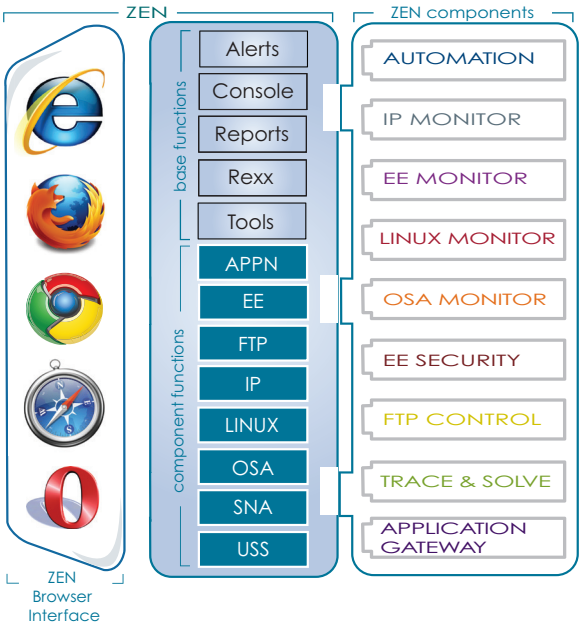
The suite consists of ZEN, a central interface which enables users to integrate and operate tools easily, and a selection of targeted solutions that provide IT performance management, network optimization, monitoring, tracing, reporting and security. ZEN solutions are critical to maintaining business continuity and service levels of z/OS networks.

ZEN

Optimize mainframe network management. Integrate and operate your tools seamlessly through one innovative interface, customized to your unique business needs.

ZEN AUTOMATION

Automate all your network and operations tasks and build your own ZEN applications by exploiting the power and flexibility of the ZEN with Rexx. Replace incumbent products at a fraction of the cost.



ZEN IP MONITOR – ZIM

Identify network issues instantly to minimize down time. Focus your recovery efforts easily with intelligent reporting and absolute real-time monitoring.

ZEN OSA MONITOR - ZOM

Optimize the operation of your IBM Open Systems Adapters (OSA) to provide maximum network resilience. Includes OSAENTA tracing support.

ZEN EE MONITOR – ZEM

Extend your network and optimize your resources. Implement Enterprise Extender (EE) with ease and improve APPN/HPR network operations and performance with this powerful and user-friendly monitoring solution.

ZEN LINUX MONITOR - ZLM

Monitor the performance and availability of all your Linux systems from ZEN, whether running under VM, natively in an IFL or on Intel™ servers.

ZEN EE SECURITY - ZES

Provide your clients with the utmost security. Confidently and efficiently fill the security gaps existing on the networks linking your business partners' legacy applications to yours.

ZEN FTP CONTROL – ZFC

Keep your corporate and client data secure. Monitor and audit all FTP file transfers in real time with this efficient tool which ensures compliance with statutory, regulatory requirements.

ZEN TRACE & SOLVE – ZTS

Minimize network outage and get back to business quicker. Promptly diagnose network and application issues – small and large – as they arise with this thorough yet simple tool.

ZEN APPLICATION GATEWAY – ZAG

A beautifully simple way of testing and implementing IPv6 under z/OS. ZAG allows you to connect any IPv6 or IPv4 client to any IPv4 or IPv6 application over any IPv4 or IPv6 network, without making additional application, network or hardware changes.

WILLIAM DATA SYSTEMS a syncsort company

William Data Systems Ltd
2 Independent Business Park
Imberhorne Lane
East Grinstead
UNITED KINGDOM

info@willdata.com
+44 1342 321234

Syncsort Inc
50 Tice Boulevard Suite 250
Woodcliff Lake
New Jersey, 07677
UNITED STATES OF AMERICA

info@syncsort.com
+1 (877) 700-0970

The IBM logo, the Business Partner emblem, System z, z/OS, VTAM and SNA are trademarks of International Business Machines Corporation.
ZEN, the ZEN logo, ZEN OSA MONITOR, ZEN IP MONITOR – IMPLEX, ZEN EE MONITOR – FERRET, ZEN OSA MONITOR, ZEN LINUX MONITOR, ZEN TRACE & SOLVE – EXIGENCE
ZEN FTP CONTROL – FTPALERT, ZEN APPLICATION GATEWAY and ZEN EE SECURITY – APIAS are trademarks of William Data Systems Ltd.
All other brand and product names are trademarks or service marks of their respective holders.
Copyright © 1999-2015 William Data Systems Ltd. All rights reserved.

Business Partner IBM Authorized System z