PERFORMANCE NEWS

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VELOCITY SOFTWARE'S 2019 ACCOMPLISHMENTS: zVPS VERSION 5

BY BARTON ROBINSON

For Velocity Software, 2019 was one of Velocity Software's most productive and busy years ever. Beyond the education we provided with onsite visits or in large groups such as the VM Workshop, we focused on many enhancements to support mainframe platforms. After providing performance management for z/VM, TCPIP networks, Linux on Z and distributed servers for many years, Velocity Software has now added support for z/OS with zOSMON ™ and has greatly enhanced support for z/VSE installations with VSEMON ™. And of course the normal z/VM release support was provided.

In support of existing customers pushing new technologies, support for applications using MongoDB and container technology was added, and provided to installations implementing those functions. As more and more Splunk is implemented, Velocity Software worked with customers to reduce the associated overhead of Splunk agents, by building a method to feed data from zVPS to Splunk rather than have individual Splunk agents on each Linux server collecting data that zVPS has already collected and stored.

For installations interested in implementing the IBM Secure Service Container technology, Velocity Software has worked with IBM to implement the collectd support allowing the very secure container platform to send performance metrics to zVPS. collectd is an open source package that provides performance data for container technology - and can be used for almost any container technology - we suspect even the z/OS Container Extensions (running Linux containers on z/OS) will be able to use collectd and the Velocity Software support for collectd.

After many years of providing z/VSE system and job data, we have formalized VSEMON and have added network management support for the BSI TCPIP stack - with full intent on doing the same for the CSI TCPIP stack as well. CICS support has also been added using the standard DMF records. All data is still managed on z/VM, with a new transmission protocol for sending the DMF records to zVPS. VSEMON is a very low cost feature of zVPS.

Our major project in 2019 was to create zOSMON. Many customers have expressed interest in using zVIEW, the Velocity Software graphical interface to view data from z/OS. zVIEW already had the ability to display data from many different LPARs, subsystems and geographies on a single pane of glass. Support is provided using the relatively new logstream mode - and an extremely light weight agent running on z/OS that sends the SMF records to zVPS using the same new transmission protocol as we provided for VSEMON. The advantages that zOSMON installations are seeing, is extremely low cost of z/OS performance management in terms of resources consumed. Large installations may gain multiple z/OS general purpose processing units back by moving the SMF reduction off the z/OS platform. And no need for zIIP processing or adding complexity. No need to understand SMF records - if there is analysis that a user is interested in, either we provide the specific report - or a simple extract from our database providing the metrics requested. The overhead in terms of both system resources and people resources to manage z/OS is a recognizable issue in many installations. This can be greatly reduced by implementing zOSMON.

zOSMON currently has full support for SMF 70s, 30s and 110s. On our test system driving 3-4 million transactions a day, the cost of processing all those records with a one minute sample interval is less than .1% of ONE CPU per LPAR. It pays to write code in assembler and low level languages. I project that one zVPS running on one engine will easily support the processing requirements of 100 z/OS LPARs as well as the large Linux environments that are growing world wide.

Our objectives for zOSMON are to greatly enhance it in 2020 with IMS, DB2, MQ and what ever else will help our customers become more efficient in their support of the mainframe platform.

It should be a fun and productive 2020!

VSEMON

Velocity Software has added zVSE to it's performance management suite. As the industry leader in z/VM performance management for over 30 years, and as the industry leader in Linux on IBM Z performance management for almost 20 years, many zVPS installations have requested support of VSE metrics in our modern and flexible graphical interface.

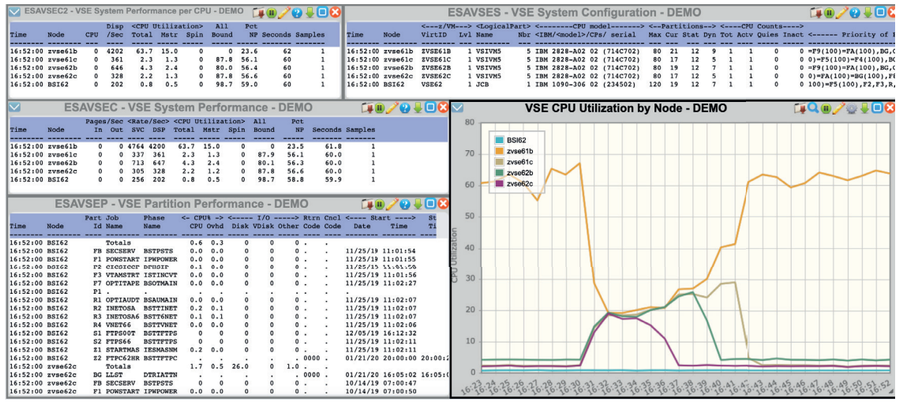
zVIEW now provides 4 reports and 1 graph on VSE LPARs or z/VM guests. As well there are 3 reports to provide data on CICS running under VSE and 5 reports on the TCP/IP activity on VSE systems.
The VSE reports are:

- ESAVSEC VSE System Performance Report
- ESAVSES VSE System Configuration Report
- ESAVSEP VSE Partition Performance Report
- ESASEC2 VSE System Performance per CP Report

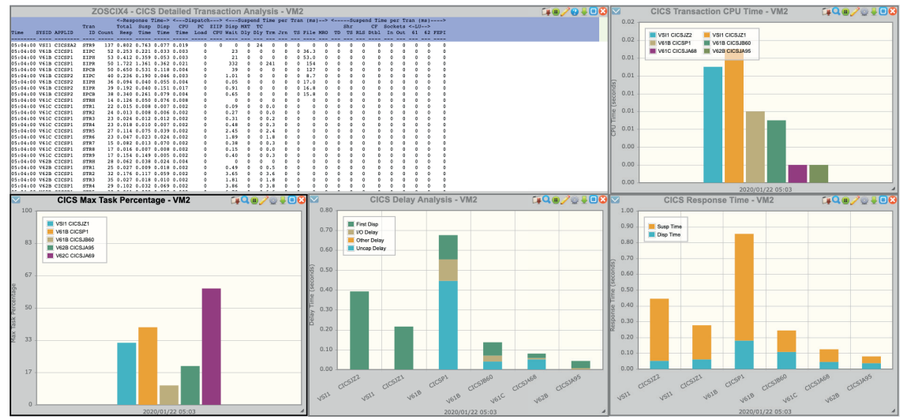
VSEMON builds on existing technology and adds significantly more function to what has been provided for z/VSE by Velocity Software in the past. The information in the reports are based on:

- System data: Starting with z/VSE 4.3 IBM has provided SNMP functionality and an SNMP MIB that shows system level data. This requires setting up SNMP on z/VSE and allowing zVPS to collect that data.
- Partition data: Velocity Software provides an SNMP extension that shows details for each partition.
- Job data: Velocity Software provides an additional SNMP extension that provides job information used for chargeback and capacity planning. CPU and I/O information are included for each job and job step.
- Network data: Velocity Software provides an SNMP extension to support IPv6/VSE from Barnard Software. The data maps directly into existing network management functionality already provided by Velocity Software. VSE is now included in the network management component of zVPS.

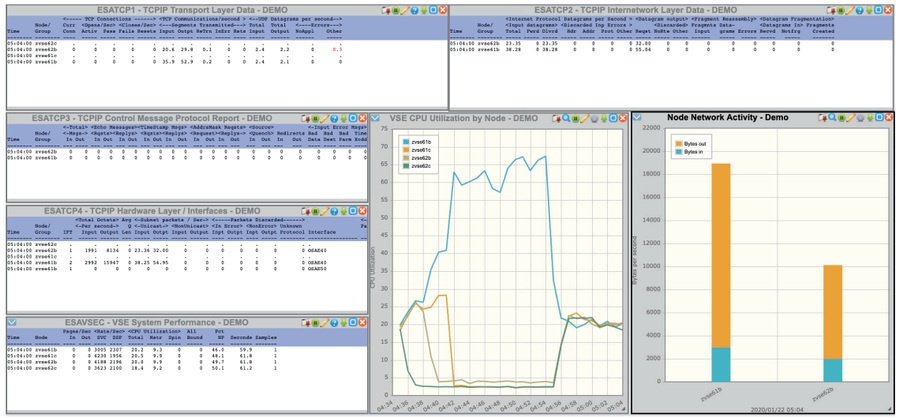
- CICS Support: A natural extension of providing CICS support for z/OS, we also have CICS support for z/VSE. This support provides high level as well as detailed transaction reporting for performance analysis, diagnostics, capacity planning and operational alerts. This support is implemented as a VSAM exit that sends the CICS DMF records to zVPS via an IP connection
- It is required to have DMF running and available in order to collect data from CICS and send it to zVPS.
- Connectivity Software Incorporated in conjunction with Velocity Software now provides an application mib. Velocity Software has a Statement of Direction (SOD) to support this mib as soon as possible.
- Performance Database: All zVSE data is maintained in the standard zVPS performance database for an long as desired (and disk space provided). This allows for capacity planning graphics, chargeback, and other historical reporting.



MyVSE view giving customers a z/VSE dashboard to start with



CICS Transaction view with supporting graphs



VSE Network data from IP6/VSE

zOSMON

With zVPS 5.1, you can now monitor your z/OS LPARs as well as your Linux guests. The zOSMON 1.0 feature provides reports on the performance of your z/OS LPARs or z/OS guests running under z/VM.

zOSMON ™ works with a very simple SMF record collector on z/OS that ships supported records over to zVPS running on z/VM. **This means no overhead on z/OS from your performance management software.**

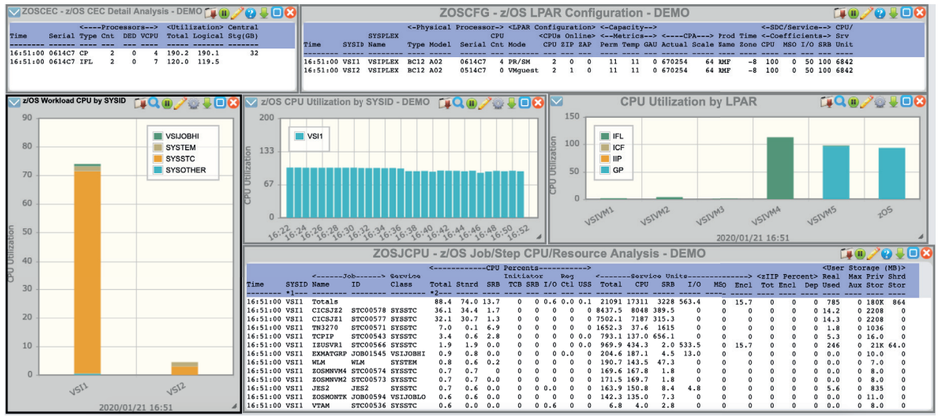
zVIEW, our world recognized web portal into performance data, running on z/VM will now also display z/OS data. When zVPS is supporting a Linux environment, it runs on IFLs, NOT general purpose processors. The SMF records are just one more data source into the zVPS suite and would still run on an IFL if supporting a Linux environment. Using zVIEW you are able to look at a full enterprise on a SINGLE PANE OF GLASS.

The reports shipped with zOSMON are:

- ZOSCFG - Configuration of the system and LPAR
- ZOSCPU - CPU Utilization of the z/OS system
- ZOSLPAR - LPAR Detailed Report
- ZOSLPRS - LPAR Summary Report
- ZOSCEC - Summary of the type and utilization of the processor in the CEC
- ZOSJCFG - z/OS Job/Step Configuration Report
- ZOSJCPU - z/OS Job/Step CPU/Resource Report
- ZOSJDSD - z/OS Job Step I/O Activity Resource Report
- ZOSJUSS - z/OS UNIX System Services
- ZOSJSTR - z/OS Job Step Storage Report
- ZOSJWKLD - z/OS Service Class Workload
- ZOSCIX1 - CICS Analysis Report
- ZOSCIX2 – CICS Transaction Analysis Report
- zOSCIX4 – CICS Detailed Transaction Analysis Report

These reports are described in detail in the zOSMON Product Guide available on https://velocitysoftware.com/customer/PUBS/ESALPS43/ZOSMPROD.PDF

zOSMON, VSEMON and all zVPS reports are available on our demo site. Go to http://demo.velocitysoftware.com/ZVIEW/zview.cgi - use the menu option to view all the zVIEW reports.



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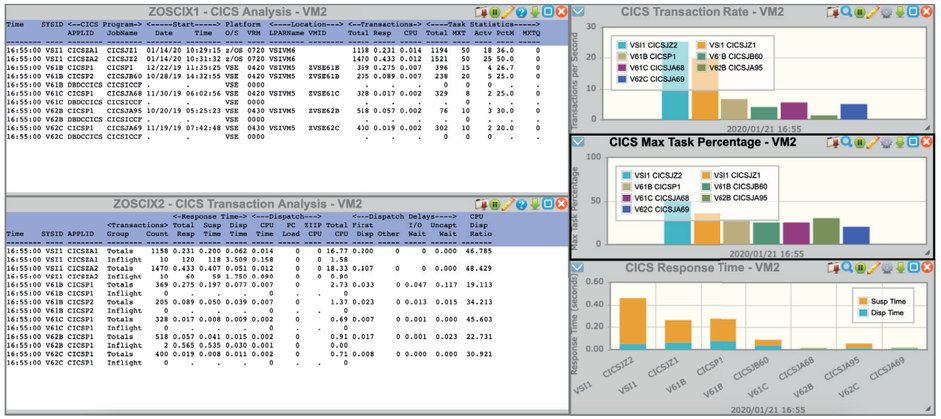

CICS Region view with supporting graphs

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2020 IBM Z, Z/VM AND LINUX ON Z EVENTS

Looking to improve your z Systems knowledge and skills? Here are some events, that we will be attending. Please check our next newsletters and social media sites for updates.

EVENTS NORTH AMERICA

23 – 28 February: SHARE 2020
Fort Worth Convention Center, Fort Worth, TX
4 – 7 May: IBM THINK
San Francisco
18 – 22 May: IBM Technical University
Orlando, FL
16 & 17 June: Velocity Software Performance Class
The Ohio State University, Columbus, OH
18 – 20 June: VM Workshop
The Ohio State University, Columbus, OH
2 – 7 August: SHARE 2020
Hynes Convention Center, Boston, MA
16 – 17 September: Open Mainframe Project Summit
Marist College Executive Center, New York, NY
5 – 9 October: IBM Technical University
Atlantic City, NJ

INTERNATIONAL EVENTS

27 – 29 April: GSE Spring Meeting for z/VSE, z/VM, KVM and Linux on IBM Z
Bonn, Germany
25 – 29 May: IBM Systems Technical University
Amsterdam, The Netherlands

October, Date TBD, GSE European Meeting for z/VSE, z/VM, KVM and Linux on IBM Z, Germany

November, Date TBD, GSE UK, UK

Imprint
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