



Monitoring z/VSE with zVPS

VM Workshop
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Richard Smrcina
Velocity Software
rich@velocitysoftware.com

Who is Velocity Software?

Founded 1988, Mission:

- Provide software to assist customers in optimizing the z/VM platform

Continuous fully integrated enhancements for over 30 years

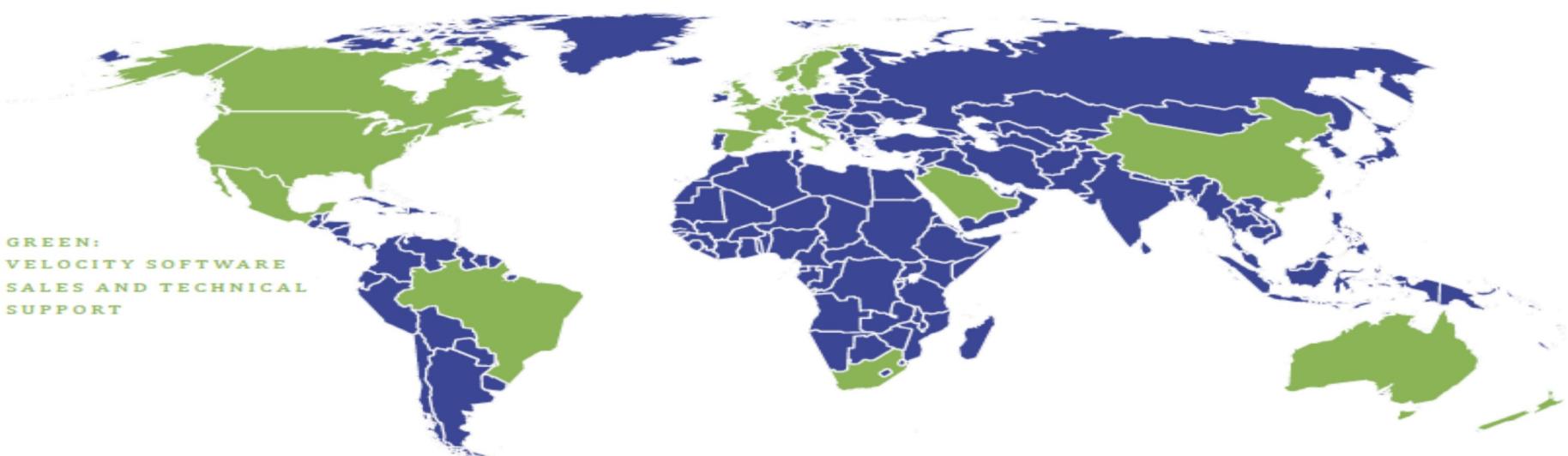
Over 200 installations (zVPS)

- More than half of the IFLs worldwide
- In 22 countries, on 6 continents

Headquartered in Mountain View, California

- Offices in Ohio, Texas, Wisconsin, and Germany

Velocity Software's Sales and Technical Support Map



z/VSE introduced SNMP with z/VSE 4.3

- Announced in 2010
- Since we use SNMP for Linux, it was a natural progression

Velocity Software

- Introduced z/VSE monitoring
- Based on SNMP ‘plugins’ provided by IBM
- Added our partition plugin in 2014
 - Displays partition and job information as jobs are running

Added additional VSE support (2019-2020)

Introduced VSEMON

- Updated partition monitoring
- CICS monitoring
- TCP/IP stack monitoring

z/VSE Monitoring Improvements

Updated partition monitoring

- Step/Job ends more closely tracked
- Performance improvements in the VSI plugin
 - One SNMP call per active partition

ESAVSEP - VSE Partition Performance - VM4																				
Time	Node	Part	Job	Phase	<- CPU% ->			I/O			Rtrn	Cncl	<- Start ->			Stop	User Info	Prty	Share	Job Num
		Id	Name	Name	CPU	Ovhd	Disk	VDisk	Other	Code	Date	Time	Time	Code	Code					
09:59:00	zvse61b	Totals			40.2	4.8	9802	0	20428											
09:59:00	zvse61b	F1	POWSTART	IPPOWER	1.6	0.4	366.0	0	8.0		05/21/20	07:55:58					1	0	0	
09:59:00	zvse61b	FB	SECSEERV	BSTPST	0.0	0.0	18.0	0	0		05/21/20	07:55:57					2	0	0	
09:59:00	zvse61b	F3	VTAMSTR	ISTINCVT	0.1	0.0	0	0	36.0		05/21/20	07:56:01					SYSA	3	0	49844
09:59:00	zvse61b	T1	BSTTVNET	BSTTVNET	0.1	0.0	2.0	0	19.0		06/04/20	08:02:07						4	0	53418
09:59:00	zvse61b	T2	BSTTFTP	BSTTFTPS	0	0	0	0	0		06/04/20	08:02:06						4	0	53419
09:59:00	zvse61b	Z1	DMFSTART	DFHDFSIP	0.5	0.1	0	0	4.0		06/04/20	08:02:55						5	0	53422
09:59:00	zvse61b	R1	STARTVCS	IESVCSR	0.1	0.0	0	0	0		06/04/20	08:01:51						6	0	53420
09:59:00	zvse61b	R2	STARTMAS	IESMASNM	0.2	0.0	0	0	0		06/04/20	08:01:55						6	0	53421
09:59:00	zvse61b	F2	CICSCICCF	DFHSIP	0.3	0.0	0	0	0		05/21/20	07:56:35					SYSA	7	0	49850
09:59:00	zvse61b	O1	CICSPA60	DFHSIP	0.4	0.0	2.0	0	10.0		05/26/20	20:14:34						8	0	51255
09:59:00	zvse61b	O2	CICSPB60	DFHSIP	0.2	0.0	0	0	0		05/26/20	20:14:44						8	0	51256
09:59:00	zvse61b	F5	LIBRDIR	LIBR	1.8	0.4	2890	0	20291	0	10	06/04/20	09:57:48	09:57:56	OPERATOR		9	100	53443	
09:59:00	zvse61b	F6	SCANVSM2	ARXREXX	23.3	3.5	6517	0	50.0	0	10	06/04/20	09:57:47	09:58:14			9	100	53442	
09:59:00	zvse61b	S1	BSTTINET	BSTTINET	0.3	0.0	0	0	2.0		06/04/20	08:01:36						19	0	53417
09:59:00	zvse61b	S2	STGPLAY	STGPLAY	11.3	0.3	7.0	0	8.0		06/04/20	09:58:38						19	0	53439

CICS monitoring

- DMF records generated by CICS (rectype 110)
- Velocity provides an exit that runs in the DMF partition to route CICS data to z/VM
- All other processing is performed on z/VM, saving precious GP CPU time
- Customers have the option to bypass the writing of the DMF data

ESAVSEP - VSE Partition Performance - VM2

Time	Node	Part	Job	Phase	<- CPU% ->			<---- I/O ---->			Rtrn	Cncl	<---- Start ---->		Stop			
					CPU	Ovhd	Disk	VDisk	Other	Code	Code	Date	Time	Time	User	Info	Prty	Share
07:10:00	zvse61b	Z1	DMFSTART	DFHDFSIP	0.2	0.0	0	0	1.0			01/20/20	07:27:55				6	0
07:10:00	zvse62b	Z1	DMFSTART	DFHDFSIP	0.2	0.0	0	0	1.0			01/29/20	04:21:55				6	0
07:10:00	zvse62c	Z1	DMFSTART	DFHDFSIP	0.2	0.0	50.0	0	1.0			01/23/20	05:17:55				5	0

61b=6.8, 62b=10.7, 62c=8.8

sustained total 650.000=700.000/day

TCP/IP monitoring

- Additional plugin written for each TCP/IP stack vendor

z/VSE 5.1+ for VSE system and partition data

z/VSE 5.2+ for CICS

z/VSE 6.1+ for TCP/IP data

- **z/VSE 6.2** is the only currently supported release

VSEⁿ 6.3 from 21st Century Software

VSE supplied SNMP agent with our plugins

- Partition plugin
- TCP/IP plugin, based on the stack in use

BSI stack must be 258pre24 or higher

CSI stack

- TCP/IP for z/VSE 2.28 (strongly suggested)
- See Server must also be configured and running

For CICS, DMF must be running

- Set to one minute interval

CICS Performance and Statistics turned on

- Set to one minute interval

Provided as a ZVPS installation package

- Download from the website

When installed...

- A top level SFS directory is created (VMSYSVPS:VSEMON.)
- Transfer the BJB file to VSE
 - Respond to the SETPARM prompt
- Samples added to VMSYSVPS:VSEMON.
 - STARTMAS JCL, IESMASCF.Z, VSIDMF config

Plugin Implementation

```
CATALOG IESMASCF.Z                               REPLACE=YES
* ****
* CONFIG FILE FOR z/VSE SNMP MONITORING AGENT *
* ****
* SNMP COMMUNITY NAME:
COMMUNITYNAME = 'velocity'
* PORT (default SNMP Port 161):
PORT          = '161'
* SYSTEM PLUGIN
PLUGIN        = 'IESMPSYS'
* CPU PLUGIN
PLUGIN        = 'IESMPCPU'
* SAMPLE PLUGIN
* THE SAMPLE PLUGIN IS SHIPPED AS SOURCE CODE, YOU
* HAVE TO COMPILE IT, IF YOU WANT TO USE IT
* PLUGIN      = 'IESMPSMP'
PLUGIN      = 'VPSSNMPP'           ←
PLUGIN      = 'VPSBSTMPP'
PARM          = 'DD:PRD2.CONFIG(IESMPSCF.Z)'
/+
```

Our plugins
configured here

Plugin Startup

```
// EXEC IESMASNM, PARM='DD:PRD2.CONFIG(IESMASCF.Z)'  
1S54I PHASE IESMASNM IS TO BE FETCHED FROM PRD1.BASE  
IESMA101I BEGINNING STARTUP OF MONITORING AGENT  
IESMASNM Loading config member: DD:PRD2.CONFIG(IESMASCF.Z)  
IESMM004I LOADING PLUGIN IESMPSYS...  
IESMM004I LOADING PLUGIN IESMPCPU...  
IESMM004I LOADING PLUGIN VPSSNMPP...  
VPSSNMPP Version 10100  
IESMM004I LOADING PLUGIN VPSBNTCP...  
VPSBNTCP Version 10100  
IESMA102I FINISHED STARTUP OF MONITORING AGENT  
IESMA103I WAITING FOR CONNECTIONS OF CLIENTS...
```

Plugin startup

CICS configuration

- DFHSIT updates

```
DFHSIT TYPE=CSECT, *  
...  
    MN=ON, MONITORING ON *  
    MNCONV=YES, MONITORING OF CONVERSATIONAL *  
    MNEXC=ON, MONITORING EXCEPTION CLASS *  
    MNFREQ=001500, MONITORING FREQUENCY *  
    MNPER=ON, MONITORING PERFORMANCE CLASS *  
    MNSYNC=YES, MONITORING SYNCPOINT *  
    MNTIME=LOCAL, MONITORING TIME GMT *  
...  
    STATRCD=ON, STATISTICS RECORDING *
```

- Additional steps in the VSEMON User's Guide

DMF Updates

- Update startup LIBDEF

```
// LIBDEF PHASE,SEARCH=(VSILIB.PHASE,SDL)
```

- Add delay to the startup before DMF

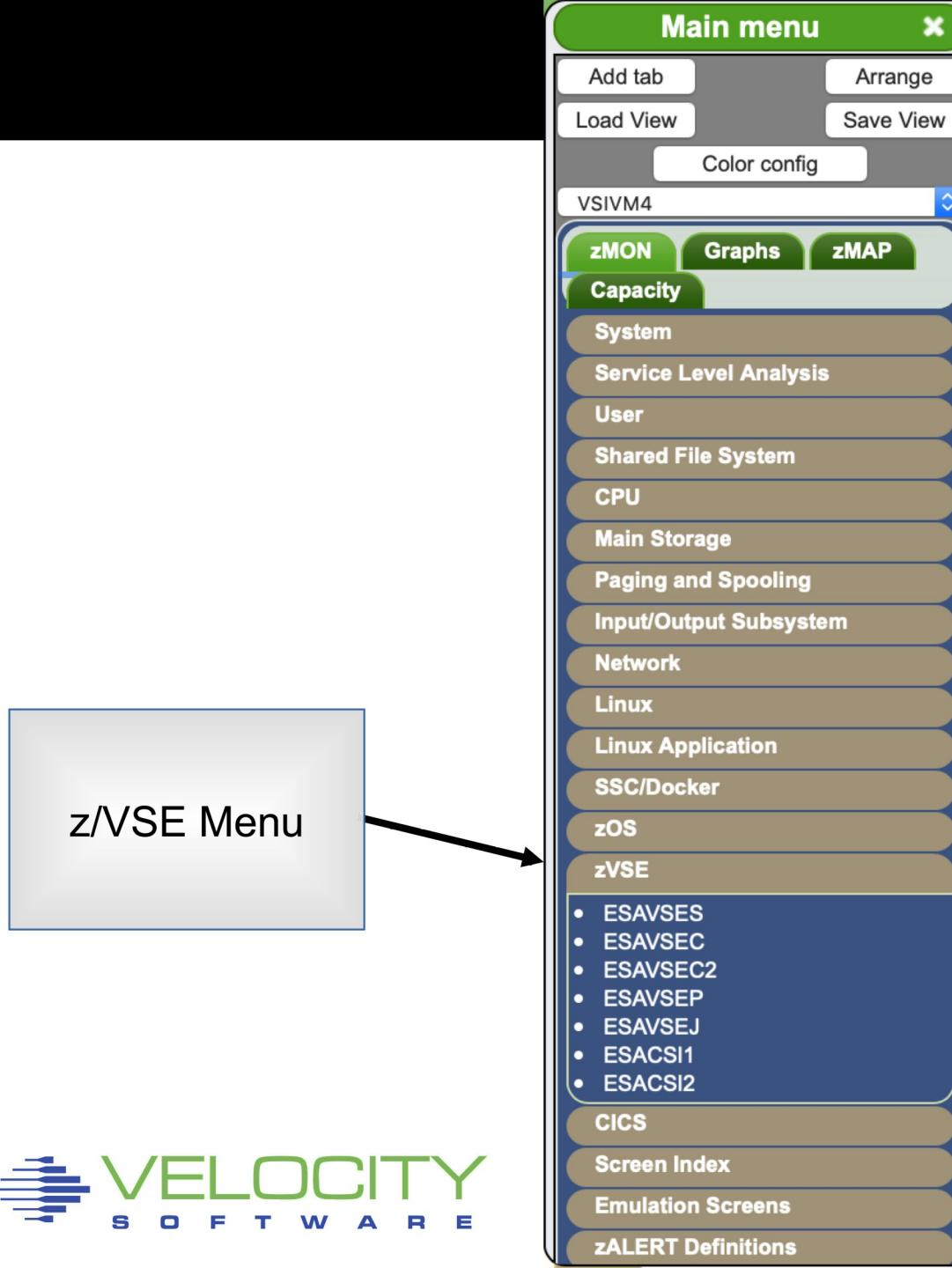
```
// LIBDEF *,SEARCH=VSILIB.REXX  
// EXEC REXX=VSIDELAY
```

DMF Updates

- DMF configuration phase changes

DFHDMFM TABLE,	*	
CATALOG=VELOCITY.USER.CATALOG, USE VSICAT	*	
FILELIST=(VSE.SYSTEM.DFHDMFA,VSE.SYSTEM.DFHDMFB),	*	
INTERVAL=0100,	1 MINUTES 0 SECONDS	*
LISTDSN=YES,	SHOW DATASETS WHEN DMF STARTS	*
SID=V62C,	SYSTEM IDENTIFIER	*
SIZE=16,	USE A 16M DATA SPACE	*
STATUS=ACTIVE,	DMF IS ACTIVE AT START	*
SUFFIX=SP,	THIS TABLE IS CALLED DFHDMFSP	*
TRACE=NO,	NO TRACE ACTIVITY	*
TRTABSZ=1024,	TRACE TABLE SIZE IS 1M	*
TYPE=0:255,	RECORD ALL DMF DATA RECORD TYPES	*
USAGE=40	REDUCE SPACE WHEN 40% FULL	

Navigation



z/VSE System

ESAVSES - VSE System Configuration - VM4



Time	Node	VirtID	Lvl	Name	Nbr	CPU model	<IBM/>	CPs/ serial	Max	Cur	Stat	Dyn	Tot	Actv	Quies	Inact	<---- Priority of Partitions ----->		
10:14:00	vsen63b	VSEN63B	1	VSIVM5	5	IBM 8562-A02	02 (40F782)		80	19	12	7	1	1	0	0	(100)=FA(100)=BG(100),O,F2,R,Z,T,F3,FB,F		
10:14:00	vsen63c	VSEN63C	1	VSIVM5	5	IBM 8562-A02	02 (40F782)		80	18	12	6	1	1	0	0	(100)=FA(100)=BG(100),O,F2,R,Z,T,F3,FB,F		
10:14:00	zvse61b	ZVSE61B	1	VSIVM5	5	IBM 8562-A02	02 (40F782)		80	20	12	8	1	1	0	0	(100)=FA(100)=BG(100),O,F2,R,Z,T,F3,FB,F		
10:14:00	zvse61c	ZVSE61C	1	VSIVM5	5	IBM 8562-A02	02 (40F782)		80	18	12	6	1	1	0	0	0 0)=F5(100)=F4(100),BG,O,F2,R,Z,T,F3,FB,F		
10:14:00	zvse62b	ZVSE62B	1	VSIVM5	5	IBM 8562-A02	02 (40F782)		80	19	12	7	2	2	0	0	0 0)=FA(100)=BG(100),F9,O,F2,R,Z,T,F3,FB,F		
10:14:00	zvse62c	ZVSE62C	1	VSIVM5	5	IBM 8562-A02	02 (40F782)		80	18	12	6	1	1	0	0	(100)=FA(100)=BG(100),O,F2,R,Z,T,F3,FB,F		
10:14:00	BSI62	VSE62	1	JCB	1	IBM 1090-306	02 (23450)		120	18	12	6	1	1	0	0	0 100)=F5(100),F2,F3,R,Z,F4,S,O,F7,FB,BG,F		

ESAVSEC - VSE System Performance - VM4



Time	Node	Pages/Sec <Rate/Sec> <CPU Utilization>				All		Pct				
		In	Out	SVC	DSP	Total	Mstr	Spin	Bound	NP	Seconds	Samples
10:14:00	vsen63b	0	0	270	339	0.5	0.2	0	94.7	50.0	59.8	1
10:14:00	vsen63c	0	0	265	294	0.6	0.3	0	95.2	59.7	60.0	1
10:14:00	zvse61b	0	0	390	405	1.0	0.5	0	92.7	52.6	60.0	1
10:14:00	zvse61c	0	0	397	410	1.1	0.7	0	92.8	64.6	59.8	1
10:14:00	zvse62b	0	0	19K	5933	31.5	16.8	0.5	77.4	53.4	59.6	1
10:14:00	zvse62c	0	0	397	409	0.8	0.5	0	93.1	60.1	60.0	1
10:14:00	BSI62	0	0	161	178	0.7	0.4	0	98.7	57.9	60.1	1

ESAVSEC2 - VSE System Performance per CPU - VM4



Time	Node	CPU	Disp	<CPU Utilization>			All		Pct		
			/Sec	Total	Mstr	Spin	Bound	NP	Seconds	Samples	
10:14:00	vsen63b	0	338	0.5	0.2	0	94.7	49.7	60	1	
10:14:00	vsen63c	0	294	0.6	0.3	0	95.2	59.7	60	1	
10:14:00	zvse61b	0	405	1.0	0.5	0	92.6	52.8	60	1	
10:14:00	zvse61c	0	410	1.1	0.7	0	92.8	64.6	60	1	
10:14:00	zvse62b	0	2837	15.2	8.0	0.2	40.6	52.6	60	1	
10:14:00	zvse62b	1	3100	16.4	8.8	0.3	36.7	54.1	59	1	
10:14:00	zvse62c	0	409	0.8	0.5	0	93.1	60.2	60	1	
10:14:00	BSI62	0	169	0.6	0.4	0	98.8	58.8	60	1	

z/VSE System

Parameters

ESAVSEC Parameters

Start Date	20/02/10
Start Time	03:00
End Date	20/02/10
End Time	04:00
User Class	
Node name	zvse62b

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ESAVSEC - VSE System Performance - Demo

Time	Node	Pages/Sec <Rate/Sec>			<CPU Utilization>			All	Pct	NP	Seconds	Samples
		In	Out	SVC	DSP	Total	Mtr	Spin	Bound			
04:01:00	zvse62b	0	0.0	4294	3147	33.6	12.3	0	0	36.6	60.7	1
04:00:00	zvse62b	0	0	4014	2969	33.9	10.9	0	0	32.1	60.0	1
03:59:00	zvse62b	0	0	4139	3043	33.0	11.2	0	0	34.0	60.2	1
03:58:00	zvse62b	0	0	4199	3058	32.1	11.3	0	0.0	35.1	60.3	1
03:57:00	zvse62b	0	0	4070	3006	32.5	11.1	0	0	34.2	59.1	1
03:56:00	zvse62b	0	0	4474	3419	31.5	12.7	0	10.0	40.2	60.6	1
03:55:00	zvse62b	0	0	4652	3563	26.1	13.0	0	46.2	49.8	59.6	1
03:54:00	zvse62b	0	0	4587	3527	25.7	12.8	0	47.2	49.8	60.5	1
03:53:00	zvse62b	0	0	4652	3543	25.9	12.9	0	48.3	49.7	59.2	1
03:52:00	zvse62b	0	0	4698	3607	26.2	13.1	0	47.4	49.8	60.6	1
03:51:00	zvse62b	0	0	5388	3765	29.2	14.4	0	42.3	49.5	59.8	1
03:50:00	zvse62b	0	0	11K	5365	54.9	26.3	0	0.7	47.9	60.2	1
03:49:00	zvse62b	0	0	12K	5632	56.2	27.1	0	2.2	48.2	60.0	1
03:48:00	zvse62b	0	0	11K	5638	55.1	26.7	0	2.1	48.6	59.5	1
03:47:00	zvse62b	0	0	12K	5551	57.1	27.3	0	0.9	47.7	60.1	1
03:46:00	zvse62b	0	0	11K	5785	51.7	26.3	0	8.7	50.8	59.7	1
03:45:00	zvse62b	0	0	4785	3658	27.1	13.5	0	43.2	49.8	60.0	1
03:44:00	zvse62b	0	0	4818	3670	27.2	13.5	0	44.0	49.5	60.6	1
03:43:00	zvse62b	0	0	5002	3819	27.8	13.8	0	45.0	49.9	60.0	1
03:42:00	zvse62b	0	0	4728	3627	26.8	13.2	0	45.9	49.4	59.4	1
03:41:00	zvse62b	0	0	6055	4300	33.1	16.8	0	27.4	50.8	60.7	1
03:40:00	zvse62b	0	0	4667	3541	26.4	13.1	0	45.2	49.6	60.0	1
03:39:00	zvse62b	0	0	4898	3743	27.5	13.7	0	43.7	49.7	59.6	1
03:38:00	zvse62b	0	0	4512	3454	25.6	12.8	0	44.7	49.8	60.0	1
03:37:00	zvse62b	0	0	4617	3479	26.7	13.1	0	33.2	49.2	60.1	1
03:36:00	zvse62b	0	0	4688	3549	26.9	13.3	0	34.7	49.7	60.0	1
03:35:00	zvse62b	0	0	4406	3361	26.1	12.8	0	33.9	49.1	60.6	1
03:34:00	zvse62b	0	0	4387	3342	25.8	12.8	0	31.4	49.6	59.8	1
03:33:00	zvse62b	0	0	4386	3316	25.6	12.6	0	27.9	49.1	60.0	1
03:32:00	zvse62b	0	0	4412	3313	25.7	12.6	0	22.1	49.2	59.5	1
03:31:00	zvse62b	0	0	4528	3436	26.5	13.5	0	30.0	50.8	60.5	1
03:30:00	zvse62b	0	0	4638	3543	26.0	13.0	0	47.0	49.9	59.8	1
03:29:00	zvse62b	0	0	4643	3576	26.7	13.2	0	42.1	49.5	59.7	1
03:28:00	zvse62b	0	0	4632	3511	25.7	12.8	0	47.9	49.8	60.2	1
03:27:00	zvse62b	0	0	4812	3661	26.8	13.3	0	45.9	49.8	59.1	1
03:26:00	zvse62b	0	0	4817	3685	26.8	13.3	0	45.6	49.8	61.0	1
03:25:00	zvse62b	0	0	4814	3677	26.9	13.4	0	46.0	49.8	60.0	1
03:24:00	zvse62b	0	0	4968	3721	59.4	14.4	0	4.4	24.2	59.9	1
03:23:00	zvse62b	0	0	4682	3504	60.4	12.8	0	0	21.1	59.5	1
03:22:00	zvse62b	0	0	4679	3607	58.6	14.0	0	0.0	23.9	60.1	1
03:21:00	zvse62b	0	0	10K	5024	57.6	23.1	0	0	40.1	60.7	1
03:20:00	zvse62b	0	0	11K	5715	56.4	26.9	0	0	47.7	59.2	1
03:19:00	zvse62b	0	0	12K	5409	56.3	26.8	0	0	47.6	60.7	1
03:18:00	zvse62b	0	0	11K	5521	55.6	26.3	0	0	47.3	59.4	1
03:17:00	zvse62b	0	0.0	11K	5681	54.1	26.7	0	0	49.3	59.8	1
03:16:00	zvse62b	0	0.0	8134	4716	42.3	20.7	0	0	48.9	60.3	1
03:15:00	zvse62b	0	0	4100	3014	29.6	11.3	0	0	38.0	60.3	1
03:14:00	zvse62b	0	0	3654	2670	22.5	10.0	0	0	44.4	59.6	1
03:13:00	zvse62b	0	0	3580	2614	22.8	9.9	0	0	43.4	60.1	1
03:12:00	zvse62b	0	0	3633	2682	22.5	10.1	0	0	45.1	59.9	1
03:11:00	zvse62b	0	0	3999	2936	27.8	11.0	0	0	39.6	60.5	1
03:10:00	zvse62b	0	0	4216	3143	40.6	11.8	0	0.0	29.1	59.9	1
03:09:00	zvse62b	0	0	4180	3080	33.6	11.6	0	0	34.5	60.4	1
03:08:00	zvse62b	0	0	3962	2938	32.4	11.0	0	0	34.1	59.5	1
03:07:00	zvse62b	0	0	4005	2955	31.6	11.2	0	0	35.5	58.9	1
03:06:00	zvse62b	0	0	3309	2447	19.5	9.4	0	0	48.2	61.5	1
03:05:00	zvse62b	0	0	3915	2922	30.3	11.8	0	0.0	38.8	59.7	1
03:04:00	zvse62b	0	0	4096	2973	28.0	11.4	0	0	40.9	59.6	1
03:03:00	zvse62b	0	0	4220	3112	32.6	11.8	0	0	36.3	60.0	1
03:02:00	zvse62b	0	0	4061	2994	31.1	11.4	0	0.0	36.5	60.8	1
03:01:00	zvse62b	0	0.0	4231	3095	31.9	12.1	0	0	37.8	59.4	1

ESAVSEP - VM4

ESAVSEP - VSE Partition Performance - VM4

Time	Node	Part	Job	Phase	<- CPU% ->			<---- I/O ---->			Rtrn	Cncl	<--- Start --->		Stop	Job				
					ID	Name	Name	CPU	Ovhd	Disk	VDisk	Other	Code	Date	Time	User	Info	Prty	Share	Num
10:01:00	zvse61b		Totals					3.9	0.6	230.0	0	16.0								
10:01:00	zvse61b	F1	POWSTART	IPWPOWER	0.0	0.0	19.0	0	0	15.0			05/21/20	07:55:58			1	0	0	
10:01:00	zvse61b	FB	SECSEERV	BSTPSTS	0	0	0	0	0	0						SYSA	2	0	0	
10:01:00	zvse61b	F3	VTAMSTRTR	ISTINCVT	0.0	0.0	0	0	0	0			05/21/20	07:55:57			3	0	49844	
10:01:00	zvse61b	S1	BSTTINET	BSTTINET	0.6	0.1	0	0	0	0			06/04/20	08:01:36			4	0	53417	
10:01:00	zvse61b	T1	BSTTVNET	BSTTVNET	0.3	0.1	0	0	0	0			06/04/20	08:02:07			5	0	53418	
10:01:00	zvse61b	T2	BSTTFTP	BSTTFTPS	0	0	0	0	0	0			06/04/20	08:02:06			5	0	53419	
10:01:00	zvse61b	Z1	DMFSTART	DFHDFSIP	0.1	0.0	0	0	0	1.0			06/04/20	08:02:55			6	0	53422	
10:01:00	zvse61b	R1	STARTVCS	IESVCSSRV	0.0	0.0	0	0	0	0			06/04/20	08:01:51			7	0	53420	
10:01:00	zvse61b	R2	STARTMAS	IESMASNM	0.2	0.0	0	0	0	0			06/04/20	08:01:55			7	0	53421	
10:01:00	zvse61b	F2	CICSICCF	DFHSIP	0.1	0.0	9.0	0	0	0			05/21/20	07:56:35	SYSA		8	0	49850	
10:01:00	zvse61b	O1	CICSJA60	DFHSIP	1.7	0.3	183.0	0	0	0			05/26/20	20:14:34			9	0	51255	
10:01:00	zvse61b	O2	CICSJB60	DFHSIP	0.8	0.1	19.0	0	0	0			05/26/20	20:14:44			9	0	51256	
10:01:00	zvse61c		Totals		57.4	7.8	18740	0	442.0											
10:01:00	zvse61c	F1	POWSTART	IPWPOWER	0.1	0.0	34.0	0	3.0	0			05/21/20	08:07:43			1	0	0	
10:01:00	zvse61c	FB	SECSEERV	BSTPSTS	0	0	0	0	0	0			05/21/20	08:07:43			2	0	0	
10:01:00	zvse61c	F3	VTAMSTRTR	ISTINCVT	0.0	0.0	0	0	0	0			05/21/20	08:07:50	SYSA		3	0	50933	
10:01:00	zvse61c	T1	TCPIP00	IPNET	1.1	0.1	0	0	0	0			05/22/20	10:30:32			4	0	51227	
10:01:00	zvse61c	T2	SVSESRRVR	SVSESRRVR	0.0	0.0	0	0	0	0			05/23/20	16:40:03			4	0	51554	
10:01:00	zvse61c	Z1	DMFSTART	DFHDFSIP	0.2	0.0	16.0	0	1.0	0			05/22/20	10:31:55			5	0	51231	
10:01:00	zvse61c	R1	STARTVCS	IESVCSSRV	0.0	0.0	0	0	0	0			05/22/20	10:31:09			6	0	51229	
10:01:00	zvse61c	R2	STARTMAS	IESMASNM	0.2	0.0	0	0	0	0			05/23/20	16:45:30			6	0	51559	
10:01:00	zvse61c	F2	CICSICCF	DFHSIP	0.0	0.0	0	0	0	0			05/21/20	08:08:13	SYSA		7	0	50937	
10:01:00	zvse61c	O1	CICSJA68	DFHSIP	1.8	0.2	206.0	0	0	0			05/21/20	08:08:28			8	0	50938	
10:01:00	zvse61c	Y1	2 Job	steps	V	2.5	0.3	2226	0	204.0							20	0		
10:01:00	zvse61c	Y2	3 Job	steps	V	24.9	3.4	12558	0	151.0							20	0		
10:01:00	zvse61c	Y3	3 Job	steps	V	26.7	3.6	3700	0	83.0							20	0		
10:01:00	zvse62b		Totals		1.0	0.4	511.0	0	1326											
10:01:00	zvse62b	F1	POWSTART	IPWPOWER	0.1	0.0	48.0	0	6.0	0			05/21/20	08:09:14			1	0	0	
10:01:00	zvse62b	FB	SECSEERV	BSTPSTS	0	0	0	0	0	0			05/21/20	08:09:14			2	0	0	
10:01:00	zvse62b	F3	VTAMSTRTR	ISTINCVT	0.0	0.0	0	0	0	0			05/21/20	08:09:28	SYSA		3	0	36114	
10:01:00	zvse62b	T1	BSTTINET	BSTTINET	0.3	0.1	0	0	0	0			05/21/20	08:09:31			4	0	36116	
10:01:00	zvse62b	T2	BSTTVNET	BSTTVNET	0.1	0.0	0	0	0	0			05/21/20	08:10:01			4	0	36117	
10:01:00	zvse62b	T3	BSTTFTP	BSTTFTPS	0	0	0	0	0	0			05/21/20	08:10:01			4	0	36118	
10:01:00	zvse62b	Z1	DMFSTART	DFHDFSIP	0.1	0.0	0	0	1.0	0			06/05/20	07:44:50			5	0	44145	
10:01:00	zvse62b	R1	STARTVCS	IESVCSSRV	0.0	0.0	0	0	0	0			05/21/20	08:10:07			6	0	36122	
10:01:00	zvse62b	R2	STARTMAS	IESMASNM	0.1	0.0	0	0	0	0			05/21/20	08:10:06			6	0	36123	
10:01:00	zvse62b	F2	CICSICCF	DFHSIP	0.0	0.0	0	0	0	0			05/21/20	08:09:51	SYSA		7	0	36120	
10:01:00	zvse62b	O1	CICSJA95	DFHSIP	0.2	0.1	0	0	0	0			05/21/20	08:10:07			8	0	36121	
10:01:00	zvse62b	F4	2 Job	steps	V	0.1	0.0	308.0	0	878.0							9	100		
10:01:00	zvse62b	F5	LIBRDIR3	LIBR	0.0	0.0	155.0	0	441.0	0			0	10	06/05/20	10:00:00	10:00:00	9	100	44201

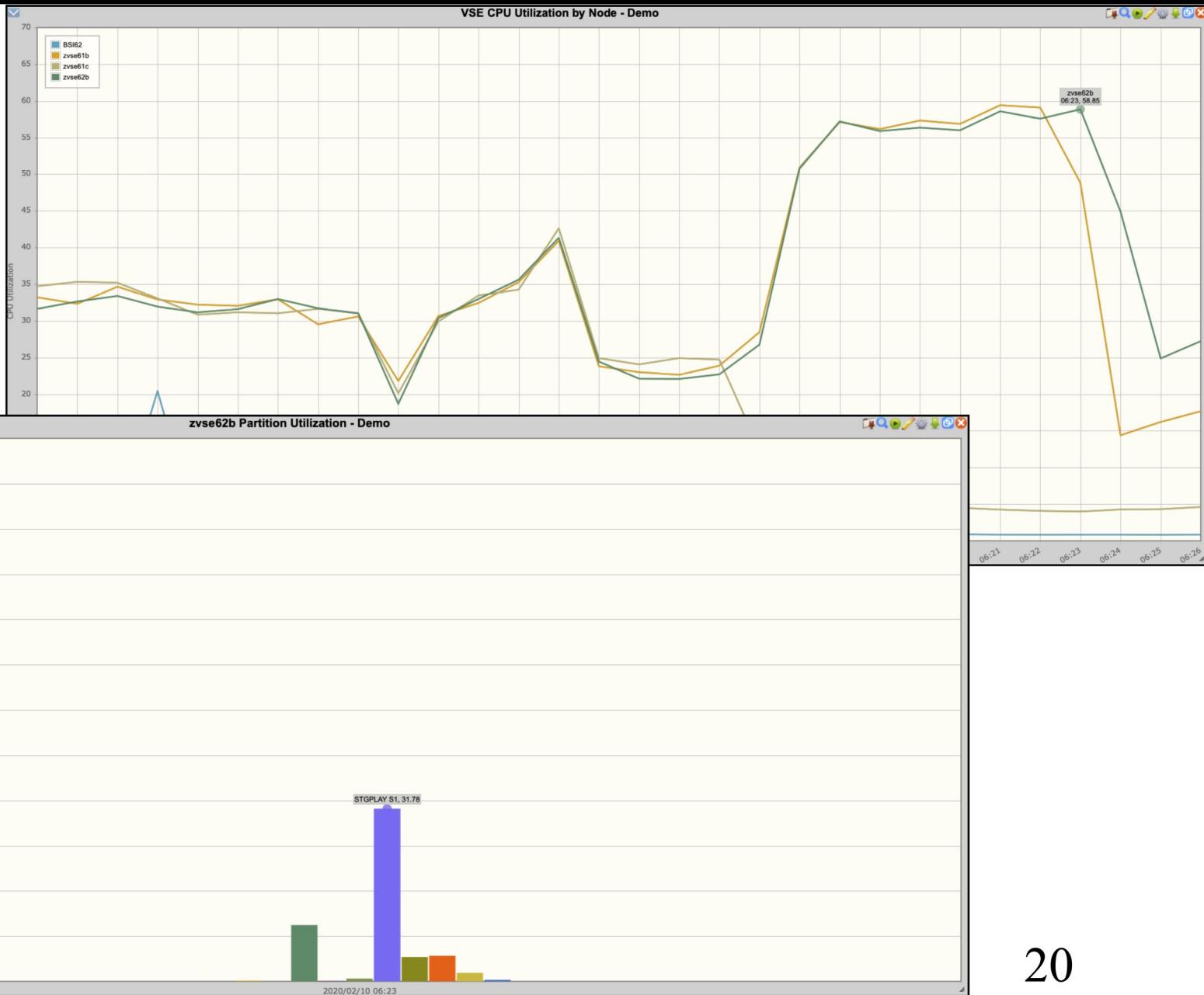
z/VSE Partition drill down

ESAVSEP - VM4

ESAVSEP - VSE Partition Performance - VM4

Time	Node	Part	Job	Job	Phase	<- CPU% ->		<---- I/O ---->			Rtrn	Cncl	<--- Start --->		Stop	User Info	Prty	Share	Job	
						CPU	Ovhd	Disk	VDisk	Other			Code	Date	Time					
10:01:00	zvse61b		Totals			3.9	0.6	230.0	0	16.0							1	0	0	
10:01:00	zvse61b	F1	POWSTART	IPWPOWER		0.0	0.0	19.0	0	15.0							2	0	0	
10:01:00	zvse61b	FB	SECSEERV	BSTPSTS		0	0	0	0	0							3	0	49844	
10:01:00	zvse61b	F3	VTAMSTRT	ISTINCVT		0.0	0.0	0	0	0							4	0	53417	
10:01:00	zvse61b	S1	BSTTINET	BSTTINET		0.6	0.1	0	0	0							5	0	53418	
10:01:00	zvse61b	T1	BSTTVNET	BSTTVNET		0.3	0.1	0	0	0							5	0	53419	
10:01:00	zvse61b	T2	BSTTFTPD	BSTTFTPS		0	0	0	0	0							6	0	53422	
10:01:00	zvse61b	Z1	DMFSTART	DFHDFSIP		0.1	0.0	0	0	1.0							7	0	53420	
10:01:00	zvse61b	R1	STARTVCS	IESVCSRVR		0.0	0.0	0	0	0							7	0	53421	
10:01:00	zvse61b	R2	STARTMAS	IESMASNM		0.2	0.0	0	0	0							8	0	49850	
10:01:00	zvse61b	F2	CICSICCF	DFHSIP		0.1	0.0	9.0	0	0							9	0	51255	
10:01:00	zvse61b	O1	CICSJA60	DFHSIP		1.7	0.3	183.0	0	0							9	0	51256	
10:01:00	zvse61b	O2	CICSJB60	DFHSIP		0.8	0.1	19.0	0	0										
10:01:00	zvse61c	Totals				57.4	7.8	18740	0	442.0										
10:01:00	zvse61c	F1	POWSTART	IPWPOWER		0.1	0.0	34.0	0	3.0							1	0	0	
10:01:00	zvse61c	FB	SECSEERV	BSTPSTS		0	0	0	0	0							2	0	0	
10:01:00	zvse61c	F3	VTAMSTRT	ISTINCVT		0.0	0.0	0	0	0							3	0	50933	
10:01:00	zvse61c	T1	TCPPIP00	IPNET		1.1	0.1	0	0	0							4	0	51227	
10:01:00	zvse61c	T2	SVSESRVR	SVSESRVR		0.0	0.0	0	0	0							4	0	51554	
10:01:00	zvse61c	Z1	DMFSTART	DFHDFSIP		0.2	0.0	16.0	0	1.0							5	0	51231	
10:01:00	zvse61c	R1	STARTVCS	IESVCSRVR		0.0	0.0	0	0	0							6	0	51229	
10:01:00	zvse61c	R2	STARTMAS	IESMASNM		0.2	0.0	0	0	0							6	0	51559	
10:01:00	zvse61c	F2	CICSICCF	DFHSIP		0.0	0.0	0	0	0							7	0	50937	
10:01:00	zvse61c	O1	CICSJA68	DFHSIP		1.8	0.2	206.0	0	0							8	0	50938	
10:01:00	zvse61c	Y1	2 Job	steps	V	2.5	0.3	2226	0	204.0							20	0		
10:01:00	zvse61c	Y2	3 Job	steps	V	24.9	3.4	12558	0	151.0							20	0		
10:01:00	zvse61c	Y2	SCANVSM2	ARXREXX		2.4	0.4	2253	0	14.0							20	0	54781	
10:01:00	zvse61c	Y2	SCANVSM2	ARXREXX		11.2	1.6	5138	0	48.0	0	10	06/05/20	10:00:26	10:00:48	VSM2	20	0	54781	
10:01:00	zvse61c	Y2	SCANVSM2	ARXREXX		11.2	1.5	5167	0	89.0	0	10	06/05/20	10:00:01	10:00:26	VSM2	20	0	54781	
10:01:00	zvse61c	Y3	3 Job	steps	V	26.7	3.6	3700	0	83.0							20	0		
10:01:00	zvse62b	Totals				1.0	0.4	511.0	0	1326										
10:01:00	zvse62b	F1	POWSTART	IPWPOWER		0.1	0.0	48.0	0	6.0							1	0	0	
10:01:00	zvse62b	FB	SECSEERV	BSTPSTS		0	0	0	0	0							2	0	0	
10:01:00	zvse62b	F3	VTAMSTRT	ISTINCVT		0.0	0.0	0	0	0							3	0	36114	
10:01:00	zvse62b	T1	BSTTINET	BSTTINET		0.3	0.1	0	0	0							4	0	36116	
10:01:00	zvse62b	T2	BSTTVNET	BSTTVNET		0.1	0.0	0	0	0							4	0	36117	
10:01:00	zvse62b	T3	BSTTFTPD	BSTTFTPS		0	0	0	0	0							4	0	36118	
10:01:00	zvse62b	Z1	DMFSTART	DFHDFSIP		0.1	0.0	0	0	1.0							5	0	44145	
10:01:00	zvse62b	R1	STARTVCS	IESVCSRVR		0.0	0.0	0	0	0							6	0	36122	
10:01:00	zvse62b	R2	STARTMAS	IESMASNM		0.1	0.0	0	0	0							6	0	36123	
10:01:00	zvse62b	F2	CICSICCF	DFHSIP		0.0	0.0	0	0	0							7	0	36120	
10:01:00	zvse62b	O1	CICSJA95	DFHSIP		0.2	0.1	0	0	0							8	0	36121	
10:01:00	zvse62b	F4	2 Job	steps	V	0.1	0.0	308.0	0	878.0							9	100		
10:01:00	zvse62b	F5	LIBRDIR3	LIBR		0.0	0.0	155.0	0	441.0	0	10	06/05/20	10:00:00	10:00:00			9	100	44201

z/VSE System



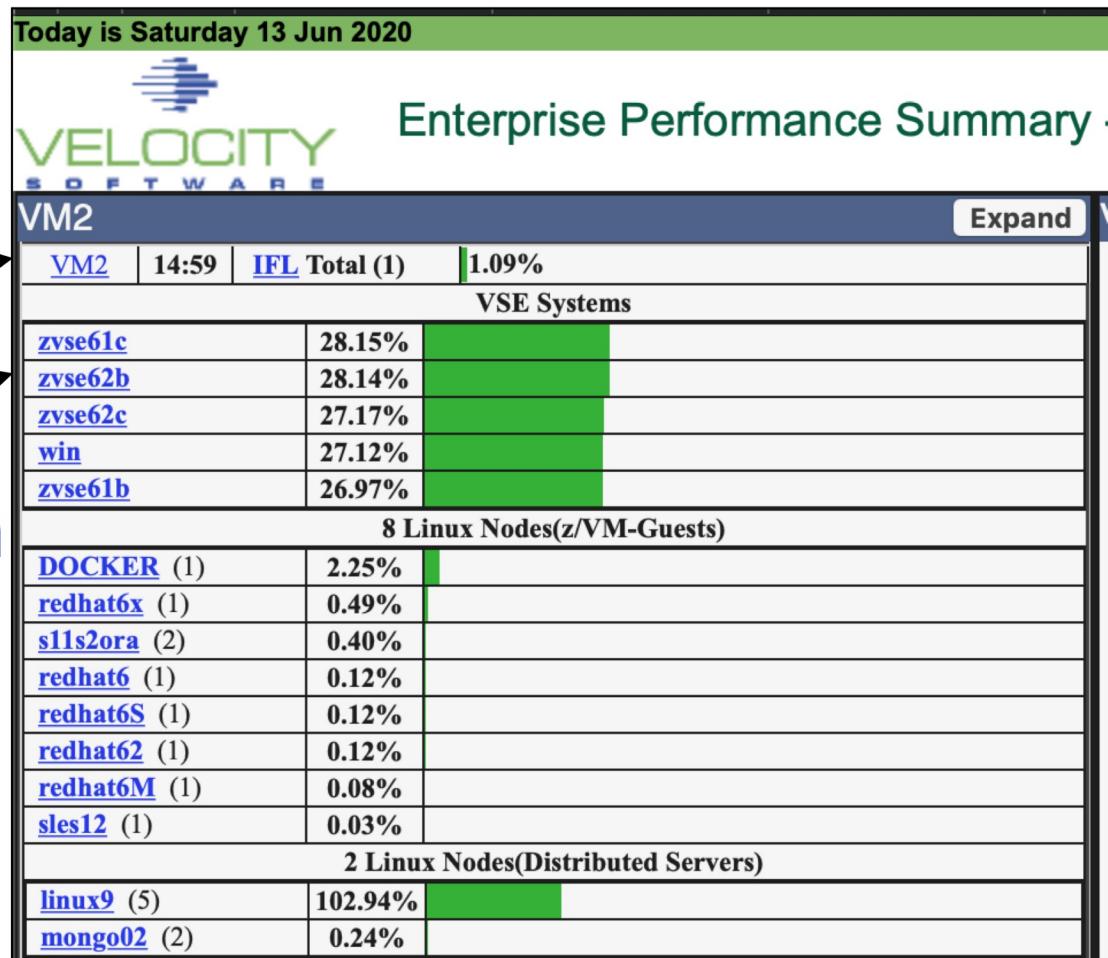
Going back in time...



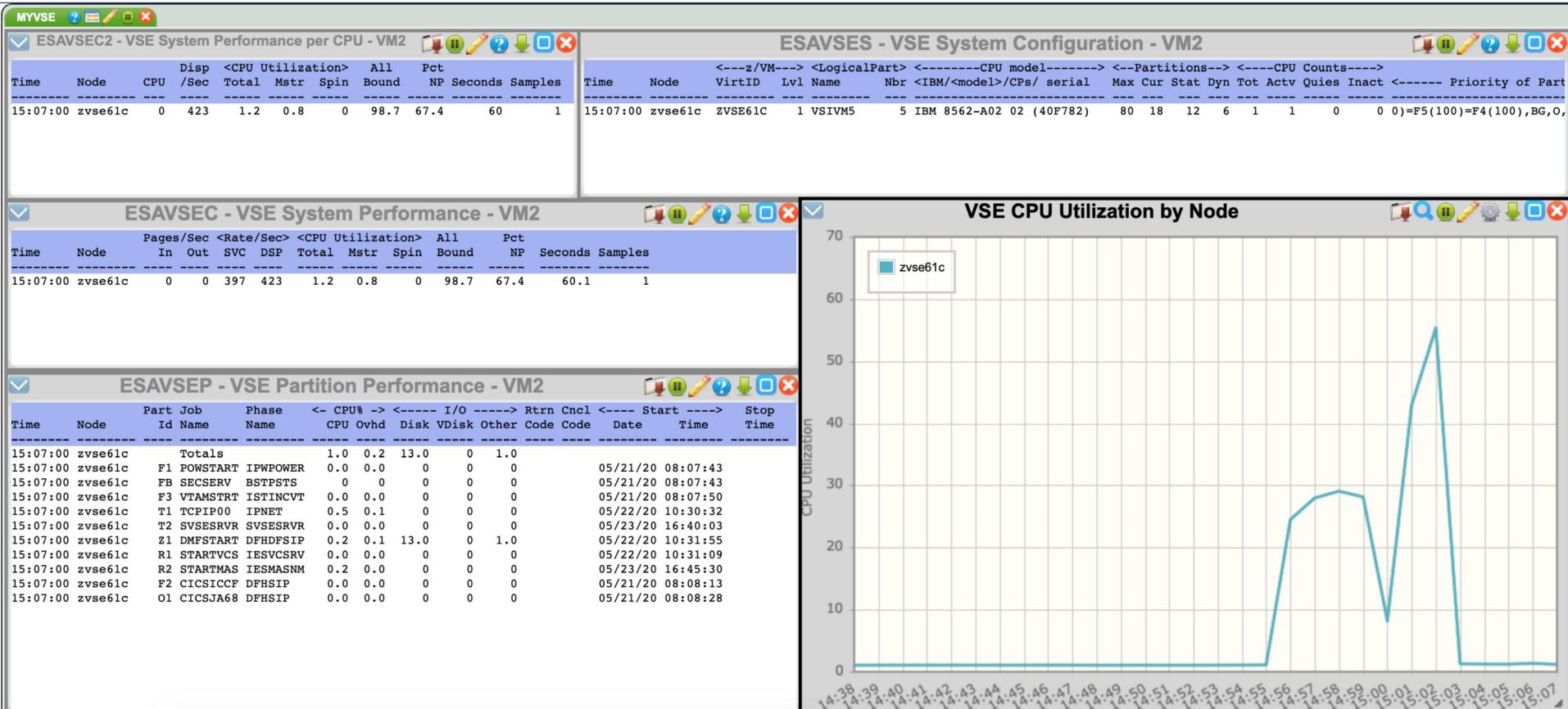
Our Enterprise View shows activity from multiple z/VM LPARs on a single screen

Click an LPAR to see zVIEW for that LPAR

Click a VSE system to see that VSE



Clicking on a VSE system name...



Load the MyVSE view to see all VSE systems

MYVSE

ESAVSEC2 - VSE System Performance per CPU - VM2

Time	Node	CPU	<CPU Utilization>			All	Pct	NP	Seconds	Samples
			Total	Mtr	Spin						Bound
10:10:00	zvse61b	0	1103	5.4	1.7	0	94.1	31.4	60	1
10:10:00	zvse61c	0	941	3.7	1.7	0	96.0	46.8	60	1
10:10:00	zvse62b	0	577	1.0	0.5	0	98.7	47.9	61	1
10:10:00	zvse62c	0	758	1.7	0.8	0	98.0	49.7	60	1

ESAVSES - VSE System Configuration - VM2

Time	Node	VirtID	Lvl	Name	Nbr	<CPU model>		<Partitions>		<CPU Counts>		Max Cur Stat Dyn Tot Actv Quies Inact	<Priority of Partitions>					
						<IBM</model>/CPs	/serial	Max	Cur	Stat	Dyn			Tot	Actv	Quies	Inact	
10:10:00	zvse61b	ZVSE61B	1	VSIIVM5	5	IBM 8562-A02	02 (40F782)	80	20	12	8	1	1	0	0	0	0	=FA(100)=BG(100),O,F2,R,Z,T,S,F3,FB,F
10:10:00	zvse61c	ZVSE61C	1	VSIIVM5	5	IBM 8562-A02	02 (40F782)	80	18	12	6	1	1	0	0	0	0	=F5(100)=F4(100),BG,O,F2,R,Z,T,F3,FB,F
10:10:00	zvse62b	ZVSE62B	1	VSIIVM5	5	IBM 8562-A02	02 (40F782)	80	19	12	7	1	1	0	0	0	0	(100)=FA(100)=BG(100),O,F2,R,Z,T,F3,FB,F
10:10:00	zvse62c	ZVSE62C	1	VSIIVM5	5	IBM 8562-A02	02 (40F782)	80	18	12	6	1	1	0	0	0	0	(100)=FA(100)=BG(100),O,F2,R,Z,T,F3,FB,F

ESAVSEC - VSE System Performance - VM2

Time	Node	<Pages/Sec <Rate/Sec>>			<CPU Utilization>			All	Pct	NP	Seconds	Samples
		In	Out	SVC	DSB	Total	Mtr						Spin
10:10:00	zvse61b	0	0	1163	1104	5.4	1.7	0	94.1	31.4	60.0	1
10:10:00	zvse61c	0	0	974	941	3.6	1.7	0	96.0	46.8	60.5	1
10:10:00	zvse62b	0	0	547	577	1.0	0.5	0	98.7	47.9	60.9	1
10:10:00	zvse62c	0	0	801	758	1.7	0.8	0	98.0	49.6	60.0	1

ESAVSEP - VSE Partition Performance - VM2

Time	Node	Part	Job	Phase	<- CPUs ->		<- I/O ->		Rtrn	Cmcl	<- Start ->		Stop	Time	User Info	Prty	Share	Job Num
					CPU	Ovhd	Disk	Vdisk			Other	Code							Code	Date	Time
10:10:00	zvse61b			Totals	4.8	0.6	212.0	0	1.0									
10:10:00	zvse61b	F1	POWSTART	IPWPOWER	0.0	0.0	0	0	0	05/21/20	07:55:58				1	0	0	
10:10:00	zvse61b	FB	SECSERV	BSTPSTS	0	0	0	0	0	05/21/20	07:55:57				2	0	0	
10:10:00	zvse61b	F3	VTAMSTRAT	ISTINCVNT	0.0	0.0	0	0	0	05/21/20	07:56:01				3	0	49844	
10:10:00	zvse61b	S1	BSTTINET	ISTINCVNET	0.6	0.1	0	0	0	06/04/20	08:01:30				4	0	53417	
10:10:00	zvse61b	T1	BSTTINET	BSTTINET	0.4	0.1	0	0	0	06/04/20	08:02:07				5	0	53418	
10:10:00	zvse61b	T2	BSTTTPD	BSTTFTPS	0	0	0	0	0	06/04/20	08:02:00				5	0	53419	
10:10:00	zvse61b	Z1	DMFSTART	DFHDFSIP	0.1	0.0	0	0	1.0	06/04/20	08:02:55				6	0	53422	
10:10:00	zvse61b	R1	STARTVCS	IESVCSRV	0.0	0.0	0	0	0	06/04/20	08:01:51				7	0	53420	
10:10:00	zvse61b	R2	STARTMAS	IESMASNN	0.1	0.0	0	0	0	06/04/20	08:01:55				7	0	53421	
10:10:00	zvse61b	F1	CICSCICF	DFHFSIP	0.0	0.0	0	0	0	05/21/20	07:56:35				8	0	49850	
10:10:00	zvse61b	O1	CICSCJA60	DFHFSIP	2.0	0.3	195.0	0	0	05/26/20	20:14:30				9	0	51255	
10:10:00	zvse61b	O2	CICSCJA60	DFHFSIP	1.1	0.2	17.0	0	0	05/26/20	20:14:40				9	0	51256	
10:10:00	zvse61c			Totals	3.2	0.5	249.0	0	1.0									
10:10:00	zvse61c	F1	POWSTART	IPWPOWER	0.0	0.0	0	0	0	05/21/20	08:07:43				1	0	0	
10:10:00	zvse61c	FB	SECSERV	BSTPSTS	0	0	0	0	0	05/21/20	08:07:43				2	0	0	
10:10:00	zvse61c	F3	VTAMSTRAT	ISTINCVNT	0.0	0.0	0	0	0	05/21/20	08:07:51				3	0	50933	
10:10:00	zvse61c	T1	TCPIP00	IPNET	1.1	0.2	0	0	0	05/22/20	10:30:32				4	0	51227	
10:10:00	zvse61c	T2	SVSSESRV	SVSSESRV	0.0	0.0	0	0	0	05/23/20	16:40:03				4	0	51554	
10:10:00	zvse61c	Z1	DMFSTART	DFHDFSIP	0.2	0.0	16.0	0	1.0	05/22/20	10:31:55				5	0	51231	
10:10:00	zvse61c	R1	STARTVCS	IESVCSRV	0.0	0.0	0	0	0	05/22/20	10:31:09				6	0	51229	
10:10:00	zvse61c	R2	STARTMAS	IESMASNN	0.2	0.0	0	0	0	05/23/20	16:45:30				6	0	51559	
10:10:00	zvse61c	F2	CICSCICF	DFHFSIP	0.0	0.0	0	0	0	05/21/20	08:08:13				7	0	50937	
10:10:00	zvse61c	O1	CICSCJA68	DFHFSIP	1.7	0.3	233.0	0	0	05/21/20	08:08:20				8	0	50938	
10:10:00	zvse62b			Totals	0.8	0.3	0	0	1.0									
10:10:00	zvse62b	F1	POWSTART	IPWPOWER	0.0	0.0	0	0	0	05/21/20	08:09:14				1	0	0	
10:10:00	zvse62b	FB	SECSERV	BSTPSTS	0.0	0.0	0	0	0	05/21/20	08:09:14				2	0	0	

VSE CPU Utilization by Node

MyVSE View

Tab Parameters

Current interval

Start date **2020/02/10**

Start time **07:41**

End date **2020/02/10**

End time **07:41**

Relative **Relative**

Class **Class**

Node **Node**

User **User**

LPAR **LPAR**

zOS SYSID **zOS SYSID**

Job name **Job name**

Service class **Service class**

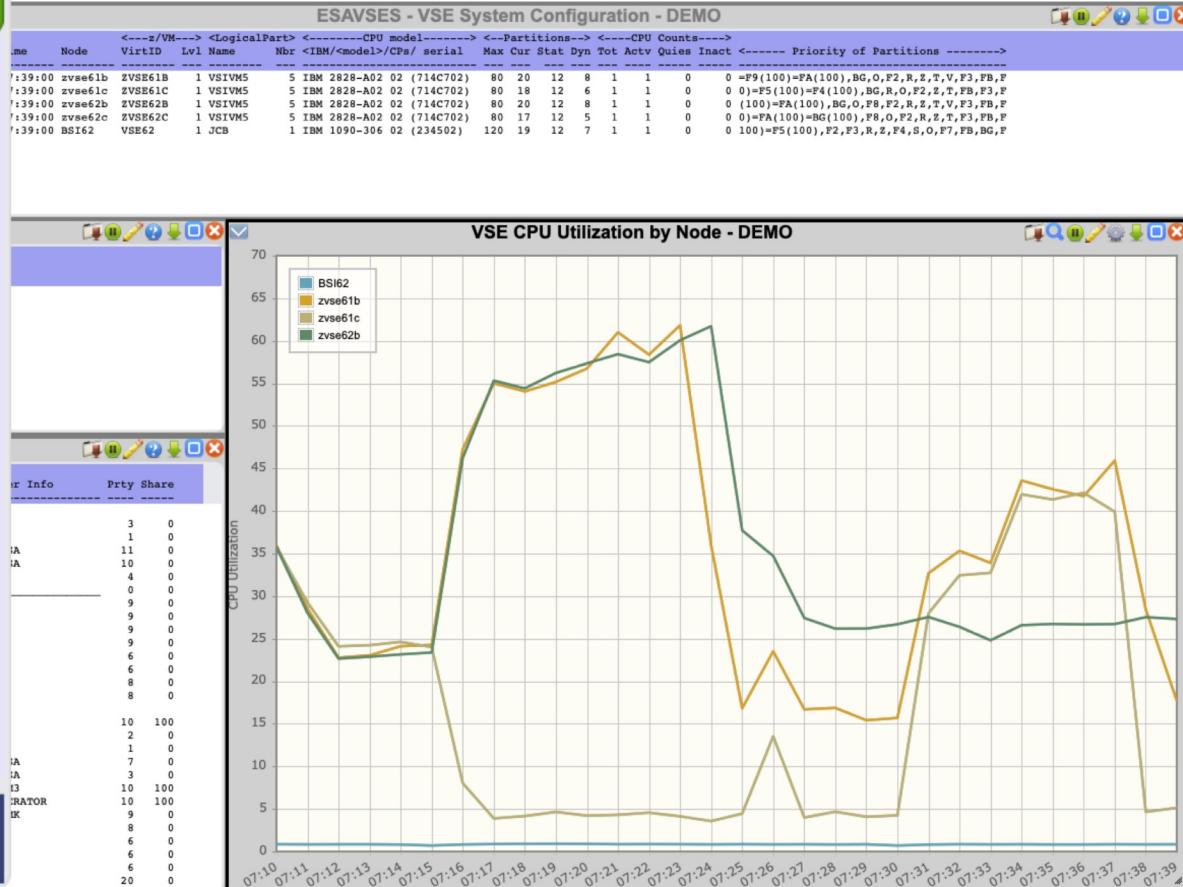
Device **Device**

Submit **Close**

Time	Node	Disp	<CPU Utilizati	Total	Mstr	S
07:39:00	zvse61b	0	1478	17.7	5.7	
07:39:00	zvse61c	0	738	5.1	3.1	
07:39:00	zvse62b	0	3777	27.4	13.6	
07:39:00	zvse62c	0	1	.	.	
07:39:00	BSI62	0	184	0.8	0.5	

Time	Node	Pages/Sec	<Rate/Sec>	<CPU	Total
07:39:00	zvse61b	0	0	1699	1472
07:39:00	zvse61c	0	0	682	711
07:39:00	zvse62b	0	0	4840	3715
07:39:00	BSI62	0	0	231	201

Time	Node	Part	Job	Phase	<Name
07:39:00	BSI62	Totals			
07:39:00	BSI62	FB	SECSSERV	BSTPSTS	
07:39:00	BSI62	F1	POWSTART	IPPOWER	
07:39:00	BSI62	F2	CICSICC0	DFHSIP	
07:39:00	BSI62	F3	VTAMSTRTR	ISTINCVT	
07:39:00	BSI62	F7	OPTITAPE	BSOTMAIN	
07:39:00	BSI62	P1	.	OPTITAP	
07:39:00	BSI62	R1	OPTIAUDIT	BSAUMAIN	
07:39:00	BSI62	R2	INOTOSA	BSTTINET	
07:39:00	BSI62	R3	INOTOSA6	BSTTINET6	
07:39:00	BSI62	R4	VNET	BSTTINET	
07:39:00	BSI62	S1	FTPS600T	BSTTFTPS	
07:39:00	BSI62	S2	FTPS66	BSTTFTPS	
07:39:00	BSI62	Z1	STARTRMAS	IEMMASNN	
07:39:00	BSI62	Z2	FTPC62HR	BSTTFTPC	
07:39:00	zvse62c	Totals			
07:39:00	zvse62c	BG	LLST	DTRIATTN	
07:39:00	zvse62c	FB	SECSSERV	BSTPSTS	
07:39:00	zvse62c	F1	POWSTART	IPPOWER	
07:39:00	zvse62c	F2	CICSICC0	DFHSIP	
07:39:00	zvse62c	F3	VTAMSTRTR	ISTINCVT	
07:39:00	zvse62c	F4	SCANNSM3	ARKREXX	
07:39:00	zvse62c	F5	LIBRDIR	LIRR	
07:39:00	zvse62c	F8	VPSSNMP	L1STLOG	
07:39:00	zvse62c	O1	CICSSA69	DFHSIP	
07:39:00	zvse62c	R1	STARTVCVS	IEVSVCVRV	
07:39:00	zvse62c	R2	STRTMAST	IEMMASNN	
07:39:00	zvse62c	R3	STRTMAST	IEMMASNN	
07:39:00	zvse62c	S1	STGPLAY	STGPLAY	



Barnard Software's IPv6/VSE monitoring

- Additional SNMP plugin written for each TCP/IP stack vendor
- Data maps directly in to fields currently used for Linux network monitoring

ESATCP1 - TCPIP Transport Layer Data - DEMO														
Time	Node/ Group	Curr Conn	<--- TCP Connections --->	<TCP Communications/second >	<--UDP Datagrams per second-->	Total Total	<---Errors--->							
			<Opens/Sec>	<Closes/Sec>	<---Segments Transmitted--->	Input	Output	ReTrn	InErr	Rts	Input	Output	NoAppl	Other
07:09:00	zvse62c	.	.	.	.	57.8	80.4	2.7	0	0	2.4	1.9	0	0
07:09:00	zvse62b	0	0	0	0	.	.	.	.	.	.	.	.	.
07:09:00	zvse61c	.	.	.	.	.	.	.	.	.	.	.	.	.
07:09:00	zvse61b	0	0	0	0	19.8	33.3	0.9	0	0	3.0	2.5	0	0.1

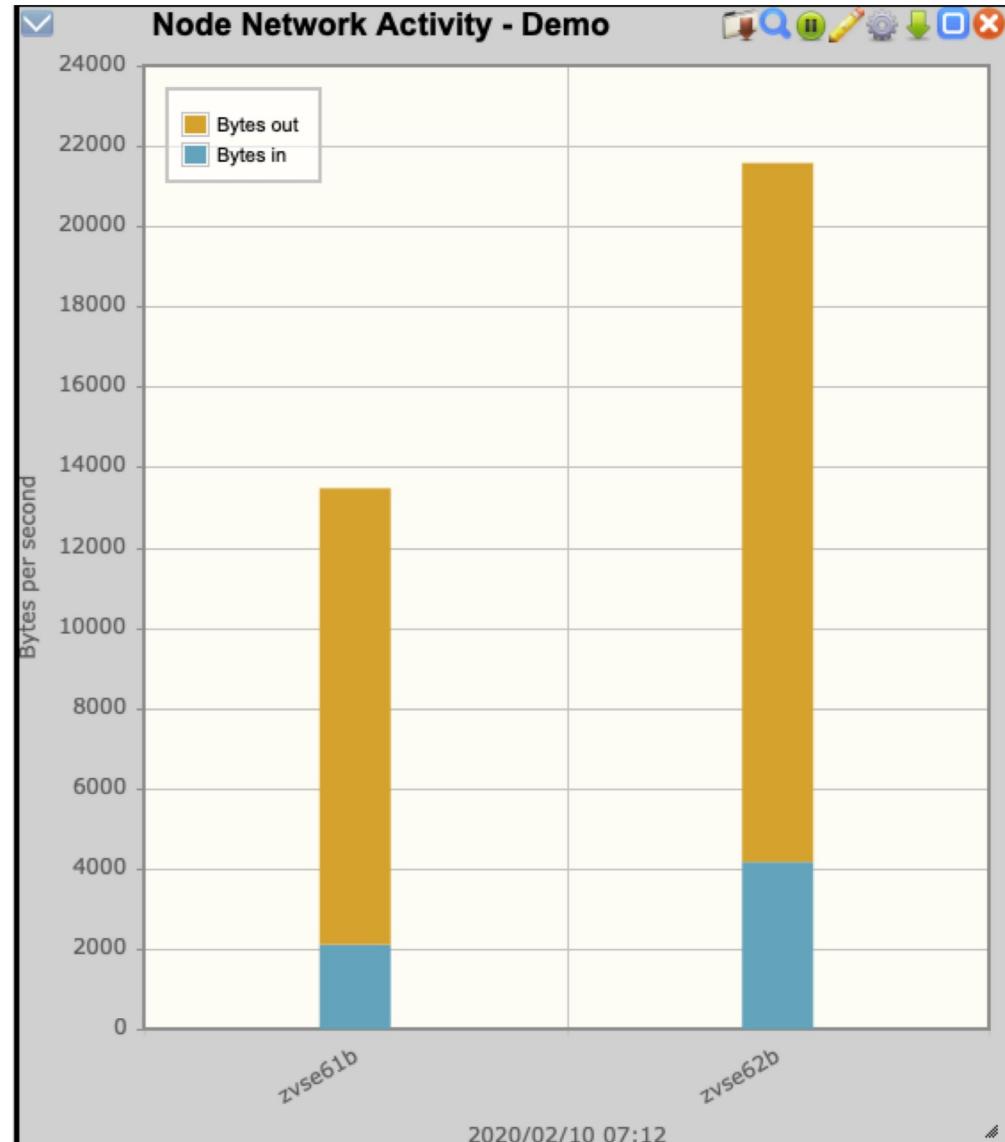
ESATCP2 - TCPIP Internetwork Layer Data - DEMO															
Time	Node/ Group	Total	Fwrd	Dlvrd	Hdr	Addr	Prot	Other	Regst	NoRte	Other	Input	grams	Errors	Fragments
07:09:00	zvse62b	60.18	0	60.18	0	0	0	0	0	82.31	0	0	0	0	0
07:09:00	zvse61b	22.88	0	22.88	0	0	0	0	0	35.84	0	0	0	0	0

ESATCP3 - TCPIP Control Message Protocol Report - DEMO														
Time	Node/ Group	<-Total>	<Echo Messages>	<TimeStamp Msgs>	<AddrsMask Reqsts>	<Source>	<Input Error Msgs>							
		In	Out	In	Out	In	Out	In	Out	In	Out	Bad	Bad	Bad
07:09:00	zvse62b	0	0	0	0	0	0	0	0	0	0	0	0	0
07:09:00	zvse61b	0	0	0	0	0	0	0	0	0	0	0	0	0

ESATCP4 - TCPIP Hardware Layer / Interfaces - DEMO														
Time	Node/ Group	IFT	<Total Octets>	Avg	<Subnet packets / Sec->	<-----Packets Discarded----->	<--Average-->							
			<-Per second->	Q	<-Unicast->	<NonUnicast>	<In Error>	<NonError>	Unknown	Inpt	Outpt	Protocol	Interface	Packet Size
07:09:00	zvse62c	.	.	.	.	.	0	0	0	0	0	0	OSAE40	75
07:09:00	zvse62b	1	4566	20273	0	60.99	83.18	0	0	0	0	0	OSAE40	244
07:09:00	zvse61c	.	.	.	.	.	.	.	.	.	.	.	.	.
07:09:00	zvse61b	2	2046	10850	0	23.13	36.05	0	0	0	0	0	OSAE40	88
07:09:00	zvse61b	1	0	0	0	0	0	0	0	0	0	0	OSAE50	301

IPv6/VSE monitoring

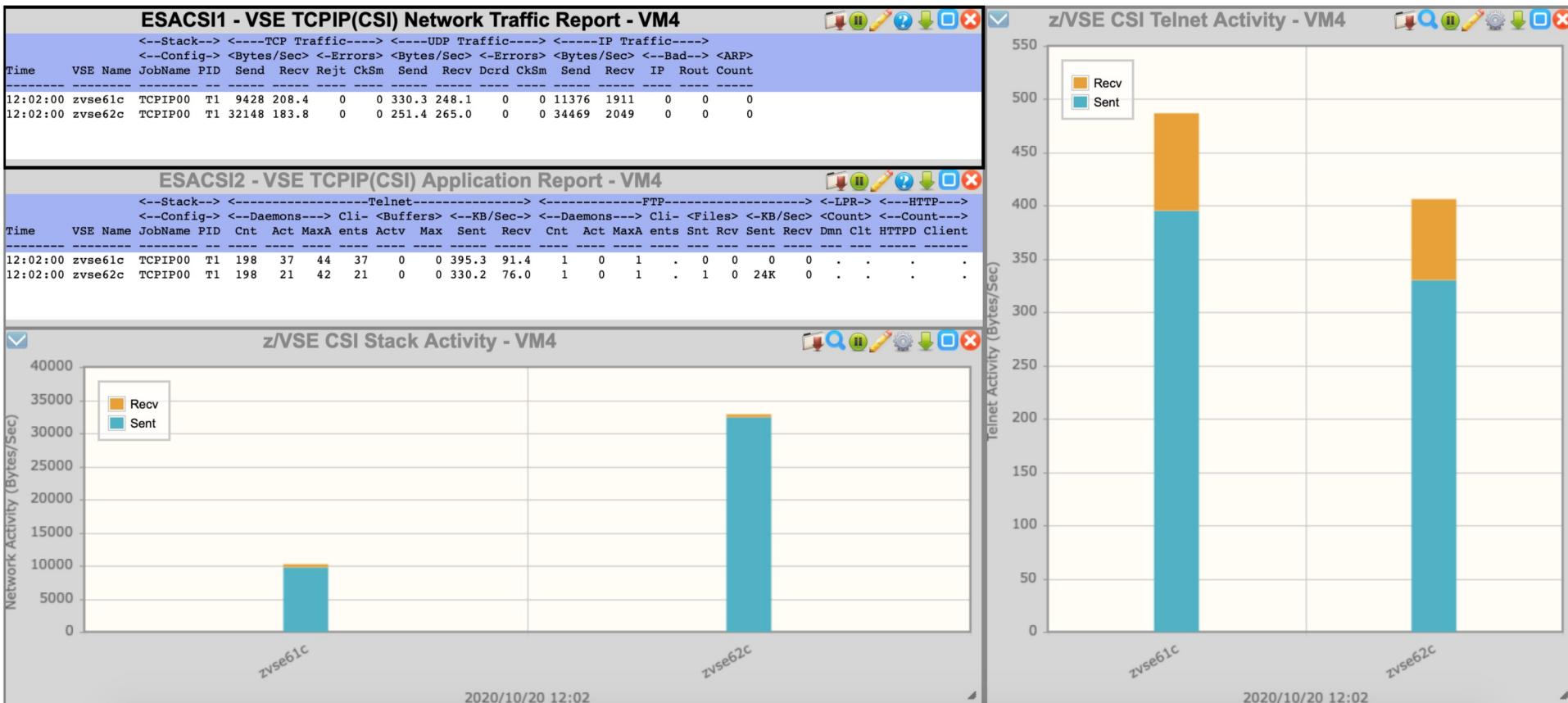
- Node activity
real time graph



Connectivity Systems -

TCP/IP for z/VSE monitoring

- SNMP plugin written to interface with See Server
- Screens/reports created to display the data



Main menu x

Friday 12 Jun 2020 07:42

zVIEW Version 5112

zVIEW - Velocity Software - VSIVM4 (VM4)
Performance Displays for z/VM, Linux, z/OS and z/VSE

VSIVM4

zMON **Graphs** **zMAP**

Capacity

System

Service Level Analysis

User

Shared File System

CPU

Main Storage

Paging and Spooling

Input/Output Subsystem

Network

Linux

Linux Application

SSC/Docker

zOS

zVSE

CICS

- ZOSCIX1
- ZOSCIX2
- ZOSCIX3
- ZOSCIX4

Screen Index

Emulation Screens

zALERT Definitions

zOPERATOR

zTUNE

ZOSCIX1 - VM4

ZOSCIX1 - CICS Analysis - VM4

Time	SYSID	<--CICS Program-->	<---Start---->	Platform	<---Location-->	<--Transactions-->	<---Task Statistics----->
		APPLID	JobName	Date	Time	O/S VRM LPARName VMID	Total Resp CPU Total MXT Actv PctM MXTQ
07:42:00	VS11	CICSSZ1	CICSSJZ1	05/26/20	14:07:18	z/OS 0720 ZOSLP1	815 0.022 0.007 816 50 1 2.0 0
07:42:00	VS11	CICSSZ2	CICSSJZ2	05/26/20	14:08:46	z/OS 0720 ZOSLP1	863 0.022 0.008 855 50 0 0 0
07:42:00	V61C	CICSSJA68	CICSSJA68	05/21/20	08:08:28	VSE 0420 VSIVM5 ZVSE61C	287 0.032 0.015 369 40 2 5.0 0
07:42:00	V62B	CICSSJA95	CICSSJA95	05/21/20	08:10:06	VSE 0430 VSIVM5 ZVSE62B	392 0.004 0.001 418 15 2 13.3 0

ZOSCIX2 - VM4

ZOSCIX2 - CICS Transaction Analysis - VM4

Time	SYSID	APPLID	<--Response Time-->			<---Dispatch--->			<---Dispatch Delays---->			CPU				
			<Transactions>	Total	Susp	Disp	CPU	PC	zIIP	Total	First		I/O	Uncapt	Disp	
			Group	Count	Resp	Time	Time	Load	CPU	Disp	Other	Wait	Wait	Ratio		
07:50:00	VS11	CICSSZ1	Totals	824	0.024	0.010	0.028	0.007	0	0	5.94	0.005	0.003	0.001	0.001	51.893
07:50:00	VS11	CICSSZ1	Inflight	0	.	.	.	0	.	.	0					
07:50:00	VS11	CICSSZ2	Totals	832	0.023	0.010	0.026	0.007	0	0	6.16	0.007	0.000	0.003	0.000	56.345
07:50:00	VS11	CICSSZ2	Inflight	0	.	.	.	0	.	.	0					
07:50:00	V61C	CICSSJA68	Totals	328	0.035	0.004	0.031	0.017	0	.	5.62	0.004	0	0	0	111.762
07:50:00	V61C	CICSSJA68	Inflight	0	.	.	.	0	.	.	0					
07:50:00	V62B	CICSSJA95	Totals	360	0.003	0.001	0.002	0.001	0	.	0.22	0.001	0	0.000	0.000	49.928
07:50:00	V62B	CICSSJA95	Inflight	0	.	.	.	0	.	.	0					

CICS Menu

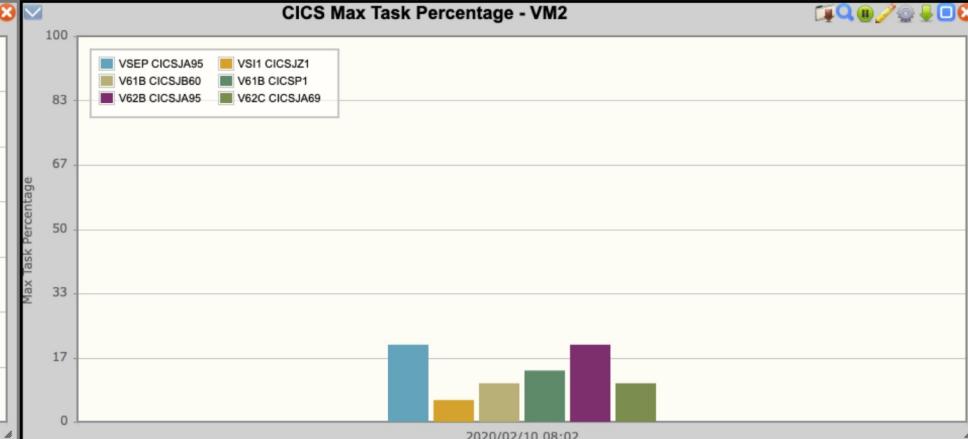
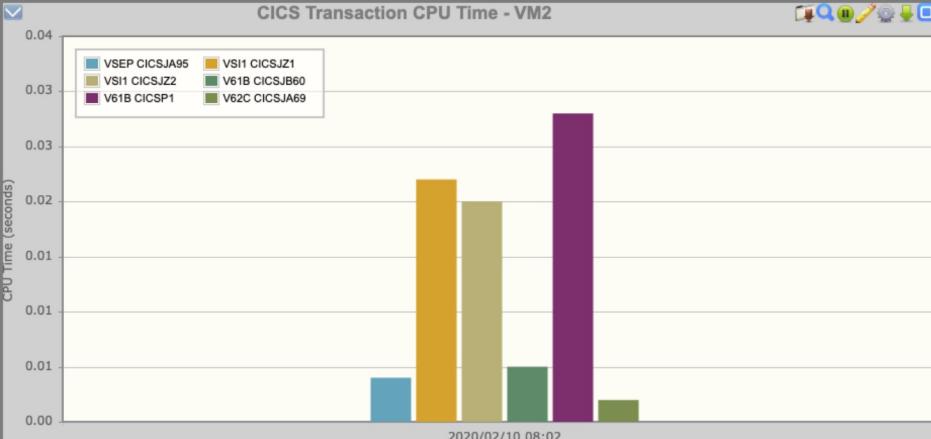
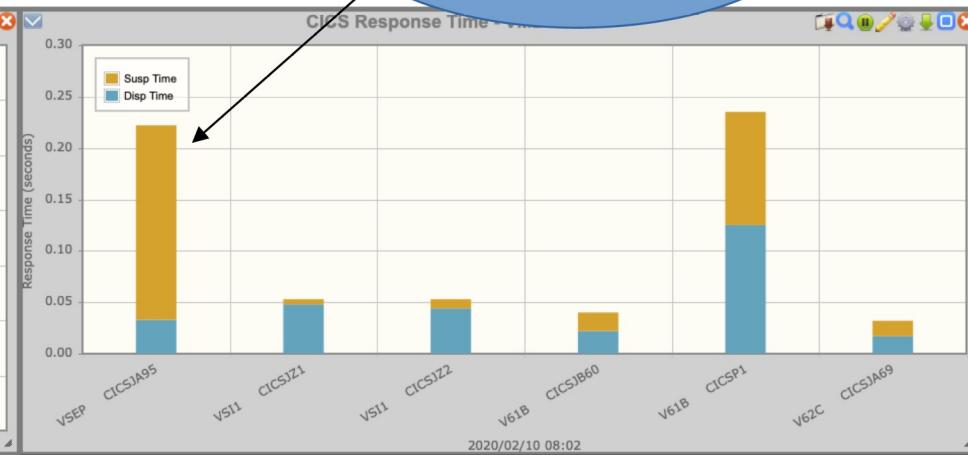
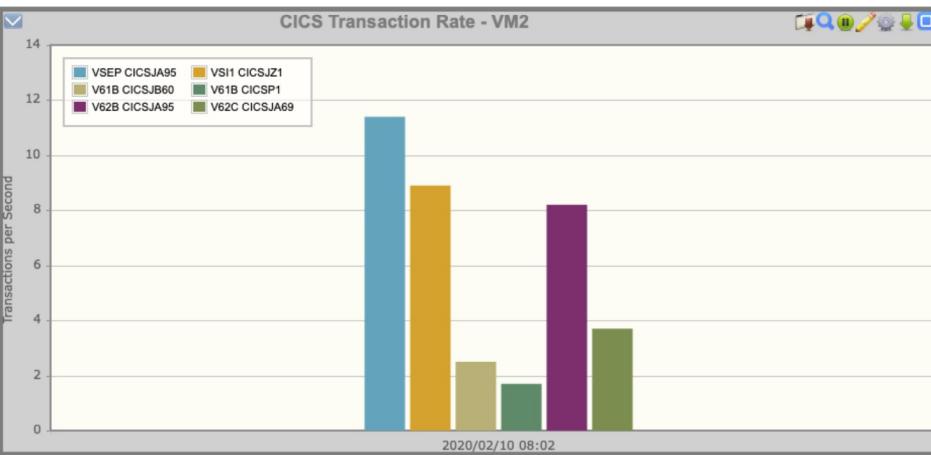
ZOSCLX4 - CICS Detailed Transaction Analysis - VM4



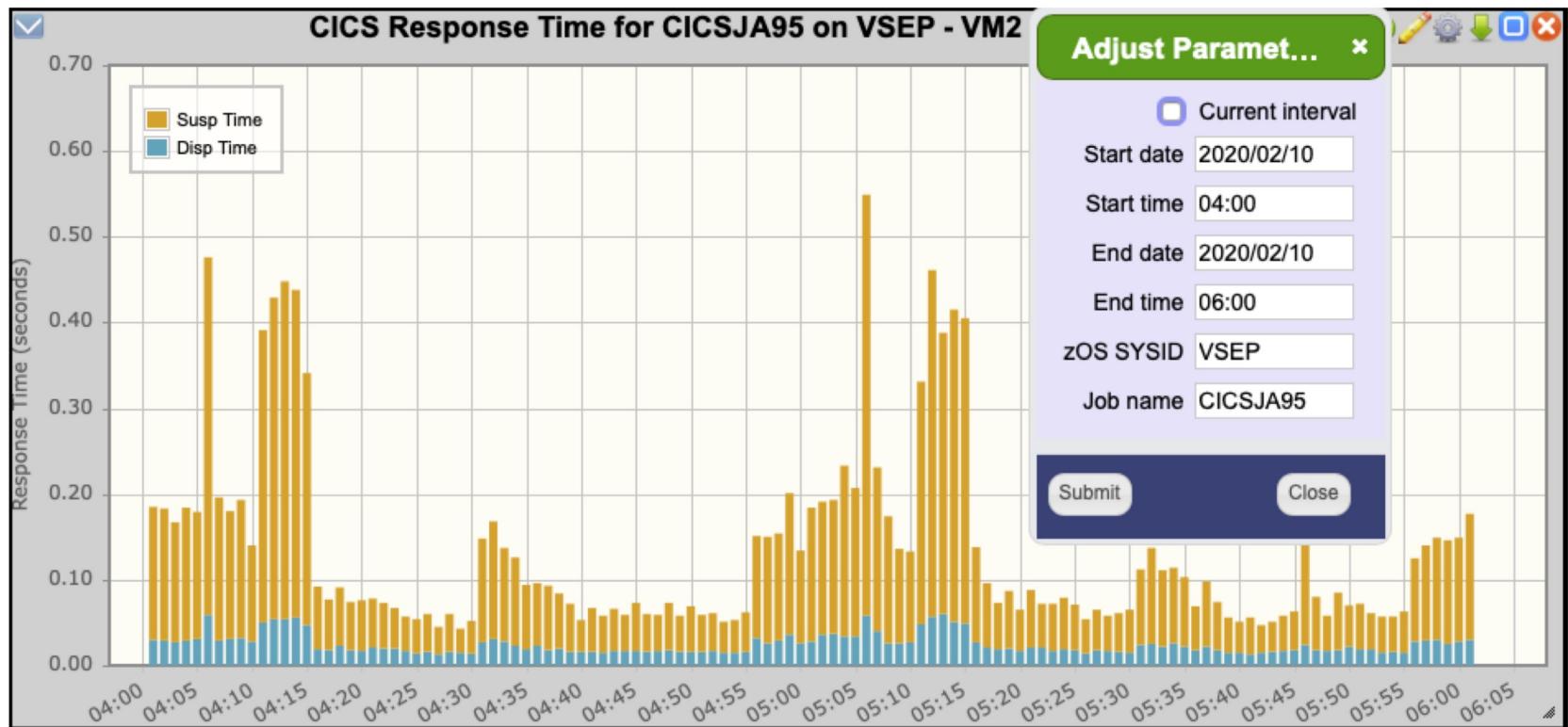
Time	SYSID	APPLID	Tran	<-Response Time-> <--Dispatch--> <---Suspend Time per Tran (ms)--> <----Suspend Time per Tran (ms)---->										<-LU-->					
				ID	Count	Total	Susp	Disp	CPU	PC	zIIP	Disp	MXT	TC	Shr	CF	Sockets		
07:52:00	VSI1	CICSSA1	CSSY	2	0.010	0.010	0.000	0.000	0	0	0	0	0	0	0	0	0	0	
07:52:00	VSI1	CICSSA1	STRH	21	0.010	0.004	0.011	0.004	0	0	0	0	0	0	0	0	0	0	
07:52:00	VSI1	CICSSA1	STR1	20	0.025	0.020	0.010	0.003	0	0	16	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR2	24	0.013	0.009	0.009	0.003	0	0	3.33	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR3	28	0.019	0.011	0.016	0.006	0	0	8.33	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR4	24	0.017	0.006	0.022	0.007	0	0	3.65	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR5	27	0.045	0.014	0.062	0.013	0	0	10	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR6	26	0.036	0.016	0.042	0.012	0	0	9.79	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR7	22	0.044	0.021	0.045	0.015	0	0	10	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR8	25	0.037	0.008	0.059	0.016	0	0	6.05	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	STR9	26	0.044	0.013	0.062	0.018	0	0	8.28	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	ZIPC	191	0.007	0.004	0.006	0.001	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA1	ZIPIR	191	0.038	0.006	0.062	0.017	0	0	1.33	0	0	2.0	0	0.1	0	0	0
07:52:00	VSI1	CICSSA1	ZIPU	187	0.011	0.008	0.007	0.001	0	0	2.39	0	0	0.0	0	2.5	0	0	0
07:52:00	VSI1	CICSSA2	CSSY	1	0.269	0.268	0.003	0.000	0	0	0.01	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STRH	29	0.012	0.006	0.011	0.003	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR1	27	0.014	0.010	0.008	0.003	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR2	30	0.016	0.010	0.012	0.005	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR3	22	0.016	0.007	0.020	0.005	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR4	23	0.016	0.005	0.022	0.007	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR5	34	0.028	0.006	0.044	0.012	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR6	23	0.031	0.016	0.029	0.011	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR7	26	0.030	0.007	0.048	0.016	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR8	30	0.038	0.012	0.051	0.017	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	STR9	25	0.055	0.021	0.068	0.023	0	0	0	0	0	0	0	0	0	0	0
07:52:00	VSI1	CICSSA2	ZIPC	188	0.013	0.010	0.005	0.001	0	0	1.86	0	0	0	0	2.6	0	0	0
07:52:00	VSI1	CICSSA2	ZIPIR	193	0.050	0.021	0.060	0.017	0	0	7.10	0	0	4.5	0	4.2	0	0	0
07:52:00	VSI1	CICSSA2	ZIPU	187	0.013	0.011	0.005	0.001	0	0	3.96	0	0	0.0	0	5.2	0	0	0
07:52:00	V61C	CICSSA68	STRH	37	0.011	0.000	0.011	0.005	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR1	35	0.013	0.002	0.011	0.004	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR2	33	0.012	0.001	0.011	0.008	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR3	31	0.023	0.008	0.016	0.011	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR4	35	0.022	0.003	0.019	0.012	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR5	30	0.040	0.006	0.034	0.022	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR6	33	0.040	0.006	0.034	0.021	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR7	34	0.048	0.002	0.046	0.030	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR8	27	0.041	0.001	0.041	0.023	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V61C	CICSSA68	STR9	33	0.082	0.009	0.073	0.040	0	.	0	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STRH	35	0.004	0.001	0.003	0.001	0	.	0.03	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR1	37	0.002	0.000	0.002	0.001	0	.	0.01	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR2	37	0.002	0.000	0.002	0.001	0	.	0.01	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR3	37	0.002	0.000	0.002	0.001	0	.	0.01	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR4	38	0.002	0.000	0.002	0.001	0	.	0.01	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR5	36	0.002	0.000	0.002	0.001	0	.	0.02	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR6	34	0.002	0.000	0.002	0.001	0	.	0.02	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR7	41	0.003	0.000	0.002	0.001	0	.	0.01	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR8	31	0.003	0.001	0.002	0.001	0	.	0.02	0	0	0	0	0	0	0	0
07:52:00	V62B	CICSSA95	STR9	34	0.003	0.001	0.002	0.001	0	.	0.02	0	0	0	0	0	0	0	0

Some of the CICS graphs

Click on a bar to see data over time

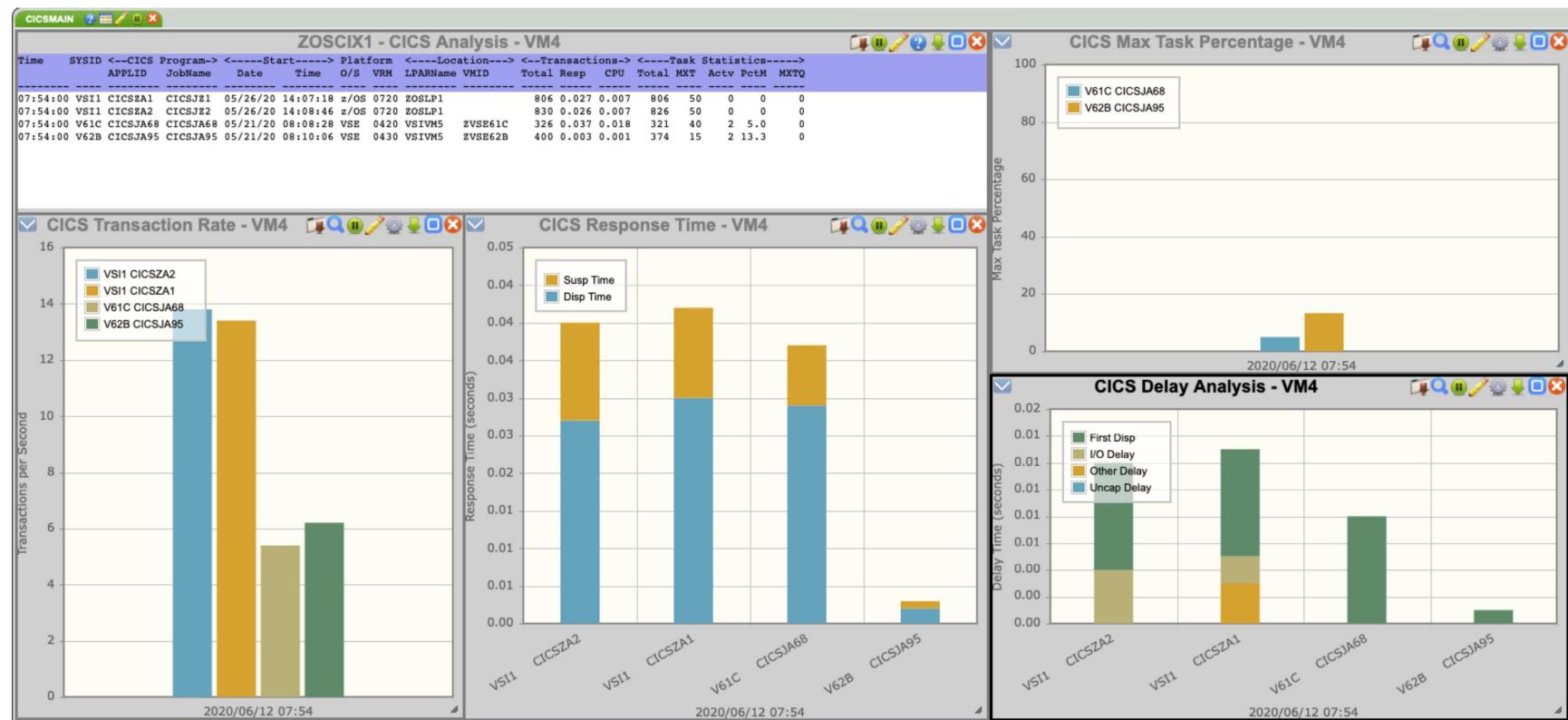


CICS response time over time



Additional CICS Views are available

- Use ours or make your own



Operational Alerts

zALERT is a component that comes with zVPS

It provides the ability to look at one minute data based on customer supplied rules

zALERT can also generate notifications when any data elements exceed certain thresholds

```
F4 0004 // JOB LIBRDIRC
        DATE 06/13/2020, CLOCK 15/49/44
F4 0004 EOJ LIBRDIRC MAX.RETURN CODE=0008
        DATE 06/13/2020, CLOCK 15/49/44, DURATION 00/00/00
F4 0001 1Q34I   F4 WAITING FOR WORK
```

```
15:50:10 ZALERT    VSER Job LIBRDIRC on zvse61b ended at 15:49:44 with rc=0008
```

Operational Messages

zOPERATOR is a component that comes
with zVPS

Actions can be
taken on
messages

ZOPER - zOPERATOR Console - VM5



```
12:00:06 ZVSE61C Y2 0052 // JOB SCANVSM2
12:00:09 ZVSE62C BG 0000 EOJ LIBRDIR MAX.RETURN CODE=0000
12:00:10 ZVSE61C F5 0005 EOJ LIBRDIR MAX.RETURN CODE=0000
12:00:12 ZVSE61C Y1 0051 // JOB SCANVSM1
12:00:13 ZVSE62C Y1 0051 // JOB SCANVSM1
12:00:20 ZVSE62C Y1 0051 EOJ SCANVSM1 MAX.RETURN CODE=0000
12:00:24 ZVSE61C Y1 0051 EOJ SCANVSM1 MAX.RETURN CODE=0000
12:01:21 ZVSE62C Y2 0052 EOJ SCANVSM2 MAX.RETURN CODE=0000
12:01:38 ZVSE62C Y3 0053 EOJ SCANVSM3 MAX.RETURN CODE=0000
12:01:53 ZVSE61C Y2 0052 EOJ SCANVSM2 MAX.RETURN CODE=0000
12:02:00 VSEN63B Y1 0001 1Q47I Y1 LIBRDIR2 01011 FROM LOCAL , TIME=12:02:00 , TKN=000000D0
12:02:00 VSEN63B Y1 0052 // JOB LIBRDIR2
12:02:00 VSEN63B DATE 05/31/2022, CLOCK 12/02/00
12:02:00 VSEN63B Y1 0052 1S47I PRELEASE RDR,LIBRDIR3
12:02:00 VSEN63B Y1 0052 EOJ LIBRDIR2 MAX.RETURN CODE=0000
12:02:00 VSEN63B DATE 05/31/2022, CLOCK 12/02/00, DURATION 00/00/00
12:02:00 VSEN63B Y2 0001 1Q47I Y2 LIBRDIR3 01012 FROM LOCAL , TIME=12:02:00 , TKN=000000D1
12:02:00 VSEN63B Y2 0053 // JOB LIBRDIR3
12:02:00 VSEN63B DATE 05/31/2022, CLOCK 12/02/00
12:02:00 VSEN63B Y2 0053 1S47I PRELEASE RDR,LIBRDIR4
12:02:00 VSEN63B Y2 0053 EOJ LIBRDIR3 MAX.RETURN CODE=0000
12:02:00 VSEN63B DATE 05/31/2022, CLOCK 12/02/00, DURATION 00/00/00
12:02:01 VSEN63B Y1 0001 1Q47I Y1 LIBRDIR4 01013 FROM LOCAL , TIME=12:02:01 , TKN=000000D2
12:02:01 VSEN63B Y1 0052 // JOB LIBRDIR4
12:02:01 VSEN63B DATE 05/31/2022, CLOCK 12/02/01
12:02:01 VSEN63B Y1 0052 EOJ LIBRDIR4 MAX.RETURN CODE=0000
12:02:01 VSEN63B DATE 05/31/2022, CLOCK 12/02/01, DURATION 00/00/00
12:02:01 VSEN63B Y1 0001 1Q3EI DYNAMIC CLASS 'Y' WAITING FOR WORK
12:02:02 ZVSE61C Y3 0053 EOJ SCANVSM3 MAX.RETURN CODE=0000
12:02:40 VSEN63C F1 0001 1Q34I RDR WAITING FOR WORK ON 00C
12:02:40 VSEN63C Y1 0001 1Q47I Y1 STGPLAY 17992 FROM LOCAL , TIME=12:02:40 , TKN=000000D1
12:02:40 VSEN63C Y1 0051 // JOB STGPLAY
12:02:40 VSEN63C DATE 05/31/2022, CLOCK 12/02/40
12:02:40 VSEN63C Y1 0051 * PASS 1
12:02:40 VSEN63C Y1 0051 // EXEC STGPLAY
12:02:40 VSEN63C Y1 0051 1U53I PROGRAM NOT FOUND.
12:02:40 VSEN63C Y1 0051 1I70I JOB STGPLAY CANCELLED DUE TO CONTROL STATEMENT ERROR
12:02:40 VSEN63C Y1 0051 1S78I JOB TERMINATED DUE TO PROGRAM ABEND
12:02:40 VSEN63C Y1 0051 EOJ STGPLAY
12:02:40 VSEN63C DATE 05/31/2022, CLOCK 12/02/40, DURATION 00/00/00
12:02:40 VSEN63C Y1 0001 1Q3EI DYNAMIC CLASS 'Y' WAITING FOR WORK
```

Real Time vs Long Term

All of the real time data is displayed in one minute intervals

At the end of the day the one minute data is summarized into 15 minute intervals

This provides a long term database and is the source for capacity planning

In addition, reports are generated in the 15 minute format

These reports cover z/VM, Linux, and of course, z/VSE

Reports

Main menu

Add tab Arrange
 Load View Save View
 Color config

VSIVM4

zMON	Graphs	zMAP
Capacity		
Daily Reports		
Fri 12 Jun 2020		
ESAHDR		
ESATUNE		
Performance Summary		
ESASSUM		
ESASUM		
ESAILEMT		

VSE Reporting
 ESAVSEC
 ESAVSES
 ESAVSEP
 ESAVSEJ

Daily VSE System Performance Report - VM4 - Fri 12 Jun 2020

Report: ESAVSEC	VSE System Performance Report										Velocity Software Corporation		
Monitor initialized: 06/12/20 at 00:00:00 on 8562 serial 040F78											First record analyzed: 06/12/20 00:00:00		
<hr/>													
NODE /Time	Pages/Sec	<Rate/Sec>	<CPU Utilization>	<-Job CPU->	All	Pct	Seconds						
	In	Out	SVC	DSP	Total	Mstr	Spin	TOTal	Ovhd	All Bound	NP	OfData	
06/12/20 00:15:00													
zvse61b	0	0	2140	1923	10.2	3.1	0	9.1	1.1	85.0	30.5	899.3	15.0
zvse61c	0	0	4508	2215	10.5	6.2	0	9.0	1.4	75.1	59.7	899.9	15.0
zvse62b	0	0	3347	1293	4.6	2.2	0	3.9	0.7	92.1	48.0	899.9	15.0
zvse62c	0	0	3652	1512	5.5	2.7	0	4.7	0.8	81.1	48.1	900.0	15.0
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00:30:00													
zvse61b	0	0	6934	3349	18.8	8.5	0	17.9	2.3	78.8	45.0	900.0	15.0

Daily VSE System Configuration Report - VM4 - Fri 12 Jun 2020

Report: ESAVSES	VSE System Configuration Report										Velocity Software Corporation ZMAP 5.1.1		
Monitor initialized: 06/12/20 at 00:00:00 on 8562 serial 040F78											First record analyzed: 06/12/20 00:00:00		
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NODE /Time	<--z/VM-->	<LogicalPart>	<-----CPU model----->	<--Partitions-->	<---CPU Counts---								
	VirtID	Lvl	Name	Nbr	<IBM/<model>/CPs/ serial	Max	Cur	Stat	Dyn	Tot	Actv	Quies	Inact
06/12/20 00:15:00													
zvse61b	ZVSE61B	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	20	12	8	1	1	0	0
zvse61c	ZVSE61C	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	18	12	6	1	1	0	0
zvse62b	ZVSE62B	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	19	12	7	1	1	0	0
zvse62c	ZVSE62C	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	18	12	6	1	1	0	0
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00:30:00													
zvse61b	ZVSE61B	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	20	12	8	1	1	0	0
zvse61c	ZVSE61C	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	18	12	6	1	1	0	0
zvse62b	ZVSE62B	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	19	12	7	1	1	0	0
zvse62c	ZVSE62C	1	VSIVM5	5	IBM 8562-A02 02 (40F78 2)	80	18	12	6	1	1	0	0
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00:45:00													

Velocity Software is the recognized leader for performance and cloud management tools for the z/VM, z/VSE, and Linux on Z platforms

- We recently added the collection of some z/OS records to our portfolio

Performance monitoring should not be the performance problem

We listen to customers and strive to provide the information and add the functions that they (or you) need to our products

Questions and requests: info@velocitysoftware.com

Thank you!

Questions?

<http://www.velocitysoftware.com>