

VELOCITY
S O F T W A R E

Using zVIEW to Identify and Solve Performance Issues

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Enterprise View

- Layout options
- Thresholds and other configuration options
- Defining hosts

zVIEW

- Basic layout and functions
- Configuration options
- Current data and adhoc queries
 - Graphs and reports
 - Thresholds
- Tabs
- zMAP reports
- Capacity graphs
- Views
- Direct URL access
- Path options
- Securing zVIEW access
- Version 5200, enterprise security and new enterprise view
- Identifying and finding problems

Enterprise View

TIM2 - zVIEW
VSIVM4 - Enterprise View
demo.velocitysoftware.com/zview/
zVIEW Version 4240
today is Thursday 9 Jun 2016

Velocity Software System Summary Demo V4 - Velocity Software - VSIVM4

First level

VSIVM1				VSIVM2				Demo System V4				VSIVM5			
VM	12:05	IFL Total (1)	0.48%	VM	12:05	IFL Total (1)	0.82%	Demo	12:05	IFL Total (2)	20.87%	VM	12:05	CP Total (1)	70.05%
Linux Nodes(Distributed Servers)				Linux Nodes(z/VM-Guests)				VSE Systems				VSE Systems			
LINUX9 (9)		2.29%		redhat6x (1)		2.08%		zvse52		28.16%		zvse52		28.16%	
syselx3 (9)		2.22%		linux9 (9)		1.70%		zvse43		26.40%		zvse43		26.93%	
				oracle (1)		1.17%		zvse51		0.67%		zvse51		0.82%	
				redhat6 (1)		0.48%		Top 5 Linux Nodes(z/VM-Guests)				Linux Nodes(z/VM-Guests)			
				redhat62 (1)		0.47%		sls2ora (2)		6.74%		sls2ora		5.65%	
				redhat6M (1)		0.45%		lxora12b (1)		3.01%		lxora12		3.27%	
				redhat6S (1)		0.44%		redhat6x (1)		2.96%		oracle		1.17%	
				RH5X16 (1)		0.31%		redhat56 (1)		1.46%		redhat5x		0.25%	
				OSA178 (1)		0.30%		redhat6 (1)		1.16%		lxugar		0.23%	
				Linux Nodes(Distributed Servers)				Top 5 Linux Nodes(Distributed Servers)				Linux Nodes(Distributed Servers)			
				sls2ora (2)		6.38%		Remaining servers		2.19%		sls1l		0.15%	
								vpnz (1)		3.32%		vpnz (1)		3.28%	
								vpnbrz (1)		2.55%		vpnbrz (1)		2.53%	
								mail (9)		2.30%		mail (9)		2.25%	
								vpnc (1)		1.46%		mail (9)		2.25%	
								vpnbc (1)		1.17%		vpnbc (1)		1.19%	
								Remaining servers		0.76%					

Second level

RKS Level 2				DXT Level 2				Tim Level 2			
VM	12:05	IFL Total (1)	0.48%	DXT2LV	14:05	IFL Total (1)	0.14%	TIM2LV	15:05	IFL Total (1)	0.26%
Linux Nodes(z/VM-Guests)				Linux Nodes(z/VM-Guests)				Top 5 Linux Nodes(z/VM-Guests)			
linux001		0.22%		redhat56 (1)		1.44%		sls2ora (2)		5.68%	
				redhat6 (1)		0.45%		lxora12b (1)		3.29%	
				redhat5x (1)		0.26%		redhat56 (1)		1.37%	
				lxugar (2)		0.23%		redhat6 (1)		0.46%	
				redhat64 (1)		0.15%		redhat5x (1)		0.30%	
								Remaining servers		0.82%	
								Top 5 Linux Nodes(Distributed Servers)			
								vpnbrz (1)		2.61%	
								vpnbc (1)		1.15%	
								rhel7v (2)		0.76%	

- Quick overview of all LPARs
 - Operations or system support
- Total and individual processor CPU utilization
- Linux servers
 - Local and Distributed CPU busy
 - Number of processors
 - Swap rate and used
 - Click on + to expand
- VSE and z/OS guests
- Other users
- URL: <http://hostname/ZVIEW>

The screenshot displays the ZVIEW Enterprise View interface for a system named 'Demo System V4'. It shows a hierarchy of system components and their CPU utilization. The top-level system utilization is 97.34%. Below it, two LPARs are listed with utilizations of 47.30% and 50.04%. The 'VSE Systems' section shows three systems: zvse52 (88.84%), zvse61 (2.28%), and zvse62 (1.91%). The 'Top 15 Linux Nodes(z/VM-Guests)' section lists various Linux guests with their CPU utilization and swap usage. The 'sles12' guest is expanded to show a swap rate of 0.00% and 100.00% swap used. The 'mongo01' guest shows a swap rate of 0.00% and 96.77% swap used. Other guests include ssnode1 (10.34%), ssnode2 (8.62%), scs3dkrl (8.28%), ssnode3 (8.06%), slls2ora (3.77%), and REDHAT6X (1.80%).

Demo System V4		Expand
Demo	19:08	IFL Total (2) 97.34%
		0414C7-0 47.30%
		0414C7-1 50.04%
VSE Systems		
zvse52		88.84%
zvse61		2.28%
zvse62		1.91%
Top 15 Linux Nodes(z/VM-Guests)		
⊖ sles12 (1)		19.93%
	Swap rate	0.00
	Swap used	100.00%
⊖ mongo01 (1)		19.65%
	Swap rate	0.00
	Swap used	96.77%
⊕ ssnode1 (1)		10.34%
⊕ ssnode2 (1)		8.62%
⊕ scs3dkrl (1)		8.28%
⊕ ssnode3 (1)		8.06%
⊕ slls2ora (2)		3.77%
⊕ REDHAT6X (1)		1.80%

Layout options

- Use VSIMAIN Config option
 - Not all options show if direct XEDIT file
 - F10 on ZVIEW product line
 - Fast path command: VSIMAIN CONFIG ZVIEW *configfn configft*
 - F1 on parameter for help or anywhere else for all parameter help
- Portal also supports configuration
- Configuration file: ZVIEW CECLIST

System Overview Parameters

Web page title Velocity Software System Summary Demo V4
Number of graphs across 3
Maximum local Linux guests 15
Maximum distributed Linux guests 5
Maximum users 5
CPU count source USERDATA
Server click URL /zview/zview.cgi
Server click parms view=mylinux&node=&server
User click URL /zview/zview.cgi
User click parms graph=USERCPU&user=&server
VSE click URL /zview/zview.cgi
VSE click parms view=VSE&user=&server
Page links from current host NO

Thresholds

Threshold TOTALCPU	Warning 70	Value 90	Title change YES
Threshold CPU	Warning 70	Value 90	Title change YES
Threshold SERVERCPU	Warning 70	Value 90	Title change YES
Threshold SWAPRATE	Warning 3	Value 10	Title change YES
Threshold SWAPUSED	Warning 90	Value 95	Title change YES

Group names listed in display order

Group name First level
Group name Second level

System name VM1
System URL //WWW.VELLOCITYSOFTWARE.COM/ZVIEW/
System heading VSIVM1
System group First level

System name VM2
System URL //VSIVM2.VELLOCITYSOFTWARE.COM/ZVIEW/
System heading VSIVM2
System group First level

PF1: Help PF2: Validate/Save PF3: Exit PF5: Add line PF6: Delete line
PF8: Down PF10: Default PF12: Cancel

System Overview Parameters

- Title
- Number of columns
- Number of Linux servers (local & distributed) & users
 - *, 0 or number
- Server, user, z/OS and VSE click specification
 - Specify zVIEW graph, report or view or some other URL
- Page links from current host
 - Current host serves all data instead of directed to selected host

Thresholds

- Total CPU, individual CPU, server CPU, swap rate and swap used
- Warning (yellow) and Value (red)
- Set value for swap rate or swap used to enable
 - Others have default values
- Triggered threshold
 - Color title and line
 - Title coloring now configurable
 - Automatically expand CPUs or swap
 - Focus on first threshold

- **Groups and LPARs**
 - Groups can be defined to group LPARs by CEC or location
- **System parameters**
 - Set names, heading, URL and group
 - Also used by zVIEW to define available hosts
 - Match URL to what user would enter in browser
 - IP address or host name
 - http://, https:// or //
- **Expand button**
 - Expand LPAR data for easier viewing
 - Will stay expanded across refreshes



Enterprise Performance Summary

DC1

V1P1 Expand		V1P2 Expand		V1P3 Expand		V1P4 Expand	
V1P1	07:12 IFL Total (20) 185.30%	V1P2	07:12 IFL Total (20) 184.02%	V1P3	07:12 IFL Total (20) 668.29%	V1P4	07:12 IFL Total (19) 433.28%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)	
V1N1 Expand		V1N2 Expand		P105 Expand		P106 Expand	
V1N1	07:12 IFL Total (8) 265.41%	V1N2	07:12 IFL Total (8) 7.91%	P105	07:12 IFL Total (20) 13.22%	P106	07:12 IFL Total (20) 12.99%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)	
P107 Expand		P108 Expand		P109 Expand		P110 Expand	
P107	07:12 IFL Total (14) 7.56%	P108	07:12 IFL Total (14) 8.56%	P109	07:12 IFL Total (8) 1.49%	P110	07:12 IFL Total (8) 1.53%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)					
P113 Expand		P114 Expand					
P113	07:12 IFL Total (14) 2.56%	P114	07:12 IFL Total (14) 4.88%				
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)					

DC2

V2P1 Expand		V2P2 Expand		V2P3 Expand		V2P4 Expand	
V2P1	07:12 IFL Total (32) 482.74%	V2P2	07:12 IFL Total (32) 825.6%	V2P3	3E0FC7-21 86.95%	V2P4	07:12 IFL Total (32) 312.03%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		3E0FC7-22 15.24%		Linux Nodes (zVM-Guests)	
V2P5 Expand		V2P6 Expand		P207 Expand		P208 Expand	
V2P5	07:12 IFL Total (20) 340.64%	V2P6	07:12 IFL Total (20) 348.75%	P207	07:12 IFL Total (24) 585.87%	P208	07:12 IFL Total (24) 485.11%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)	
P209 Expand		P210 Expand		P211 Expand		P212 Expand	
P209	07:12 IFL Total (32) 884.2%	P210	07:12 IFL Total (32) 836.3%	P211	07:12 IFL Total (32) 1032.18%	P212	07:12 IFL Total (28) 685.29%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)	
P213 Expand		P214 Expand		P215 Expand		P216 Expand	
P213	333B77-19 71.94%	P214	07:12 IFL Total (28) 439.01%	P215	07:12 IFL Total (24) 380.90%	P216	07:12 IFL Total (24) 348.65%
	333B77-20 9.94%	Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)	
P217 Expand		P218 Expand		P219 Expand		P220 Expand	
P217	07:12 IFL Total (20) 2.64%	P218	07:12 IFL Total (20) 4.46%	P219		P220	07:12 IFL Total (24) 1.15%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)					
C203 Expand		C204 Expand		C205 Expand		C206 Expand	
C203	07:12 IFL Total (16) 457.52%	C204	07:12 IFL Total (10) 290.24%	C205	07:12 IFL Total (10) 791.06%	C206	07:12 IFL Total (10) 636.96%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		3520D7-0 80.10%		Linux Nodes (zVM-Guests)	
C207 Expand		C208 Expand		V2N1 Expand		V2N2 Expand	
C207	07:12 IFL Total (12) 92.29%	C208	07:12 IFL Total (12) 1.33%	V2N1	07:12 IFL Total (10) 268.45%	V2N2	07:12 IFL Total (28) 62.95%
Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)	
V2N3 Expand		V2C1 Expand		V2C2 Expand			
V2N3	07:12 IFL Total (12) 1.22%	V2C1	07:12 IFL Total (16) 656.29%	V2C2	07:12 IFL Total (12) 617.71%		
		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)			

CDL

VLB1 Expand		VLB2 Expand		VLB3 Expand		VLB4 Expand	
VLB1	07:12 IFL Total (20) 616.85%	VLB2	07:12 IFL Total (12) 1158.17%	VLB3	07:12 IFL Total (20) 301.97%	VLB4	07:12 IFL Total (14) 847.53%
Linux Nodes (zVM-Guests)		02CA7-0 83.38%		Linux Nodes (zVM-Guests)		Linux Nodes (zVM-Guests)	
VLB5 Expand		VLB6 Expand		VLB8 Expand		ZS01 Expand	
VLB5	07:12 IFL Total (20) 0.44%	VLB6	061A67-6 81.30%	VLB8	07:12 IFL Total (20) 159.02%	ZS01	07:12 IFL Total (2) 1.01%
		061A67-7 69.33%		Linux Nodes (zVM-Guests)			

URL: <http://hostname/ZVIEW/ZVIEW.CGI>

DEMO - zVIEW - Google Chrome
 demo.velocitysoftware.com/ZVIEW/zview.cgi
 Today is Monday 13 Jun 2016 zVIEW Version 4240

VELOCITY SOFTWARE

zVIEW - Velocity Software - VSIVM4 (DEMO)
 Performance Displays for zVM and Linux on System z

Menu

SYSTEM

ESAMAIN - System Overview - DEMO

Time	Users	Transact.	Processor	Cap	Storage (MB)	...						
	On	per Avg.	Utilization	ture	Fixed Active Stor	...						
	Actv	In Q	per Avg.	Fixed	Active	Stor						
	In	Q	Time	Ratio	User	Resid. Load						
	Sec.	Time	CPUS	Total	Virt.	Ratio						
10:04:00	92	58	20.0	19.9	0.31	2	22.3	19.3	100	47	12689	0.4
10:03:00	92	54	34.0	19.2	0.41	2	22.1	19.1	100	47	12676	0.4
10:02:00	92	51	25.0	18.6	0.52	2	23.0	19.8	100	47	12662	0.4
10:01:00	92	46	25.0	19.4	0.43	2	28.0	24.4	100	47	12639	0.4
10:00:00	92	61	25.0	20.6	0.31	2	19.9	17.1	100	47	12693	0.4
09:59:00	92	44	18.0	20.1	0.38	2	19.7	17.0	100	47	12636	0.4
09:58:00	92	51	20.0	18.5	0.54	2	18.8	15.9	100	47	12661	0.4
09:57:00	92	50	22.0	17.3	0.71	2	20.2	17.3	100	47	12652	0.4
09:56:00	92	49	28.0	18.9	0.35	2	72.5	69.9	100	47	12650	0.4
09:55:00	92	61	18.0	20.0	0.29	2	22.4	19.6	100	47	12693	0.4
09:54:00	92	44	14.0	20.5	0.27	2	20.6	17.9	100	46	12636	0.4
09:53:00	92	46	18.0	20.4	0.28	2	21.5	18.7	100	46	12642	0.4
09:52:00	92	54	13.0	20.8	0.28	2	25.8	21.4	100	47	12663	0.4
09:51:00	92	48	18.0	20.8	0.28	2	23.9	20.9	100	47	12649	0.4
09:50:00	92	61	18.0	20.7	0.27	2	19.2	16.0	100	47	12693	0.4
09:49:00	92	45	15.0	21.1	0.28	2	19.8	16.7	100	47	12639	0.4
09:48:00	92	48	21.0	21.2	0.29	2	20.3	17.1	100	47	12647	0.4

CPU Utilization - DEMO

DASD I/O Rate - DEMO

LPAR Shared CP Utilization - DEMO

LPAR Shared IFL Utilization - DEMO

User Class Utilization - DEMO

Add tab

- New tab to organize new graphs and reports

Arrange

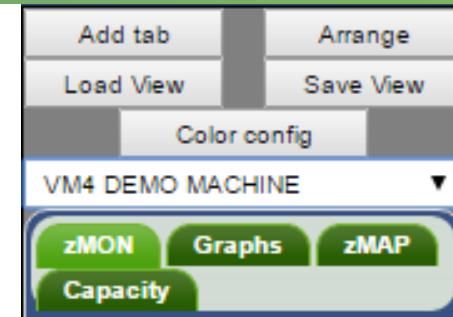
- Up to 12 graphs and reports. 5200 no limit

Load/Save View

- Load or save from system, cookie or local disk
- Set or remove personal startup view

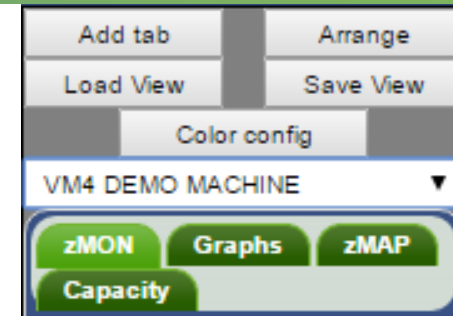
LPAR

- Drop down box for LPARs defined in ZVIEW CECLIST
- LPAR to obtain data from when graph or report opened



Color config

- Color wheel to define series colors
- Specific color: LPAR, server, user or class
- Alternate name for LPAR, server, user or class on graphs



ZMON & Graphs

- Realtime or adhoc reports or graphs

ZMAP

- Daily, weekly or monthly ZMAP reports

Capacity

- Minute, daily, weekly, monthly or trending graphs
- Created with RUNCHART utility during ZMAP processing

Configuration

```

ZVIEWCFG                               Velocity Software Inc.           ZVIEW PROD4240
                                CONFIG ZVIEW Configuration

Startup view SYSTEM      Load startup view when change host NO
Header title Performance Displays for zVM and Linux on System z
Floating main menu          YES
zMap page group count      100
Host code page              1047
Debug                       NO


Graph options
Graph name _____ Threshold warn _____ Value _____ Type _____

Excluded zMON screens _____ Exclude from Index NO

Default series colors for graphs #4bb2c5 #EAA228 #c5b47f #579575 #953579
#839557 #4b5de4 #958c12 #ff5800 #d8b83f #0085cc #c747a3 #cddf54 #FBD178
#26B4E3 #bd70c7 #2020E0 #00FFFF #FF00FF #00FF00 #800000 #ffc0cb #000080
#808000 #800080 #8A2BE2 #008080 #4B0082 #808080 #281415 _____

Colors for specific servers/classes
Server/class: Name _____ Color _____
                Alternate name _____

PF1: Help      PF2: Validate/Save  PF3: Exit      PF5: Add line   PF6: Delete line
                PF8: Down          PF10: Default  PF12: Cancel
  
```

- Startup view
 - Start up view or NONE and on host change
- Title
- Floating menu
 - Previous menu position saved in local storage
- zMAP page group count 
 - Can affect response time and web server storage
- Host code page
 - May need to change webserver
DEFAULT_CHARSET ISO-8859-1
 - Use 37 if using zOPERATOR and Linux
- Debug


- **Graph options**
 - Graph names from graph Preferences, About
 - Default threshold values
 - Default graph type
 - Vertical and horizontal bar and stacked bar
 - Area and stacked area
 - Line
 - Table
 - Pie and pie percentage
- **Excluded ZMON screens**
 - Excluded from screen index

- Series colors
 - Easier specified with Color config button
- Alternate server/class names

zVIEW - Set graph colors ✕

Default Series Colors

Color 1: ✕ #4bb2c5	Color 2: ✕ #EAA228	Color 3: ✕ #c5b47f	Color 4: ✕ #579575	Color 5: ✕ #953579	Color 6: ✕ #839557	Color 7: ✕ #4b5de4	Color 8: ✕ #958c12
Color 9: ✕ #f5800	Color 10: ✕ #d8b83f	Color 11: ✕ #0085cc	Color 12: ✕ #c747a3	Color 13: ✕ #cddf54	Color 14: ✕ #FBD178	Color 15: ✕ #26B4E3	Color 16: ✕ #bd70c7
Color 17: ✕ #2020E0	Color 18: ✕ #00FFFF	Color 19: ✕ #FF00FF	Color 20: ✕ #00FF00	Color 21: ✕ #800000	Color 22: ✕ #fc0cb	Color 23: ✕ #000080	Color 24: ✕ #808000
Color 25: ✕ #800080	Color 26: ✕ #8A2BE2	Color 27: ✕ #008080	Color 28: ✕ #4B0082	Color 29: ✕ #808080	Color 30: ✕ #281415		



Custom colors and name by server ID/class name

✕ +newserver	#ed7526
+newaltname	

Performance data and adhoc queries

- ZMON reports

- Over 269 reports
- Hover report for description
- Symbols across the top
 - Drill down available – single click on a line, click again to close
 - Title with host name – click and hold to move
 - Download report – PDF, text or CSV
 - Pause or resume
 - Change time range, node, user, class, etc – adhoc reports
 - Report fields help
 - Fully minimize
 - Minimize or maximize
 - Close report

Time	UserID /Class	<-use CPU%> Total	<Resident-> Virt	Total	Actv	Lock	<-WSSi-ed Total
12:22:00	System:	22.62	20.57	3284K	3265K	7367	3279K
12:22:00	*TheUsrs	9.38	8.90	601K	601K	126	603K

- ZMON reports

- Refresh every minute

- Sort on columns

- Primary, secondary, tertiary – last selected column primary
- First click descending, then ascending
- Click anywhere else in heading to revert to default sort

- Thresholds

- Set in MONPROF COPY – defaults in ESAMONDF COPY

- zALERT

- Click thru on alert to report, graph or view

- zOPERATOR

- zTUNE

ESAU SP2 - User Percent Utilization - ...

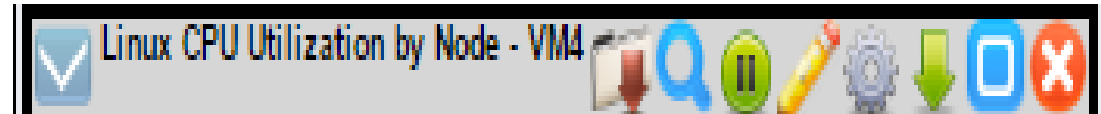
Time	UserID /Class	<-use CPU%> Total	<-use CPU%> Virt	<Resident-> Total	<Resident-> Actv	Lock -ed	<-WSSi: Total
12:22:00	System:	22.62	20.57	3284K	3265K	7367	3279K
12:22:00	*TheUsrs	9.38	8.90	601K	601K	126	603K

```

alert.ESAMAIN      = 'ON'
alert.ESAMAIN.8    = '> 80 RED REVVIDEO 80*NCPUS'
alert.ESAMAIN.17   = '> 25 RED REVVIDEO'
alert.ESAMAIN.20   = '> 95 YELLOW REVVIDEO'
    
```

- Graphs

- 209 graphs



- Symbols across the top

- Drill down available
 - Click last interval - last 30 minutes of data
- Title with host name – click and hold to move
- Download graph – PDF, PNG, JPG or CSV
- Hide or show legend
- Pause or resume
- Change time range, node, user, class, etc – adhoc reports
- Preferences
- Fully minimize
- Minimize or maximize
- Close graph

Graphs

- Preferences
 - Change graph
 - Vertical and horizontal bar and stacked bar
 - Area and stacked area
 - Line
 - Table
 - Pie and pie percentage
 - Only shows options available for the data
 - Adjust parms – same as pencil
 - Adjust y axis – change scale
 - Single click in y axis area to scale to present data
 - Good to view small values
 - Help – general zVIEW help
 - About – graph or ESAEXTR name and zVIEW version

Adjust Parameters ✕

Current interval

Start date 2017/06/20

Start time 12:51

End date 2017/06/20

End time 12:51

Class *

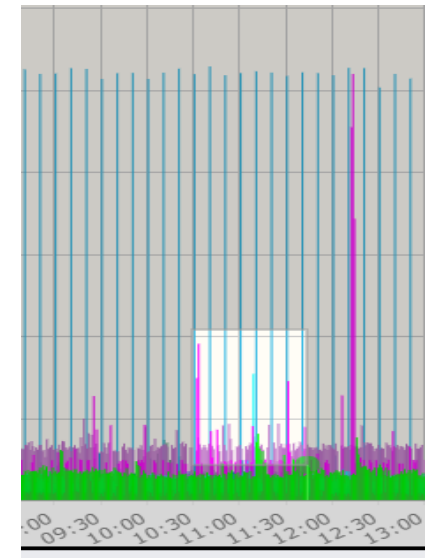
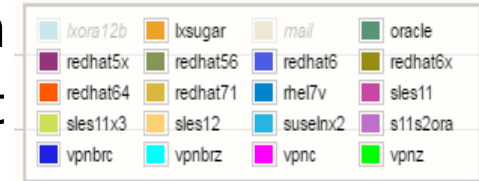
Node *

Close Submit

- **Graphs**
 - Preferences
 - Thresholds
 - Threshold and warning values and bars
 - Refresh clear
 - Clear title and tab colors when data refreshed
 - Relative CPU
 - Enter values between 0 and 100%
 - Thresholds adjusted based on the number of processors
 - Good to use if varying processors on and off

- **Graphs**

- Hover interval to show data values
- Turning off data series
 - Click on name in legend to turn off/on
 - Not for stacked graphs or inconsistent
 - Turn off high series to rescale Y axis
- Zoom
 - Blow up area to see values or drill down
 - Right click, hold and drag area to zoom
 - Multiple zooms allowed
 - Double click to return to original graph
 - Pause graph first, refresh will unzoom



• Tabs



- Organize by server, LPAR, etc
- Views will load in new tab
- Symbols on tab
 - Graph or report title in focus or view name and host name
 - General zVIEW help
 - Window list – bring hidden windows into focus
 - Tab parameters
 - All existing and new graphs or reports will use parameters
 - Good for looking at a specific time frame and/or server
 - Pause or resume all graphs and reports in the tab
 - Close tab and all the graphs and reports in the tab

Tab Parameters
✕

Current interval

Start date

Start time

End date

End time

Relative

Class

Node

User

LPAR

zOS SYSID

Job name

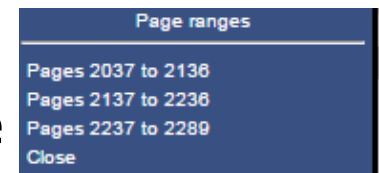
Service class

Device

Submit
Close

ZMAP reports

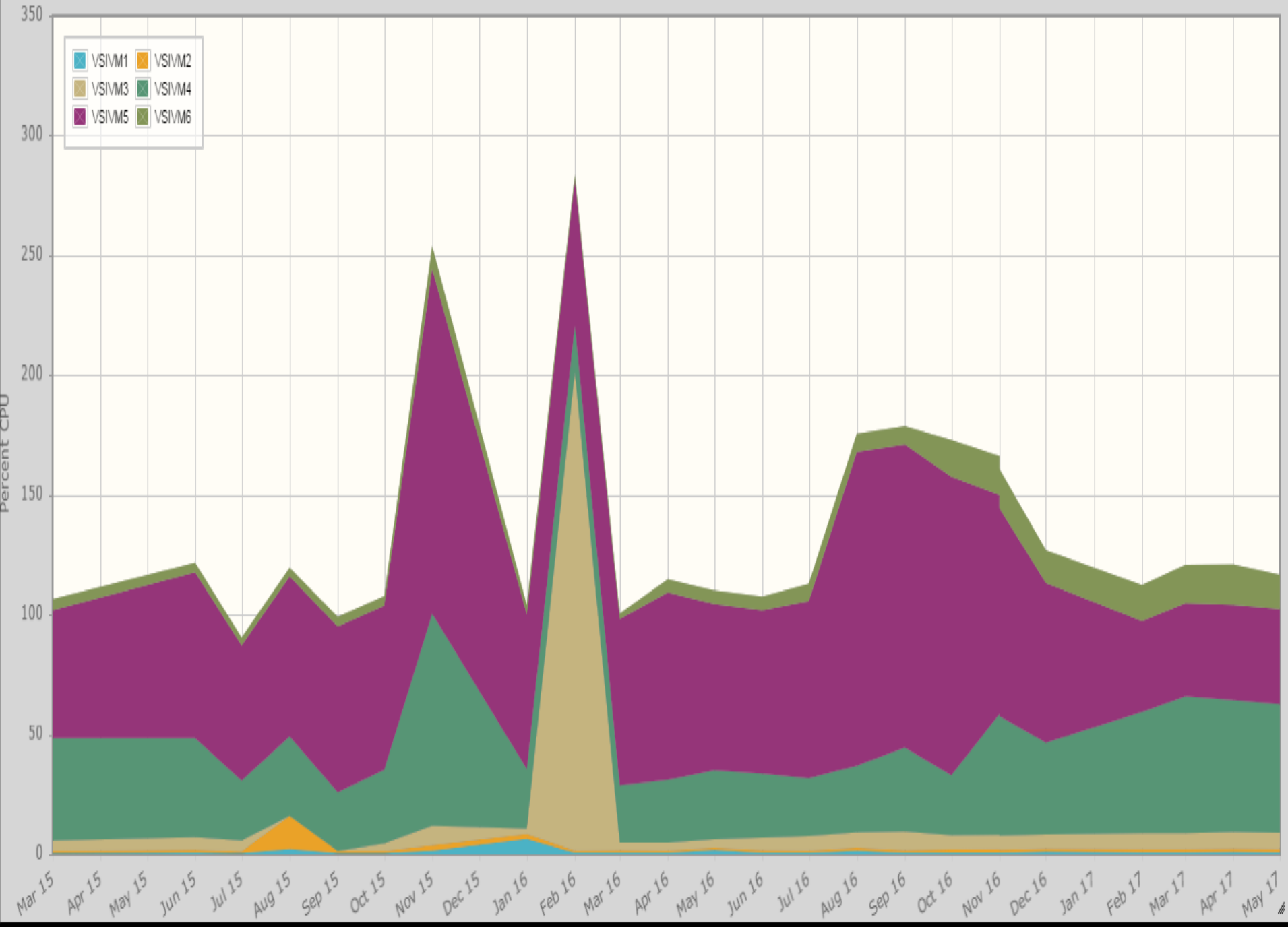
- Read from ZMAP 191 disk – OUT01 file type
- Daily, weekly and monthly
- Number of days kept depends on size of disk
- Select day, week or month for available reports
- Page range selection
 - Number of pages determined by *zMap page group count* parm
 - Red icon indicates more page groups available



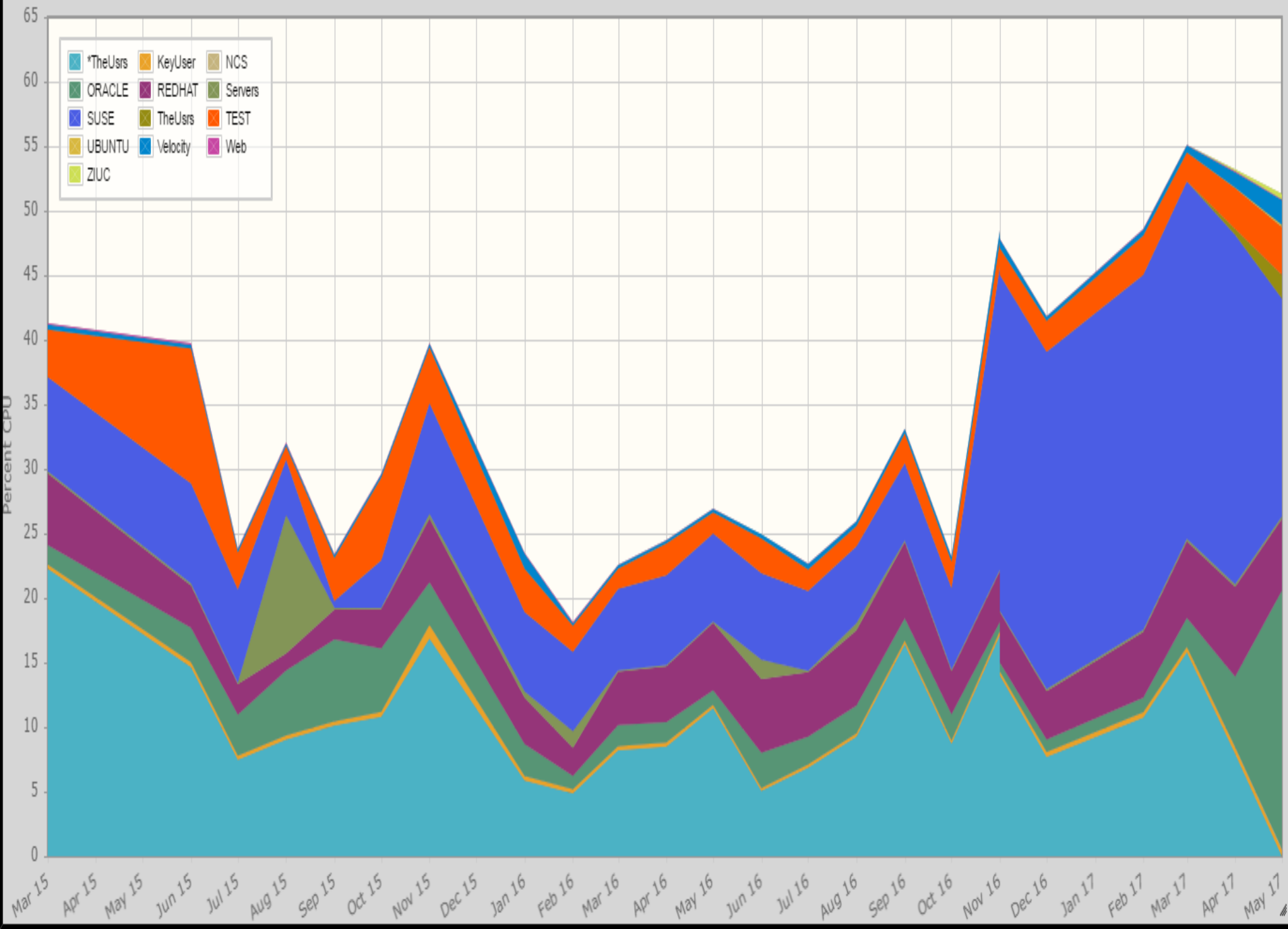
Capacity Graphs

- Long term graphs to analyze trends
- Minute, daily, weekly, monthly and trending
 - Daily – One or 15 minute intervals
 - Trending - Daily, weekly and monthly
- Created during nightly ZMAP processing
 - Fast data retrieval and graphing
- Uses ESAEXTR
- Defined in ZMAP RUNCHART PARMS file
 - Samples provided
 - Some need customization

Monthly LPAR CEC Summary - VM4



Monthly User Class CPU - VM4



Views

- Save and reload commonly used graphs and reports
- Create system or personalized start-up view
- Save/load views
 - System – CONFIG disk
 - Must be signed onto Portal to save view
 - Cookie – Limited to max size of cookie ~4k
 - PC – Can't use for start-up
- Parameters & other customization saved with view

Views

- **Tab parms**
 - Change graphs and reports for particular user or node
 - Relative option for capacity graphs
 - Depending on graph type can set for:
 - Yesterday
 - Last business day
 - Last week
 - Last month
- **Load view host selection**
 - Check box to use current host or use host saved
- **Load or Save view to remove personal start-up**

- Direct URL access

- Can save as bookmark
- Create HTML page with links

```
<p><a target="_blank" href="zview.cgi?graph=procutil&node=suselnx2">Process graph</a></p>
```

- URL for report graph or view
 - <http://myhost.com/zview/zview.cgi?screen=esamain>
 - <http://myhost.com/zview/zview.cgi?graph=cputil>
 - <http://myhost.com/zview/zview.cgi?view=linux>
 - *[http://host/ZVIEW.CGI?view=\(view1,view2,...,viewn\)](http://host/ZVIEW.CGI?view=(view1,view2,...,viewn))*
- Menu options
 - &menu=open – Open floating menu
 - &menu=closed – Closed floating menu
 - &menu=fixed – Fixed menu on left
 - &menu=no – No menu will be displayed
 - &heading=no – No heading/title for embedding into web page

- Direct URL access
 - Other qualifiers
 - &sdate - Start date (yy/mm/dd)
 - &stime - Start time (hh:mm)
 - &edate - End date
 - &etime - End time
 - &node - Node name
 - &user - User name
 - &class - Class name
 - &lpar - LPAR name
 - &device - device number
 - &sysid - zOS sysid
 - &srvcls - zOS service class
 - &job - zOS job name

Path options

- Set view, graph or report for a path
- Initial class, node, user, LPAR and/or device
- Fixed, floating, closed or no menu
- Restrict menu and submenu items
- Good for linux admin or manager so they can see what they need/want
- Setup:
 - Define path to ZVWS in DEFAULT WEBHOST and restart
 - VSIMAIN CONFIG ZVIEW, cursor to PTHPARMS SAMPPATH and press F5.
 - Set path name and select to define path options
- URL: <http://host/path/>

Parms for path

```

View          Initial
Graph         LNXPNOE
zMON report   _____

Class        Initial  Restrict to:
Node         S11S2ORA  _____
User         _____
LPAR         _____
SYSID        _____
Job Name     _____
Service Class _____
APPLID       _____
Device       _____

Menu option   FIXED
Save views    NO
Restrict views _____
  
```

```

ZMON menu     YES
System        NO
Service Level Analysis NO
User          NO
Shared File System NO
CPU           NO
Main Storage  NO
Paging and Spooling NO
Input/Output Subsystem NO
Network       YES
Linux Reports YES
Linux Applications Reports YES
SSC/Docker Reports NO
zOS           NO
zVSE          NO
CICS          NO
Db2           NO
Screen Index  NO
Emulation     NO
z/ALERT Definitions NO
zOPERATOR     NO
zTUNE         NO
Custom Samples NO
Locally defined NO
  
```

```

Graph menu    YES
System        NO
User          NO
Linux         YES
Linux Applications YES
Storage       YES
I/O           NO
Paging        NO
Network       YES
zOS           NO
zVSE          NO
  
```

```

CICS          NO
Db2           NO
Custom        NO

ZMAP menu    NO
Capacity menu NO
  
```



zVIEW - Tim's Test Machine (TIM2)

Performance Displays for zVM and Linux on System z

Add tab Arrange

Load View Save View

Color config

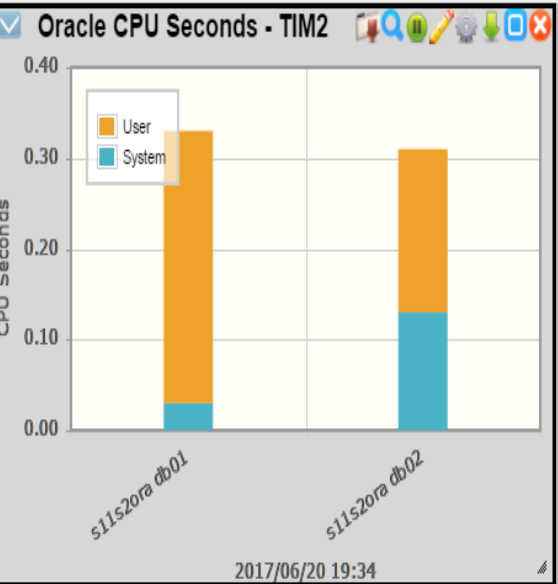
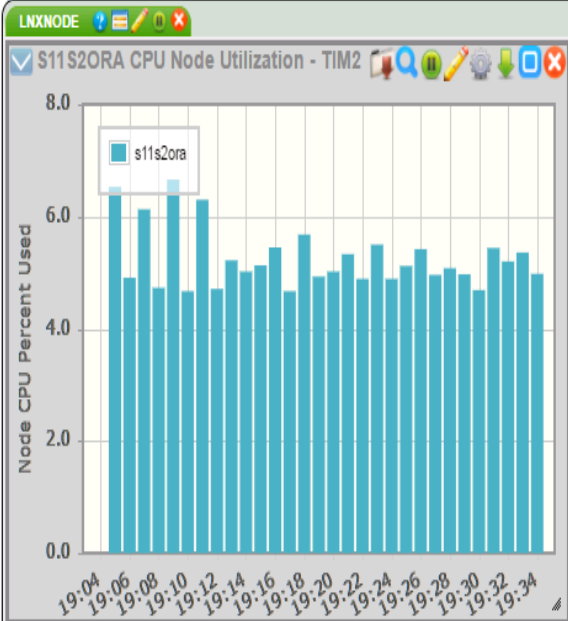
TIMS TEST MACHINE 1234567

zMON **Graphs**

Network

Linux Reports

Linux Application Reports



ZOPER - zOPERATOR Console - TIM2

```

17:05:06 S11S2ORA -- MARK --
17:25:06 S11S2ORA -- MARK --
17:45:06 S11S2ORA -- MARK --
18:05:06 S11S2ORA -- MARK --
18:25:06 S11S2ORA -- MARK --
18:45:06 S11S2ORA -- MARK --
19:05:06 S11S2ORA -- MARK --
19:25:06 S11S2ORA -- MARK --
19:45:06 S11S2ORA -- MARK --
20:05:06 S11S2ORA -- MARK --
20:25:06 S11S2ORA -- MARK --
20:45:06 S11S2ORA -- MARK --
21:05:06 S11S2ORA -- MARK --
21:25:07 S11S2ORA -- MARK --
21:45:07 S11S2ORA -- MARK --
22:02:06 S11S2ORA AgentX master disconnected us, reconnecting in 60
22:03:06 S11S2ORA NET-SNMP version 5.4.2.1 AgentX subagent connected
22:05:07 S11S2ORA -- MARK --
22:25:07 S11S2ORA -- MARK --
22:45:07 S11S2ORA -- MARK --
23:00:01 S11S2ORA /usr/sbin/cron[54952]: (root) CMD (/home/oracle/clean
23:20:01 S11S2ORA -- MARK --

```

ESALNXC - Linux Process Configuration - TIM2

Node	Process Name	ID	PPID	Group	Appl Name	Appl	<-User I
s11s2ora	init	1	1	1	1	init	root
s11s2ora	kthreadd	2	1	0	1	Kernel	root
s11s2ora	ksoftirqd/0	3	2	0	1	Kernel	root
s11s2ora	kworker/u:0	5	2	0	1	Kernel	root
s11s2ora	migration/0	6	2	0	1	Kernel	root
s11s2ora	migration/1	7	2	0	1	Kernel	root
s11s2ora	ksoftirqd/1	9	2	0	1	Kernel	root
s11s2ora	cpuset	11	2	0	1	Kernel	root
s11s2ora	khelper	12	2	0	1	Kernel	root
s11s2ora	netns	13	2	0	1	Kernel	root
s11s2ora	sync_supers	14	2	0	1	Kernel	root
s11s2ora	bdi-default	15	2	0	1	Kernel	root
s11s2ora	kintegrityd	16	2	0	1	Kernel	root
s11s2ora	kblockd	17	2	0	1	Kernel	root
s11s2ora	md	18	2	0	1	Kernel	root
s11s2ora	cio	19	2	0	1	Kernel	root
s11s2ora	cio_chp	20	2	0	1	Kernel	root
s11s2ora	kworker/u:1	21	2	0	1	Kernel	root
s11s2ora	scsi	22	2	0	1	Kernel	root

ESALNXP - LINUX VSI Process Statistics Report - TIM2

Time	Node	Name	ID	PPID	GRP	Total	sys	user	sys	usr	usr	value	Total	sys	user	sys	usr	usr	Size	RSS	min	maj	mint	majt	User	
19:34:00	s11s2ora	oracle	51755	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	415K	29K	139	0	0	0	oracle
19:34:00	s11s2ora	oracle	50858	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	472K	89K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50796	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	467K	81K	1	0	0	0	oracle
19:34:00	s11s2ora	oracle	50794	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	472K	101K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50706	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	482K	12K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50780	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	468K	14K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50770	1	0	0.5	0.2	0.2	0	0	0	0	0	0.3	0.1	0.1	0	0	0	467K	6276	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50718	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	421K	76K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50696	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	424K	101K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50639	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	418K	100K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50635	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	423K	89K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50633	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	414K	13K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50631	1	0	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	429K	12K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50625	1	0	0.1	0	0.1	0	0	0	0	0	0.0	0	0.0	0	0	0	415K	14K	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50615	1	0	0.5	0.2	0.3	0	0	0	0	0	0.3	0.1	0.2	0	0	0	413K	6364	0	0	0	0	oracle
19:34:00	s11s2ora	oracle	50613	1	0	0.0	0.0	0.0	0	0	0	0	0	0.0	0.0	0.0	0	0	0	413K	6008	1	0	3	0	oracle
19:34:00	s11s2ora	oracle	14399	1	14399	0.0	0	0.0	0	0	0	0	0	0.0	0	0.0	0	0	0	471K	79K	0	0	0	0	oracle
19:34:00	s11s2ora	vsiora	3292	3269	1159	0.3	0.1	0.2	0	0	0	-10	0.2	0.0	0.1	0	0	0	58K	6872	28	0	0	0	root	
19:34:00	s11s2ora	cmd	3275	3264	1	0.0	0.0	0.0	0	0	0	10	0.0	0.0	0.0	0	0	0	38K	15K	0	0	0	0	root	

Security

- None
- Path
- Basic
 - Sign on
 - Must sign on each system
- Enterprise (5200)
 - Single sign on for zVIEW or to zPRO and zPORTAL
 - Control access
 - Systems
 - Tabs
 - Menus
 - Graphs and reports
 - View access and saving

Path security

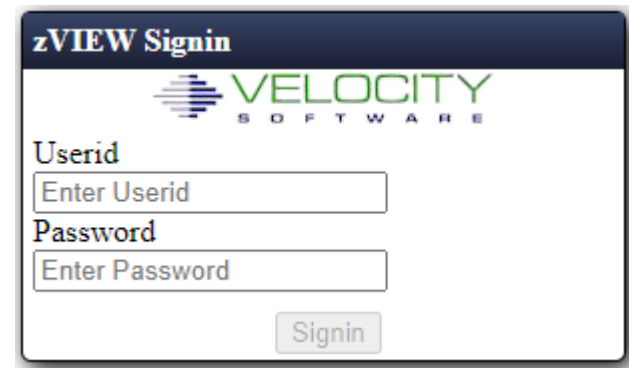
- Define restrictions based on URL path
- Can be used with no or basic security
- Restrict menus, view saving and more
- Can be used with path name ZVIEW

Basic Security

- ZVWS AUTHLIST file
 - SAMPLE AUTHLIST (V51) or SAMPLE AUTHBASC (5200)
 - Put in ZVIEW directory
 - Add ALLOWs for allowed users
 - OMIT *.GIF *.PNG *.JPG *.JS *.JGZ *.CSS *.ICO
 - May want to OMIT CECUTIL.CGI for Enterprise View
- ZVWS PASSWORD_TTL
- ZVWS PASSWORD_TIMEOUT parameter
 - Set in CONFIG ZADMIN
 - Inactivity time to reprompt for password
 - Default 15 minutes

Enterprise security

- Single sign on to zVIEW for entire enterprise
 - AUTHLIST: SIGNIN_TAG xxxxxxxx for zPRO and PORTAL
 - Active graph or report will keep you signed on
- Enabled in ZVWS AUTHLIST (SAMPLE AUTHLIST)
 - OPTION XDSF ZVIEW, SECTYPE ZVIEW
- Customize area below Signin with HTML in ZVIEW MESSAGE C
 - ZVIEW \$MESSAGE C for example



The screenshot displays the 'zVIEW Signin' window. At the top, it features the 'VELOCITY SOFTWARE' logo. Below the logo, there are two input fields: 'Userid' with the placeholder text 'Enter Userid' and 'Password' with the placeholder text 'Enter Password'. A 'Signin' button is located at the bottom right of the form.

Enterprise security

CONVCEC

- Converts ZVIEW CECLIST SYSTEM entries
- \$ZVIEW XDSF created
- Review and rename to ZVIEW XDSF or use ZPRO XDSF

Enterprise Security

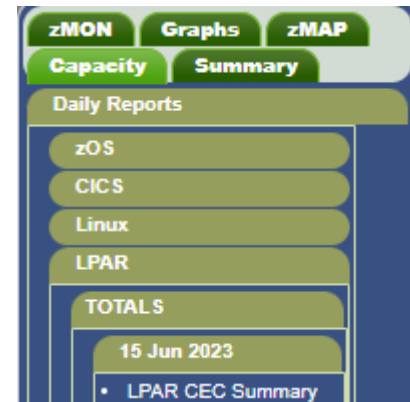
Define ZPUSER and ZPGROUP files

- CONFIG or ZADMIN 391 (SSI) disk
- Create/update with VSIMAIN CONFIG ZVIEW or XEDIT
- Define SITE access
- AUTH ZVIEW READ, WRITE or AUTH ADMIN CONTROL
- AUTH ZVIEW PLATFORM xxxx
 - VM, VSE, LINUX, ZOS, CICS, DB2, SSC, ALERT, OPERATOR, CAPACITY
- If an entry type found in ZPUSER file, it will not look at the ZPGROUP file

Enterprise security

MENU statements

- MENU ZVIEW.*
- MENU ZVIEW.opt1.opt2.opt3
 - Opt1 – ZMON, GRAPH, ZMAP, CAPACITY, VIEW or SUMMARY
 - Opt2
 - Generally menu name
 - Shortened for some
 - CAPACITY second menu level
 - VIEW view name
 - Opt3 report or graph name or third level menu for CAPACITY
- Wild card characters allowed
- MENU ZVIEW.* NOT ZVIEW.*.ZOS NOT ZVIEW.*.CICS NOT ZVIEW.*.DB2



Recent changes

- New reports
 - ESAOSA – OSA report
 - ESALNXF2 – Disk File System Configuration
 - ESASTR4 – Storage Frame Table Entry Zones
 - ESAMFCN – Processor Cache Intervention Analysis
 - ESAK8S1 – Kubernetes Configuration
 - ESAK8S2 – Kubernetes Resource Utilization
 - ESAK8S3 – Kubernetes Filesystems

Recent changes (5200)

- Arrange limit 12 graphs/reports removed
 - Scrolling enabled for more than 12
- Saving/loading views from cookies removed
- Year added to monthly capacity graph menu
- Capacity graph menu load time reduced

Summary Tab Enterprise View

- Uses ZVIEW CECLIST SYSTEM entries or XDSF file
- Same configuration parameters as Enterprise View
- New parameter 'Rows per page'
 - 0 fit in page
 - Overflow scrolling enabled
- Access considerations
 - Unsecured can't access secured LPAR
 - OMIT ZVSYSUM.CGI in ZVWS AUTHLIST
 - Can't access V51 LPARs
 - COPY ZVSYSUM.CGI to V51 LPAR
- Enterprise View still supported
 - Need OMIT CECUTIL.CGI on secured systems

Summary tab

The screenshot displays the zVIEW Enterprise Summary interface, showing a grid of system summary windows for various environments. Each window provides a detailed overview of resource usage, including IFL Total, VSE Nodes, z/VM Linux Guests, and Distributed Servers.

System Summary - Development

Development	17:04:00
IFL Total	1.93%
VSE Nodes	
zvse62c	28.99%
zvse62b (2)	0.79%
z/VM Linux Guests	
DOCKER	29.00%
sles12	28.96%
sles15	1.92%
redhatM	1.88%

System Summary - CloudDemo

CloudDemo	17:04:00
IFL Total (2)	12.07%
VSE Nodes	
zvse62c	28.95%
zvse62b (2)	0.80%
Top 15 z/VM Linux Guests	
RS327001	1.28%
RHKS NFS1	0.20%
JSVEXTRN	0.10%
MONG505A	0.10%

System Summary - VSIVC2

VSIVC2	17:04:00
sles9	0.22%
sles11x2	0.13%
scsi10s	0.08%
ROUTER10	0.07%
Distributed Servers	
vpnbrpc	77.17%
opensuse (3)	4.42%
vpnbrps	2.52%
sles12v (2)	0.35%
lxsugar	0.12%

System Summary - VSIVC3

VSIVC3	17:04:00
IFL Total (2)	0.44%
z/VM Linux Guests	
sles12	29.02%
mongo01	0.83%
redhatSD	0.12%
Distributed Servers	
opensuse (3)	4.42%

System Summary - VSIVC4

VSIVC4	17:04:00
CP Total	1.71%
IFL Total (2)	0.37%
ZIIP Total	0.00%

System Summary - Cloud4-Int

Cloud4-Int	17:04:00
CP Total	1.71%
IFL Total (2)	0.37%
ZIIP Total	0.00%

System Summary - Customer

Customer	17:04:00
IFL Total	1.21%
z/VM Linux Guests	
redhatM	1.95%
redhatSA	1.95%
redhatMA	1.90%
redhatSD	1.90%
redhat6	1.87%
redhatMD	1.85%
redhatS	1.70%

System Summary - DemoSYS4

DemoSYS4	17:04:00
redhat6s	1.44%
redhat6	1.26%
redhat6M	1.24%
mongo01	0.70%
oracle	0.56%
REDHAT6X	0.51%
REDHAT85	0.17%
sles12x6	0.13%
sles9	0.13%
sles11x2	0.12%
Remaining 4 servers	0.35%

System Summary - VSIVM5

VSIVM5	17:04:00
CP Total (2)	67.18%
IFL Total	0.58%
ZIIP Total	0.16%
VSE Nodes	
zvse62c	28.90%
vsen63c	14.12%
vsen63b	9.66%
zvse62b (2)	0.80%
z/VM Linux Guests	

Summary tab

Enterprise Summary			
System Summary - VSIVC4	System Summary - VC1S001	System Summary - VC1S002	System Summary - VC1S003
VSIVC4 17:11:00	VC1S001 17:11:00	VC1S002 17:11:00	VC1S003 17:11:00
System Summary - VC1S004	System Summary - VC1S005	System Summary - VC1S006	System Summary - VC1S007
VC1S004 17:11:00	VC1S005 17:11:00	VC1S006 17:11:00	VC1S007 17:11:00
System Summary - VC1S008	System Summary - VC1S009	System Summary - VC1S010	System Summary - VC1S011
VC1S008 17:11:00	VC1S009 17:11:00	VC1S010 17:11:00	VC1S011 17:11:00
System Summary - VC1S012	System Summary - VC1S013	System Summary - VC1S014	System Summary - VC1S015
VC1S012 17:11:00	VC1S013 17:11:00	VC1S014 17:11:00	VC1S015 17:11:00
System Summary - VC1S016	System Summary - VM1S001	System Summary - VM1S002	System Summary - VM1S003
VC1S016 17:11:00	VM1S001 17:11:00	VM1S002 17:11:00	VM1S003 17:11:00
System Summary - VM1S004	System Summary - VM1S005	System Summary - VM1S006	System Summary - VM1S007
VM1S004 17:11:00	VM1S005 17:11:00	VM1S006 17:11:00	VM1S007 17:11:00
System Summary - VM1S008	System Summary - VM1S009	System Summary - VM1S010	System Summary - VM1S011
VM1S008 17:11:00	VM1S009 17:11:00	VM1S010 17:11:00	VM1S011 17:11:00
System Summary - VM1S012	System Summary - VM1S013	System Summary - VM1S014	System Summary - VM1S015
VM1S012 17:11:00	VM1S013 17:11:00	VM1S014 17:11:00	VM1S015 17:11:00
System Summary - VM1S016	System Summary - VM4S001	System Summary - VM4S002	System Summary - VM4S003
VM1S016 17:11:00	vpnbrpc 81.79%	vpnbrpc 81.79%	vpnbrpc 81.79%
System Summary - VM4S004	System Summary - VM4S005	System Summary - VM4S006	System Summary - VM4S007
vpnbrpc 81.79%	vpnbrpc 81.79%	vpnbrpc 81.79%	vpnbrpc 81.79%
System Summary - VM4S008	System Summary - VM4S009	System Summary - VM4S010	System Summary - VM4S011
vpnbrpc 81.79%	vpnbrpc 81.79%	vpnbrpc 81.79%	vpnbrpc 81.79%
System Summary - VM4S012	System Summary - VM4S013	System Summary - VM4S014	System Summary - VM4S015
vpnbrpc 81.79%	vpnbrpc 81.79%	vpnbrpc 81.79%	vpnbrpc 81.79%
System Summary - VM4S016			
vpnbrpc 81.79%			

What's coming

- Class, user and node security
- 5200 is in beta – Looking for testers

Identifying Problems

- Alerts
 - ZALERT provides lot of samples
 - Send traps to trap manager – SPLUNK
- Thresholds
 - Enterprise View, graphs and reports
- Organize users into classes
- Use zOPERATOR to act on messages

Diagnosing problems

- Start on the highest level
- Use Tuning Guide
 - <https://velocitysoftware.com/customer/tunguide/>
 - Problem determination flow chart link
- Before and during problem performance data
- ARC_DAYS parameter in RUNAUTO PARMS
- Increase ZWRITE 191 disk
- ESACLDISK_PERCENT in ESAPARM EXEC
- ESAXACT report

Diagnosing problems

- Use tab parameters to specify date, time and other parameters of interest

Tab Parameters ×

Current interval

Start date

Start time

End date

End time

Relative

Class

Node

User

LPAR

SYSID

Job name

Service class

APPLID

Transaction ID

Device

Questions ?