

What's new in zVPS 4.2

z/VM and Linux

Performance Reporting

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Agenda

- **Overview**
- **War Stories**
- **New function, zVPS 4.2**
 - **Chargeback / Accounting**
 - **Oracle support**
 - **Java**
 - **Hardware: Z13, MFC**

- **zVPS – Velocity Performance Suite**
 - **zVIEW enhancements**
 - **Capacity Planning charts**
 - **zOPERATOR**
 - **LGR / SSI**
 - **Supports z/VM 6.3**
 - **Network data collection**
 - **Applications: JVM, MQ, ORACLE**

Velocity: 25 Years of Performance Management

- **PERFORMANCE MANAGEMENT Objectives**
 - **Reduce hardware, software costs** by managing resource utilization to high utilization
 - **Manage service levels**
 - 20 IFLs at 30% % utilization vs 10 at 60 vs 8 at 75%
 - Cost of performance management is less than the alternative (unlike distributed)
 - **How far do you drive on one gas tank if you don't have a gas gauge (that works)?**

FORMAL Performance Management

- **Performance Analysis**
 - Platform specific, z/OS skills don't apply
 - Real time analysis, Drill down
- **Capacity Planning**
 - Long Term resource utilizations
 - By application, node, system, server, etc
- **Operations Support**
 - Alerts for 1000's of servers
- **Charge back Support – South Africa amazing....**
 - Run your IT as a business (Profit Center)
 - **Accurate metrics**

Chargeback comments

- **Chargeback – Run IT as a business**
 - **Very common in North America**
 - **Very uncommon in Europe**
- **Linux is MUCH larger in North America**
- **South Africa?**
 - **Many installations have chargeback**
 - **Linux doing very well**
- **Installations that have valid chargeback:**
 - **Run IT as a business (Profit Center)**
 - **Understand Linux value proposition**
 - **Velocity Software's best customers...**

Velocity Software development guidelines

- Low cost of data collection
 - **Performance Monitor is NOT a performance problem**
 - .1% of ONE IFL per server per minute
- Standard interface (support EVERYTHING – almost)
- Agentless (snmp) – no proprietary agents
 - Supports lots of servers (x, p, solaris)
- Capture Ratios – for capacity planning, chargeback
- Easy installation (2 hour target)
- Long term archive, interface to MXG, MICS, Mainview
- **Accurate metrics**
- **Performance research (what problem trying to solve?)**

Current Research: What is a MIP(z13)?

Report: ESAMFC MainFrame Cache Analysis Rep
Monitor initialized: 12/23/14 at 13:55:31 on 2964

		<CPU Busy>		<-----Processor----->			
		<percent>		Speed/<-Rate/Sec->			
Time	CPU	Totl	User	Hertz	Cycles	Instr	Ratio
System:		557	388	5000M	25.9G	10.2G	2.542
14:05:32	0	92.9	64.6	5000M	4642M	1818M	2.554
	1	92.7	64.5	5000M	4630M	1817M	2.548
	2	93.0	64.7	5000M	4646M	1827M	2.544
	3	93.1	64.9	5000M	4654M	1831M	2.541
	4	92.9	64.8	5000M	4641M	1836M	2.528
	5	92.6	64.6	5000M	4630M	1826M	2.536
System:		557	388	5000M	25.9G	10.2G	2.542
14:06:02	0	67.7	50.9	5000M	3389M	2052M	1.652
	1	67.8	51.4	5000M	3389M	2111M	1.605
	2	69.0	52.4	5000M	3450M	2150M	1.605
	3	67.2	50.6	5000M	3359M	2018M	1.664
	4	60.8	44.5	5000M	3042M	1625M	1.872
	5	70.1	53.8	5000M	3506M	2325M	1.508
System:		403	304	5000M	18.8G	11.4G	1.640

**93% busy
1830 mips
(effective)**

**70% busy
2,000 Mips (effective)
2828 Mips at 100%**

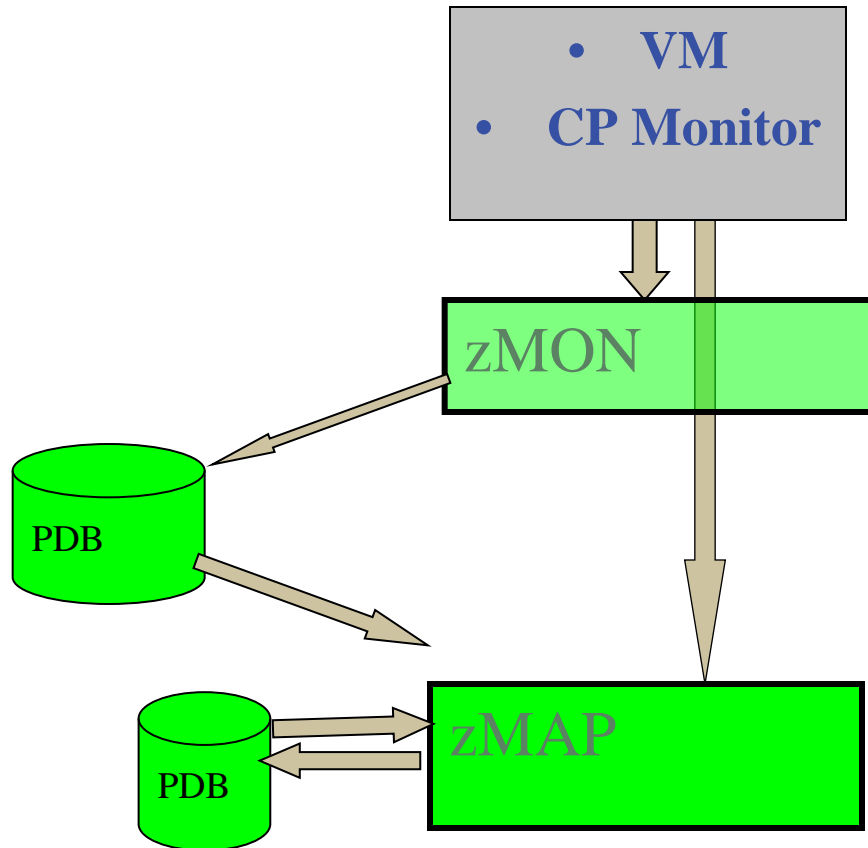
Velocity Software Products

- **Performance management (zVPS)**
 - **z/VM**
 - **z/VSE**
 - **Linux on Z**
 - **Microsoft**
 - **Solaris, P, etc**
 - **Linux on X / vmware, P, etc**
- **zTUNE – SOLVE Performance/Service problems FAST**
- **zPRO – Self service, Private Cloud, replace 3270 w Web**

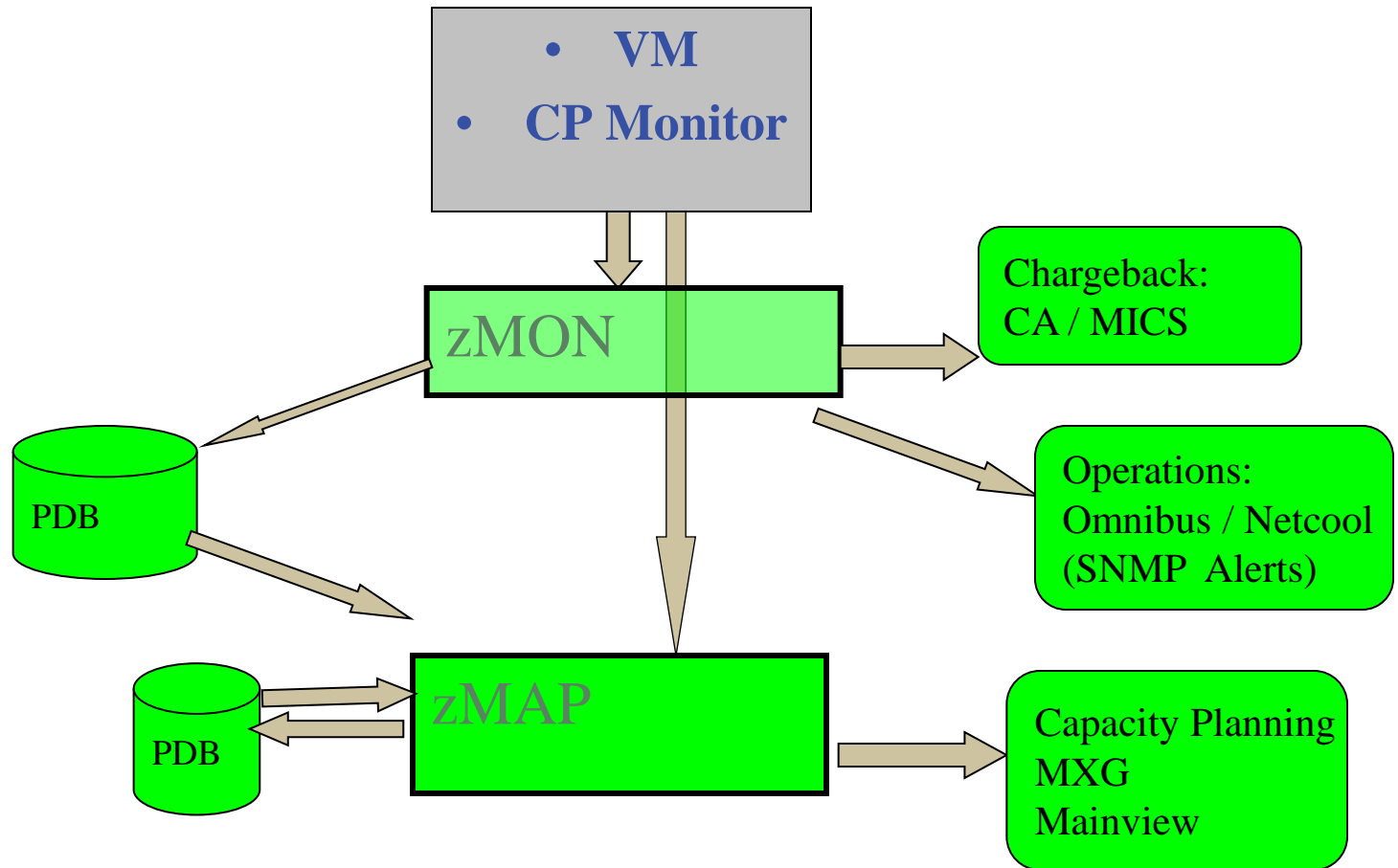
Velocity Software Products

- **z/VM Management no-charge features**
 - **zOPERATOR / 3270, browser**
 - **zALERT / 3270, sms, email, etc**
 - **Console manager / access via browser**
- **Webserver – VERY VERY FAST**
- **Web traffic logging**
- **LDEV (3270 support via browser)**

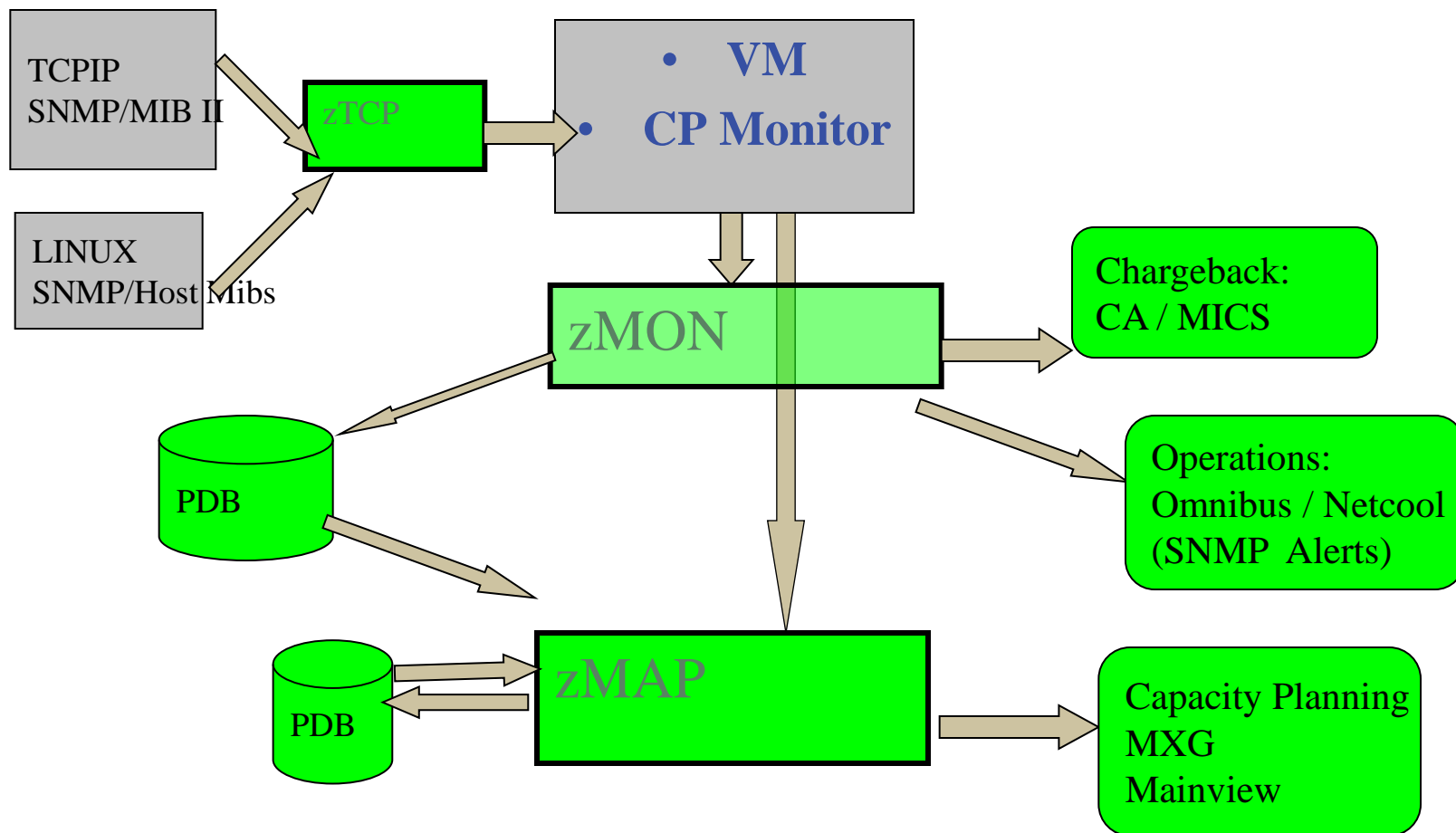
Original (1988) Architecture



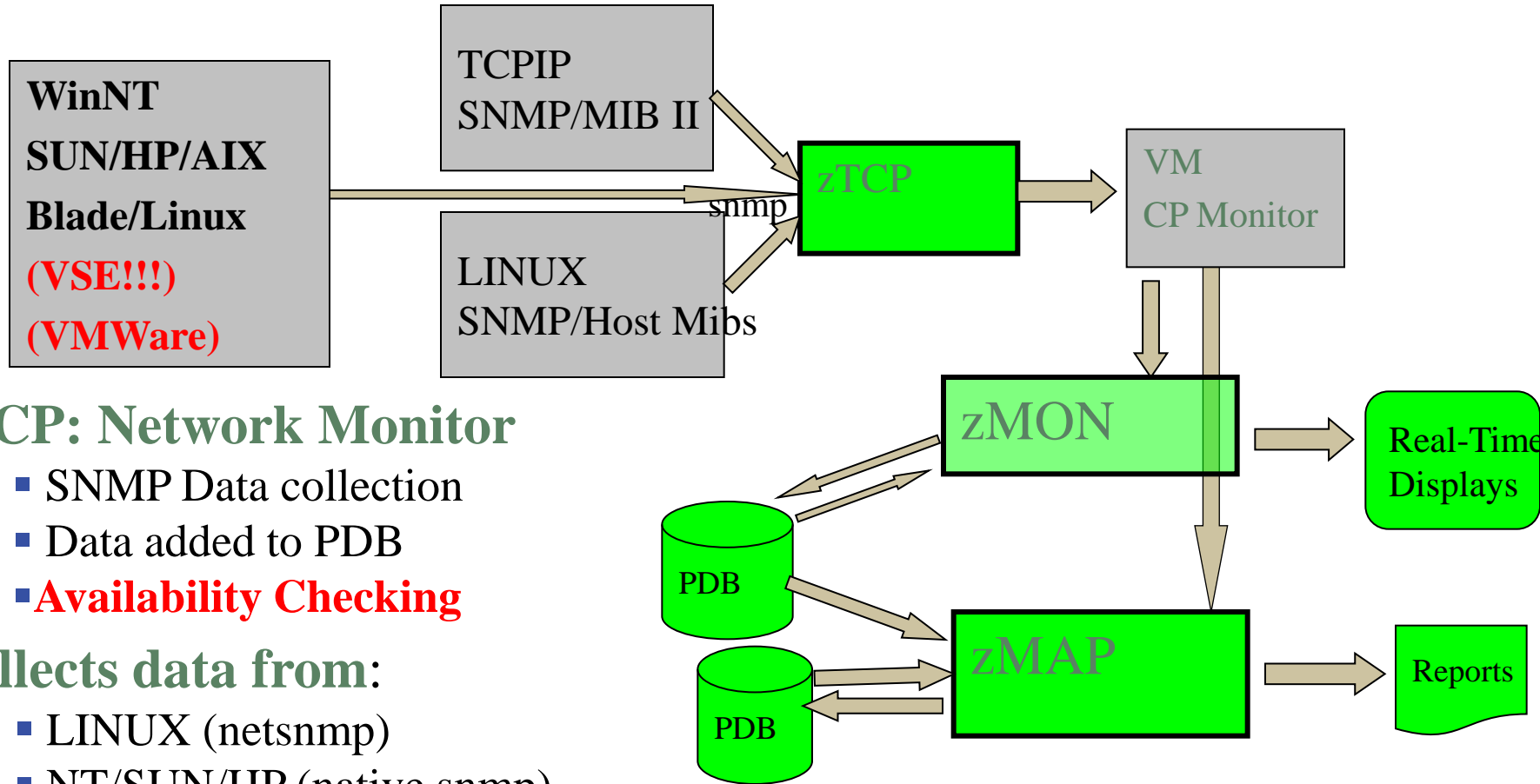
Add “Enterprise” Support



Add “Network” and Linux Support



Added Linux and Network Data Acquisition



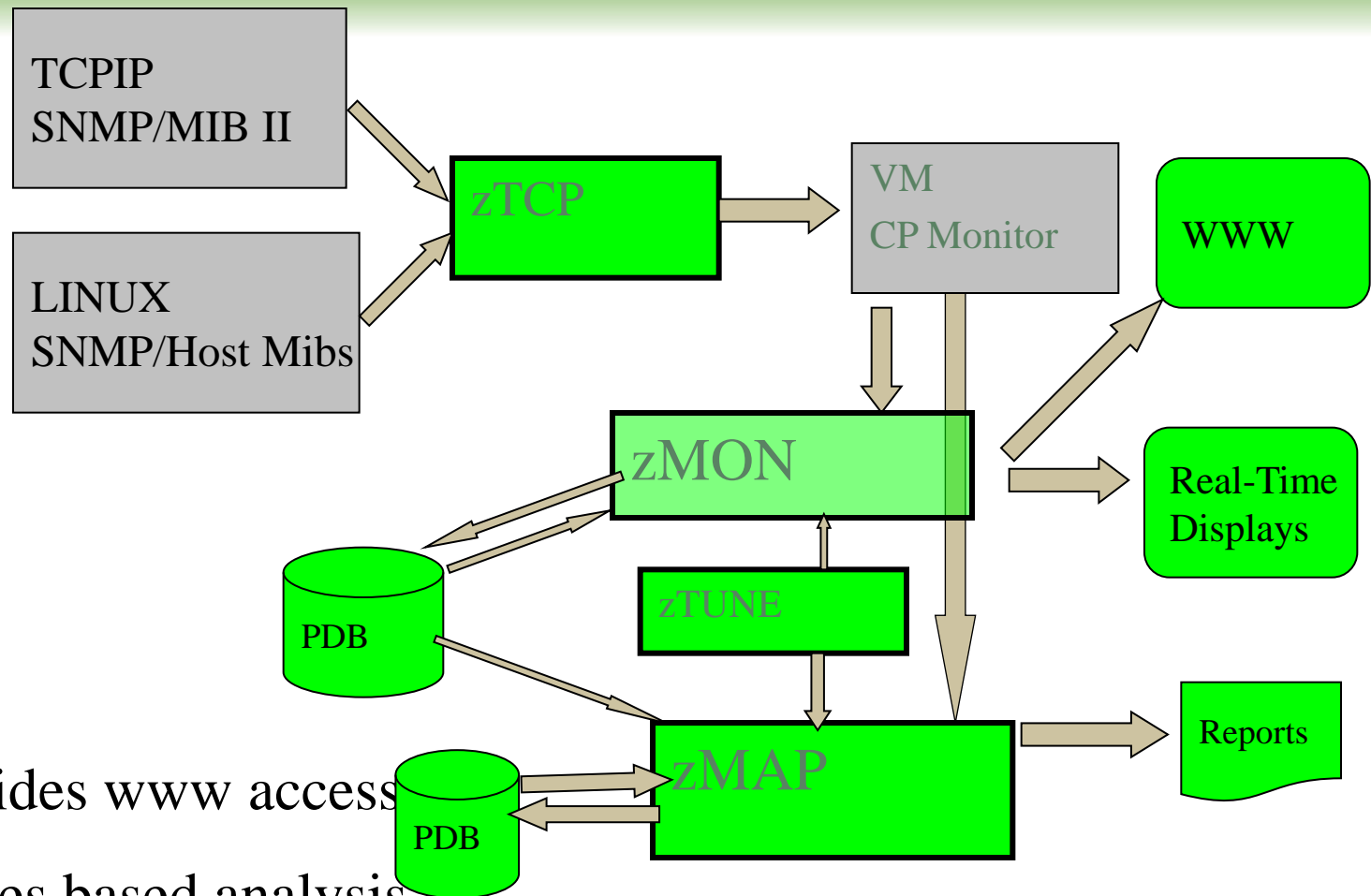
zTCP: Network Monitor

- SNMP Data collection
- Data added to PDB
- **Availability Checking**

Collects data from:

- LINUX (netsnmp)
- NT/SUN/HP (native snmp)
- Printers/Routers....
- **THOUSANDS OF SERVERS?**

Add webserving, performance skills



ZVWS Provides www access

zTUNE: Rules based analysis

Benefit of using standard interface?

- z/VM new releases supported day 1 (Note stg size)

Report: ESAUCD2

LINUX UCD Memory Analysis Report

Veloc

```
-----
Node/      <-----Storage Sizes (in MegaBytes)-----
Time/      <--Real Storage--> <-----SWAP Storage-----> Total <----Storage i
Date       Total  Avail Used  Total Avail Used  MIN   Avail CMM   Buffer
-----
```

15:29:00

*** Nodes *****

ZLNXT030	994.8	407.7	587.1	256.1	256.1	0	15.6	663.8	0	21.8
ZLNXT006	494.7	388.8	105.9	511.5	511.5	0	15.6	900.3	0	19.3
ZLNXT001	494.2	24.9	469.3	256.0	256.0	0	15.6	280.9	0	19.7
ZLNXT018	994.8	472.1	522.8	1279	1279	0	15.6	1751	0	41.9
ZLNXT017	3008.7	2612	396.9	1279	1279	0	15.6	3891	0	29.5
ZLNXT002	2001.3	902.4	1099	512.0	512.0	0	15.6	1414	0	53.9
ZLNXT007	201192	96151	103K	1023	1023	0	15.6	97174	0	18.1
ZLNXT009	201192	165K	32356	640.1	640.1	0	15.6	166K	0	19.9
ZLNXT013	201192	171K	26563	7.9	7.9	0	15.6	171K	0	22.2
ZLNXT010	201192	181K	15917	1535	1535	0	15.6	182K	0	24.3
ZLNXT011	201192	194K	2280	128.9	128.9	0	15.6	194K	0	28.4

Benefits of Architecture – day one support

- z/VM new releases supported day 1 (Note stg size)

Report: ESASTR1

Velocity Software Corporate

	Users	<-----Pages----->				<-----Over					
	Loggd	System	<Available>		Systm	User	<-AddSpace>		VDISK	Commit	Capt-
Time	On	Storage	<2gb	>2gb	ExSpc	Resdnt	Systm	User	Rsdnt	Ratio	Ratio
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
15:29:00	69	138412K	84	1258K	10296	134M	1641K	0	0	1.915	1.000
15:30:02	69	138412K	109	1649K	10194	134M	1699K	0	0	1.915	1.000
15:31:00	69	138412K	178	1540K	10059	134M	1732K	0	7	1.915	1.000
15:32:00	67	138412K	838	2974K	9869	89040K	1764K	0	21	1.915	0.686
15:33:03	66	138412K	200K	46M	9717	58977K	1064K	0	26	1.915	0.776
15:34:08	66	138412K	390K	77M	9277	23615K	707K	0	22	1.915	0.743
15:36:01	65	138412K	486K	136M	8669	204895	81839	0	10	1.915	0.995
15:37:00	65	138412K	486K	136M	8426	205722	78891	0	10	1.915	0.996
15:38:00	62	138412K	486K	137M	8333	206309	14582	0	0	1.915	1.000
*****Summary*****											
Average:	66	138412K	250K	65M	9392	57454K	912K	0	16	1.915	0.903

War Story – South Africa

Virtual Disk storage consumes large amounts of storage?

- **ESASTR1**

Identify Problem users, virtual disks (ESAASPC)

Identify WHEN swap was a problem (ESAUCD2)

- **Look at specific server storage/RAM and swap**

Look at specific server time and processes (ESALNXP)?

-

War Story: What did we learn?

- **Each server may be different?**
 - **TSM is using more resources than available**
 - **Controlling TSM will reduce resources a LOT**
- **Potential savings is 30GB of real storage**
 - **Very little effort (with zvps)**
 - **Diagnostics required (skills required)**
 - **Significant financial savings (30GB???)**

zVPS 4.2 Enhancements and Evolution

- **Performance Analysis**
 - New Linux metrics, zview enhancements
 - z/VM 6.3 (storage)
- **Capacity Planning**
 - Capacity charts
 - Node grouping (to support ESX, etc)
- **Operations Support (No charge features!)**
 - zAlert (adding click thru, cool stuff)
 - zOPERATOR (full operations support)
 - Console Management (for zVPS and ??)

zVPS “is” zVIEW

- **zVIEW:**
 - Web application
 - Integrated with zVPS
 - No charge feature of zVPS
- **CEC List / Enterprise View**
 - Feature of zVIEW
 - Renamed to match function
 - High level view of any LPAR in enterprise
 - MULTI-System “enterprise” access

zVPS “is” zVIEW

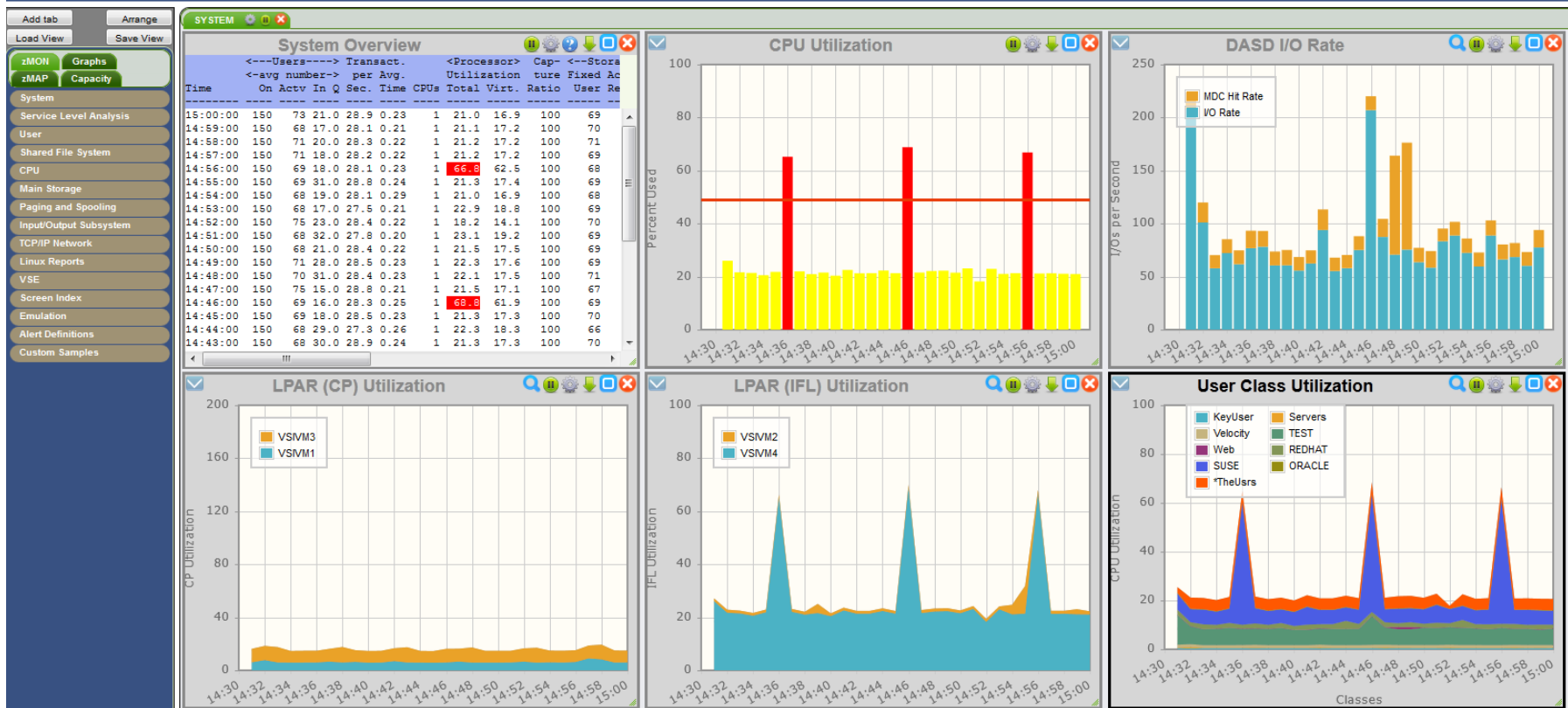
- **zVIEW enhancements**
 - **Colors user customizable**
 - **Enterprise view**
 - **LPAR Grouping**
 - **Configurable number of guests displayed**
 - **“expand button”**
 - **zOPERATOR display included**
 - **New I/O Response and I/O Intensity charts**

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

zVIEW Version 4120



Real Time Displays via browser



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

zVIEW Version 4120

Add tab

Arrange

Load View

Save View

zMON

Graphs

zMAP

Capacity

System

• ESAMGMT

• ESAHDR

• ESAMAIN

• ESASUM

• ESAOPER

• ESATUNE

Service Level Analysis

User

Shared File System

CPU

Main Storage

Paging and Spooling

Input/Output Subsystem

TCP/IP Network

Linux Reports

VSE

Screen Index

Emulation

Alert Definitions

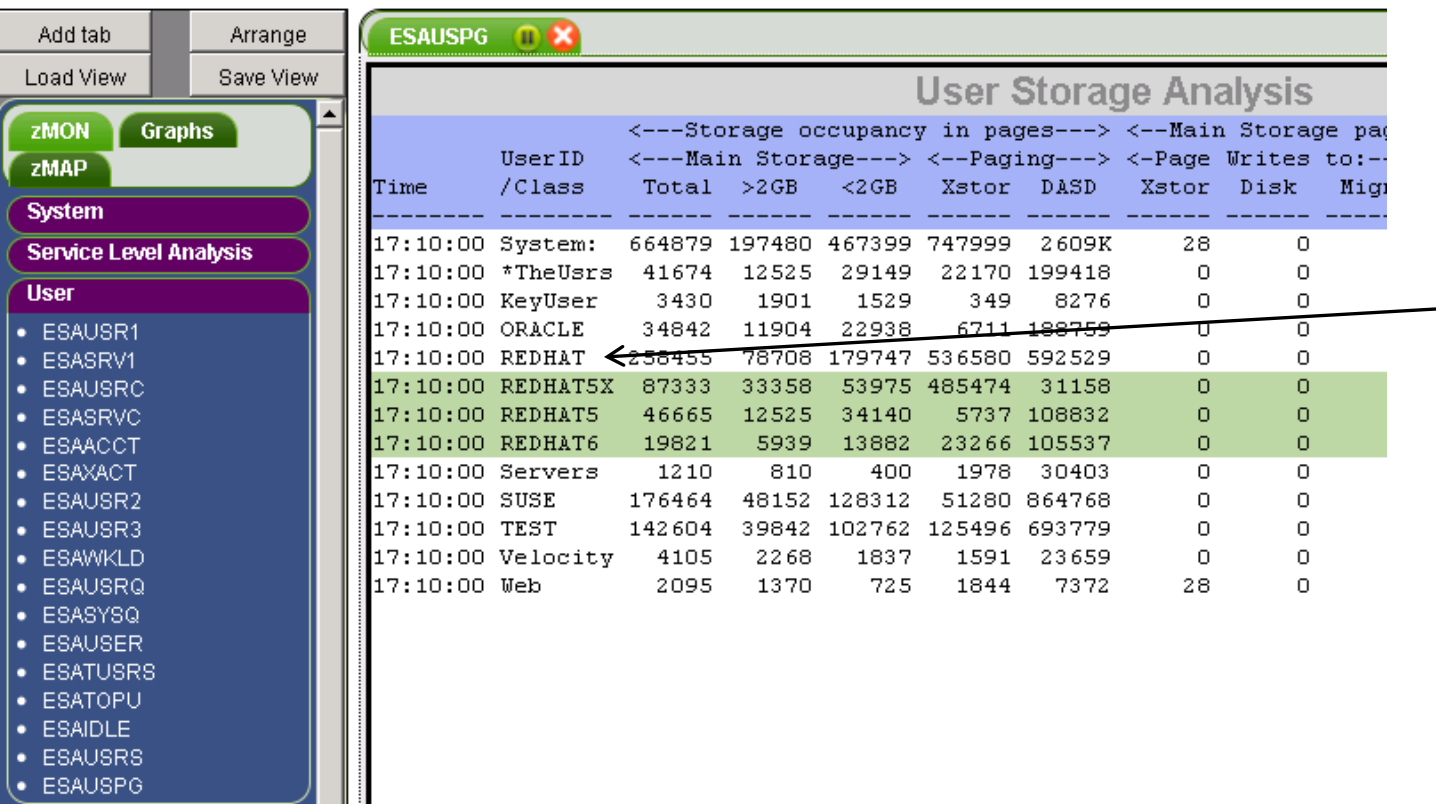
Custom Samples

ESAMAIN

System Overview

	<---Users-->	Transact.		<Processor>	Cap-	<--Storage (MB)-->	<--Paging-->	<---I/O--->	<MiniDisk>	Spool	Communications				
	<-avg number-->	per Avg.		Utilization	ture	Fixed Active Stor	<-pages/sec-->	<-DASD-->	<-Cache-->	Page	<-per second-->				
Time	On Acct	In Q Sec. Time	CPU	Total Vir.	Ratio	User Resid.	Load	XStore	DASD	Rate Resp	Rate	Hit	Rate	UUCV	VMCF
14:58:00	150	71 20.0 28.3 0.22	1	21.2 17.2	100	71 2367 0.5	35 25 68	1 0	13 93.4	1 510	1				
14:57:00	150	71 18.0 28.2 0.22	1	21.2 17.2	100	69 2365 0.5	27 8 66	1 0	14 95.1	1 506	1				
14:56:00	150	69 18.0 28.1 0.23	1	66.8 62.5	100	68 2365 0.5	25 26 89	1 0	14 94.0	2 514	1				
14:55:00	150	69 31.0 28.8 0.24	1	21.3 17.4	100	69 2366 0.5	1 12 60	1 0	13 94.0	1 508	1				
14:54:00	150	68 19.0 28.1 0.29	1	21.0 16.9	100	68 2363 0.5	12 36 72	1 0	14 94.2	1 510	1				
14:53:00	150	68 17.0 27.5 0.21	1	22.9 18.8	100	69 2361 0.5	25 44 89	1 0	13 94.5	1 507	1				
14:52:00	150	75 23.0 28.4 0.22	1	18.2 14.1	100	70 2367 0.5	23 35 93	1 0	12 93.0	1 498	1				
14:51:00	150	68 32.0 27.8 0.20	1	23.1 19.2	100	69 2360 0.5	3 5 58	1 0	16 95.4	1 529	1				
14:50:00	150	68 21.0 28.4 0.22	1	21.5 17.5	100	69 2359 0.5	2 7 64	1 1	13 92.1	1 508	1				
14:49:00	150	71 28.0 28.5 0.23	1	22.3 17.6	100	69 2357 0.5	18 18 75	1 0	101 89.1	2 993	1				
14:48:00	150	70 31.0 28.4 0.23	1	22.1 17.5	100	71 2362 0.5	15 34 71	1 0	93 89.4	2 961	1				
14:47:00	150	75 15.0 28.8 0.21	1	21.5 17.1	100	67 2362 0.5	42 41 87	1 0	17 94.6	2 534	1				
14:46:00	150	69 16.0 28.3 0.25	1	68.8 61.9	100	69 2362 0.5	4 17 207	1 0	13 94.4	1 519	1				
14:45:00	150	69 18.0 28.5 0.23	1	21.3 17.3	100	70 2355 0.5	4 5 75	1 0	13 94.8	2 514	1				
14:44:00	150	68 29.0 27.3 0.26	1	22.3 18.3	100	66 2353 0.5	19 18 58	1 0	12 95.2	1 510	1				
14:43:00	150	68 30.0 28.9 0.24	1	21.3 17.3	100	70 2356 0.5	19 8 55	1 0	13 94.7	1 507	1				
14:42:00	150	77 17.0 28.3 0.26	1	21.3 17.2	100	70 2359 0.5	29 31 94	1 1	19 93.1	8 537	1				
14:41:00	150	69 20.0 28.2 0.19	1	22.5 18.7	100	68 2360 0.5	11 28 62	1 1	12 95.3	1 506	1				
14:40:00	150	68 17.0 27.7 0.24	1	20.3 16.6	100	70 2357 0.5	1 5 56	1 0	13 94.9	1 504	1				
14:39:00	150	69 13.0 27.2 0.24	1	21.5 17.4	100	70 2356 0.5	18 13 61	1 0	14 95.8	1 505	1				
14:38:00	150	75 23.0 27.9 0.25	1	20.9 17.0	100	70 2361 0.5	26 7 61	1 1	13 94.8	1 507	1				
14:37:00	150	74 36.0 27.7 0.23	1	22.0 17.9	100	69 2362 0.5	29 25 78	1 0	15 95.5	1 508	1				
14:36:00	150	71 20.0 28.4 0.21	1	65.2 61.2	100	69 2364 0.5	19 33 77	1 0	17 92.7	7 533	1				
14:35:00	150	70 19.0 29.2 0.20	1	21.8 17.8	100	69 2361 0.5	19 22 62	1 0	13 95.2	2 508	1				
14:34:00	150	73 30.0 29.2 0.21	1	20.5 16.4	100	68 2367 0.5	19 39 72	1 0	13 94.4	2 511	1				
14:33:00	150	67 16.0 30.1 0.20	1	21.4 17.5	100	69 2362 0.5	30 12 58	1 0	12 94.9	1 507	1				
14:32:00	150	73 12.0 28.9 0.21	1	21.6 17.1	100	70 2368 0.5	82 53 101	1 0	19 96.6	1 507	1				
14:31:00	150	70 21.0 28.8 0.22	1	26.0 19.2	100	69 2369 0.5	65 173 208	2 0	15 94.3	1 501	1				
14:30:00	150	69 18.0 29.4 0.22	1	21.0 17.2	100	69 2361 0.5	10 7 59	1 0	13 95.4	1 507	1				
14:29:00	150	69 17.0 29.2 0.23	1	21.2 17.0	100	70 2357 0.5	22 18 67	1 0	13 95.4	1 507	1				
14:28:00	150	68 17.0 29.1 0.23	1	21.0 17.1	100	68 2356 0.5	17 8 67	1 0	13 94.8	1 511	1				
14:27:00	150	72 29.0 28.8 0.22	1	22.0 17.8	100	69 2361 0.5	9 8 87	1 0	15 95.8	1 513	1				
14:26:00	151	71 32.0 28.6 0.22	1	64.9 60.9	100	68 2358 0.5	25 12 76	1 0	16 92.9	1 511	1				
14:25:00	151	70 20.0 28.7 0.21	1	22.4 18.6	100	69 2356 0.5	16 25 60	1 0	13 94.8	1 507	1				
14:24:00	152	70 18.0 28.6 0.22	1	20.7 16.6	100	69 2360 0.5	17 27 79	1 0	13 95.3	1 509	1				
14:23:00	152	68 21.0 28.9 0.22	1	21.2 17.2	100	68 2357 0.5	25 15 76	1 0	13 95.5	1 506	1				
14:22:00	152	71 28.0 29.1 0.20	1	21.3 16.8	100	69 2361 0.5	24 19 96	1 0	14 95.5	1 507	1				
14:21:00	152	70 22.0 29.8 0.18	1	21.5 17.3	100	67 2363 0.5	17 15 117	1 0	15 97.1	19 532	1				
14:20:00	152	67 19.0 28.5 0.21	1	23.0 18.9	100	68 2363 0.5	10 20 86	1 0	13 95.5	1 508	1				
14:19:00	152	67 19.0 28.8 0.21	1	21.6 17.4	100	67 2360 0.5	11 9 84	1 0	13 95.5	1 508	1				
14:18:00	152	68 14.0 28.2 0.23	1	21.5 17.2	100	69 2365 0.5	5 10 90	1 0	13 95.9	1 509	1				
14:17:00	152	77 13.0 28.6 0.21	1	23.0 18.0	100	68 2363 0.5	80 39 136	1 9	16 88.5	1 534	1				
14:16:00	152	75 16.0 28.7 0.21	1	67.1 60.1	100	68 2368 0.5	19 17 217	1 0	13 95.5	1 514	1				
14:15:00	152	73 14.0 30.4 0.18	1	22.5 18.7	100	68 2365 0.5	32 7 69	1 0	13 96.0	1 508	1				
14:14:00	152	71 17.0 30.4 0.18	1	20.9 17.0	100	69 2365 0.5	22 3 62	1 0	13 95.5	2 508	1				
14:13:00	152	73 16.0 30.2 0.21	1	21.5 17.6	100	69 2363 0.5	22 3 62	1 0	13 95.5	2 508	1				

Drill down Options



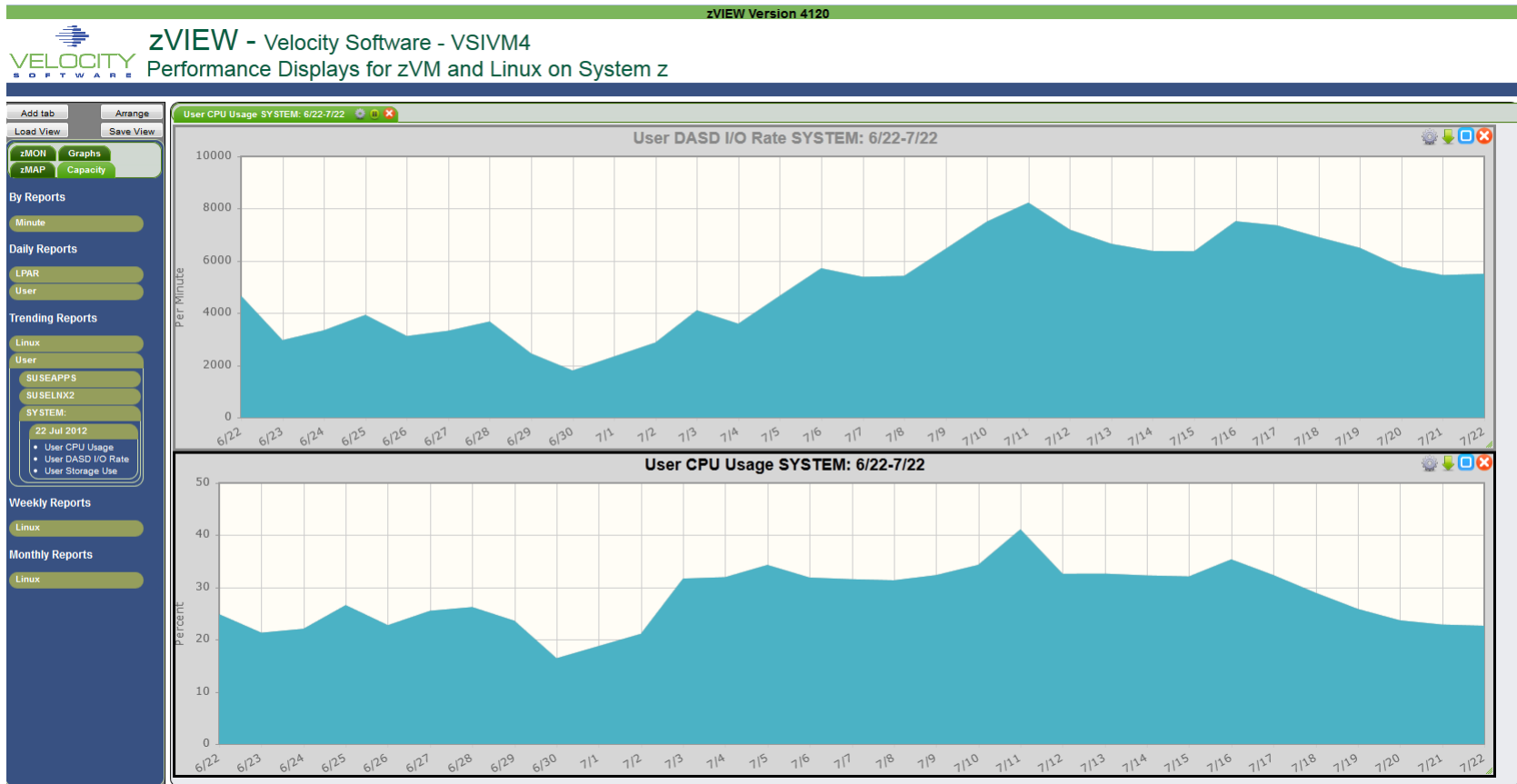
The screenshot shows the Velocity Software interface. On the left, a sidebar contains a tree view with categories: zMON, Graphs, zMAP, System, Service Level Analysis, and User. The 'User' category is selected, and an arrow points to it. Below 'User' is a list of users: ESAUSR1, ESASRV1, ESAUSRC, ESASRVC, ESAACCT, ESAXACT, ESAUSR2, ESAUSR3, ESAWKLD, ESAUSRQ, ESASYSQ, ESAUSER, ESATUSR8, ESATOPU, ESAIDLE, ESAUSRS, and ESAUSPG. The main window, titled 'ESAUSPG', displays a 'User Storage Analysis' table. The table has columns for Time, UserID /Class, and storage metrics. The 'redhat' class is highlighted in green.

Time	UserID /Class	<---Storage occupancy in pages--->			<---Main Storage pa		
		Total	>2GB	<2GB	Xstor	DASD	Xstor
17:10:00	System:	664879	197480	467399	747999	2609K	28
17:10:00	*TheUsrs	41674	12525	29149	22170	199418	0
17:10:00	KeyUser	3430	1901	1529	349	8276	0
17:10:00	ORACLE	34842	11904	22938	6711	188759	0
17:10:00	REDHAT	258455	78708	179747	536580	592529	0
17:10:00	REDHAT5X	87333	33358	53975	485474	31158	0
17:10:00	REDHAT5	46665	12525	34140	5737	108832	0
17:10:00	REDHAT6	19821	5939	13882	23266	105537	0
17:10:00	Servers	1210	810	400	1978	30403	0
17:10:00	SUSE	176464	48152	128312	51280	864768	0
17:10:00	TEST	142604	39842	102762	125496	693779	0
17:10:00	Velocity	4105	2268	1837	1591	23659	0
17:10:00	Web	2095	1370	725	1844	7372	28

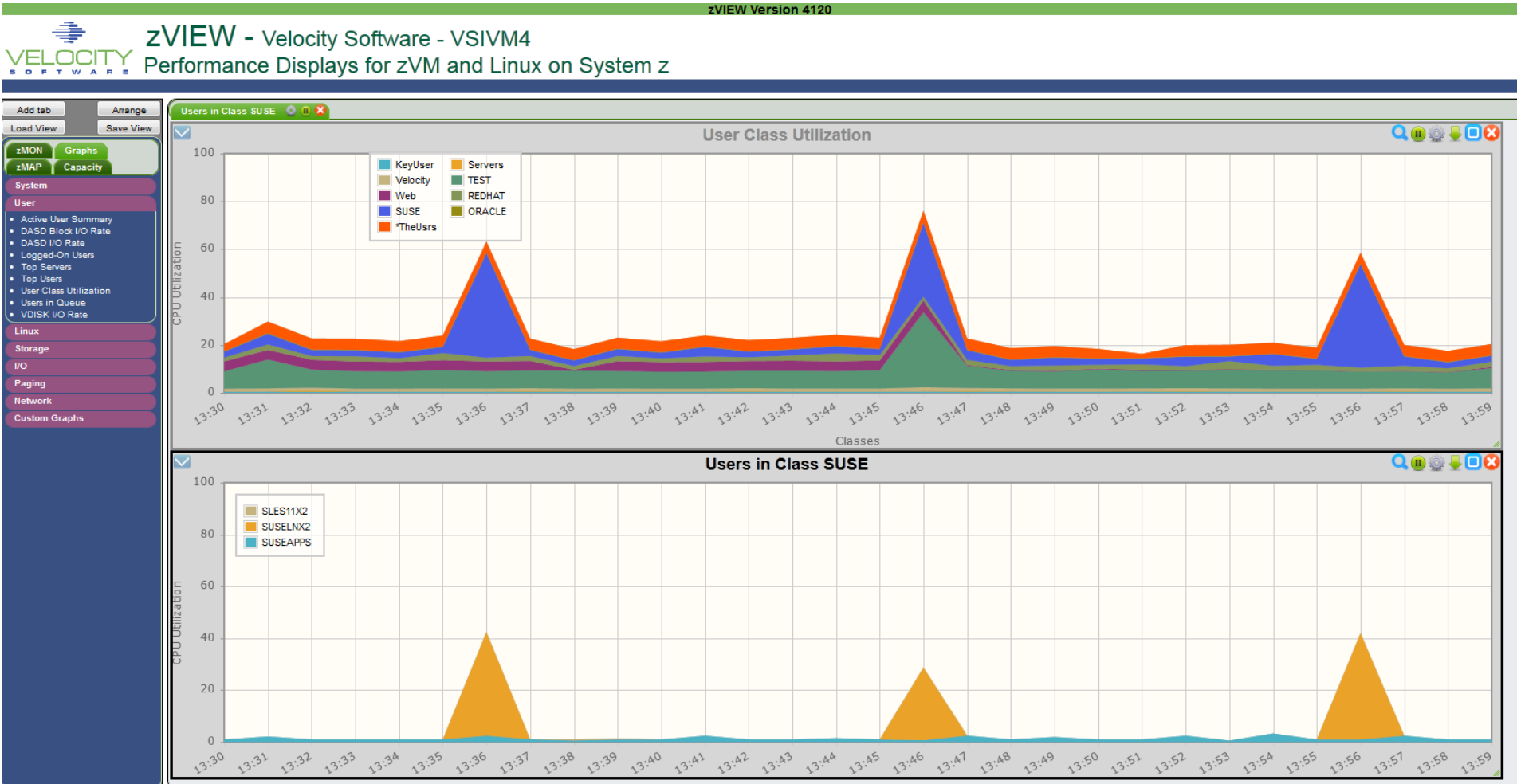
Click on “user” to see user screens

Click on “redhat” class to see “redhat users”

zMAP Capacity/Trend Graphs



Graph Drilldown



Enterprise System View



RSM and Velocity Software Performance Management Demonstration

RSM z/VM

RSMDemo	13/06/15	10:29	03AB37-0	0.76%	<div></div>
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Velocity cloud

VSIIDemo	13/06/15	02:30	044B42-0	23.71%	<div></div>
Linux Nodes (z/VM-Guests)					
slis2ora	4.85%	<div></div>			
roblx1	1.28%	<div></div>			
BROBLX1	1.27%	<div></div>			
roblx2	0.71%	<div></div>			
BROBLX2	0.69%	<div></div>			
redhat01	0.48%	<div></div>			

Velocity Production

VSIProd	13/06/15	01:30	014B42-0	4.02%	<div></div>
			014B42-1	3.47%	<div></div>
			Total	7.49%	<div></div>
Linux Nodes (Distributed Servers)					
LINUX9	3.98%	<div></div>			
suselnx3	2.61%	<div></div>			

Multiple System View (3 LPARs)

zVIEW Version 4143



zVIEW - Velocity Software/RSMZVM6 (RSMDEMO)
Performance Displays for zVM and Linux on System z



Measuring Application or other servers

Node Groups – Virtualized systems and applications

-Group by ESX

```
Report: ESAUCD2      LINUX UCD Memory Analysis Report  Velocity Software Corporate
-----
Node/      <-----Storage Sizes (in MegaBytes)----->
Time/      <--Real Storage--> <---SWAP Storage---> Total <---Storage in Use----->
Date       Total  Avail Used  Total Avail Used  MIN   Avail CMM   Buffer Cache Ovrhd
--
00:15:00
***Node Groups***
REDHAT      3477.6 104.4 3373 14609 13490 1119 93.7 13595 0 644.8 1272 1456
SUSE        11098 873.8 10224 25733 24337 1395 193.7 25211 0 1867.6 4367 3989
SOLARIS     2535.1 215.6 2320 1792 888.4 903.6 31.2 720.3 0 0 0 2320
VMWARE      1985.9 135.8 1850 5636 5454 182.7 46.9 5589 0 448.7 779.2 622.1
*** Nodes *****
redhat01    496.9 12.5 484.3 1024 1024 0.1 15.6 1036 0 56.4 338.1 89.8
redhat5     499.2 17.5 481.7 4095 3561 533.2 15.6 3579 0 63.8 24.9 393.0
redhat5x    497.1 18.2 478.9 4095 3874 220.5 15.6 3892 0 96.9 55.7 326.3
linux93     1011.4 21.5 989.9 1914 1336 578.2 15.6 1357 0 61.2 91.4 837.3
redhat56    497.0 17.4 479.7 1176 820.1 355.9 15.6 837.5 0 71.3 40.7 367.6
linux64     2013.1 15.8 1997 0 0 0 15.6 15.8 0 71.4 1819 107.0
rhel55v     498.5 22.5 476.1 2047 2047 0.1 15.6 2070 0 133.0 139.3 203.8
rhel64v     996.4 82.8 913.7 2047 2047 0 15.6 2130 0 194.7 536.2 182.7
redhat6x    994.8 31.0 963.8 125.0 125.0 0 15.6 156.0 0 187.3 625.3 151.2
sles11x     494.2 189.5 304.7 4219 4219 0 15.6 4408 0 139.7 109.7 55.3
sles11      494.7 75.0 419.7 4211 4211 0 15.6 4286 0 141.2 213.5 64.9
sles10      493.0 24.6 468.4 4219 4219 0 15.6 4243 0 141.5 276.7 50.1
SUSEAPPS    997.4 41.6 955.8 62.5 23.8 38.7 15.6 65.4 0 140.4 106.2 709.2
solarisa    1535.6 166.1 1369 768.0 768.0 0 15.6 700.2 0 0 0 1369
solarisb    999.6 49.5 950.1 1024 120.4 903.6 15.6 20.2 0 0 0 950.1
```

Process Storage metrics (zVPS version 4.2)

New metrics

- RSS, Size - Same
- Locked: Locked memory size (mlock)
- Peak: peak RSS (high water mark)
- Data: size of data, stack
- Stack: size of stack
- EXEC: size of executable (text)
- Lib: shared library code size
- PTBL: page table entries (linux 2.6.10) - Use to evaluate LARGE PAGES
- Swap: Swapped out

```
Report: ESALNXP          LINUX HOST Process Statistics Report          Velocity Software Corporate    ESAMAP 4.2.0
Monitor initialized: 03/07/13 at 13:04:28 on 2096 serial 34B42      First record analyzed: 03/07/13 13:05:00
```

```
-----
node/      <--Process Ident--> Nice PRTY <-----CPU Percents-----> <-----Storage Metrics (MB)----->
Name      ID      PPID   GRP  Valu Valu  Tot  sys user syst usrt  Size RSS Peak Swap Data Stk  EXEC Lib Lck PTbl
-----
13:06:00
sles11x2   0        0      0    0    0 0.58 0.37 0.22    0    0  508  109  589 1.73  170  6.2 10.3 159    0 0.70
ksoftirq  3        2      0    0    20 0.02 0.02    0    0    0    0    0    0    0    0    0    0    0    0
snmpd     15544    1 15544 -10   10 0.28 0.18 0.10    0    0   31   15 40.4    0 18.4  0.1  0.0  11    0 0.06
kworker/  30397    2      0    0    20 0.02 0.02    0    0    0    0    0    0    0    0    0    0    0    0
top       35656    1      0    0    20 0.27 0.15 0.12    0    0    3    1   2.9    0 0.40  0.1  0.1  1.9    0 0.09
-----
```

Process Storage metrics (zVPS version 4.2)

New metrics, New report ESALNXR (RAM)

- SwapCached Both in swap and ram
- Active Recently referenced
- **Inactive** Not recently referenced
- ActiveAnon Anonymous storage NOT file backed
- **InactiveAnon**
- ActiveFile page cache active
- VmallocTotal total allocated virtual address space
- VmallocUsed total used virtual address space
- VmallocChunk largest available chunk (virtual?)
- Slab - In-kernel data structure cache
- SReclaimable
- SUNreclaim
- KernelStack
- **PageTables**

```
Report: ESALNXR          LINUX RAM/Storage Analysis Report          Velocity Software Corporate    ESAMAP 4.2.0
Monitor initialized: 03/07/13 at 13:04:28 on 2096 serial 34B42      First record analyzed: 03/07/13 13:05:00
-----
Node/    <---Memory in megabytes--<-----> <-Kernel(MB)-> <-Buffers(MB)-->      Wrt <---VMalloc-->
          <---Cache-----><Anonymous> Stack<--Slab-->      Write <---VMalloc-->      <-----Huge page----->
Time     Total Free Size Actv Swap Actv Inact Size Size SRec  Size Dirty Back  Unre Back TOT Used Chunk Totl Fre Rsv Surp Size
-----
13:06:00
sles11x2 996.5 43.1  519  399  0.2 51.1 12.2  39.1  1.6 117  106  242   0.0   0 .1M 13.1 131K 928.0   0  0  0
```


New Installation Easy Update Process

White is update to installed product, yellow is update to something not installed

```
GETUPDAT Velocity Software Inc.
Download Installation Packages

Select following new or updated file(s) to download and press PF2

_ FBADIR  README  13-06-17 13:11
_ INSTALL PROD4130 13-06-16 19:12
_ POOLDEF README  13-06-17 07:29
_ PTRACK  PROD2100 12-07-04 17:19
_ VSESMP  PROD4100 13-05-16 10:27
_ ZALERT  PROD4140 13-05-02 08:25
_ ZLDEV   README  13-04-24 07:18
_ ZLDEV   PROD4150 13-04-24 09:06
_ ZMAP    PROD4135 13-05-14 16:19
_ ZOPER   PROD4112 13-06-10 08:49
_ ZPRO    PROD1343 13-05-21 06:30
_ ZSSL    README  13-05-21 06:09
_ ZSSL    PROD4152 13-05-21 06:29
_ ZSSL    PROD4150 13-04-13 12:10
_ ZVIEW   PROD4144 13-06-13 13:27
_ ZVWS    README  13-05-20 07:14
_ ZVWS    README  13-05-20 07:14
_ ZVWS    PROD4152 13-05-28 09:43

PF1: Help    PF2: Download PF3: Exit    PF5: Upload
PF6: All Files PF9: Update Key PF12: Cancel
```

Performance “new stuff”

zTCP – Network Data Collector – 4.2

- **Topology recognition**
 - From snmp, know if node moves (LGR)
 - move nodes to correct LPAR (4.2)
- **DNS Support**
- **Apple PID support (pid > 64K)**
- **Long process names (16 characters)**

Server Accounting

- Linux accounting by “application”

```
EXTRACT:                                ; First extract system data

columns = '10 10 10 8 8 8 8'
TITLE = '  STARTTIME  STOPTIME  NODE          APPL          PID'
TITLEc= '          CPU'
TITLE = '-----'
TITLEc= '-----'

INTERVAL='SU'
CRITERIA='USRTYPE=USER'
CRITERIA='USRCON.CLASSID=*Linux'
CRITERIA='STARTTIME >= 080000'
CRITERIA='STOPTIME <= 170000'
CRITERIA='VSINAP.TOTCPU > 0 '

X = 'STARTTIME'
Y = 'STOPTIME'
Y = 'NODE'
Y = 'VSINAP.NAME'
Y = 'VSINAP.ID'
Y = 'VSINAP.TOTCPU / 100' ;Turn into CPU Seconds
```

Linux Application Accounting

- By server, by application, CPU seconds consumed

Date	Time	NODE	APPL	PID	CPU
-----	-----	-----	-----	-----	-----
• 20090910	092200	LNXAS009	*Totals	0	34
• 20090910	092200	LNXAS009	agc2	29188	8
• 20090910	092200	LNXAS009	nodeage	318	7
• 20090910	092200	LNXAS009	automou	3028	0
• 20090910	092200	LNXAS009	cron	3313	1
• 20090910	092200	LNXAS009	kernel	1	10
• 20090910	092200	LNXAS009	multipa	24607	4
• 20090910	092200	LNXAS009	sendmai	3154	0
• 20090910	092200	LNXAS009	snmpd	30961	3
• 20090910	092200	LNXAS029	*Totals	0	170
• 20090910	092200	LNXAS029	.opende	3340	0
• 20090910	092200	LNXAS029	ace	28947	8
• 20090910	092200	LNXAS029	agenten	18597	7
• 20090910	092200	LNXAS029	auditau	26553	13
• 20090910	092200	LNXAS029	a2adata	25244	19
• 20090910	092200	LNXAS029	comm_um	15950	11
• 20090910	092200	LNXAS029	c2cb_mi	20312	3
• 20090910	092200	LNXAS029	ezacqui	4612	9
• 20090910	092200	LNXAS029	isodata	28948	7
• 20090910	092200	LNXAS029	nodeage	9756	15
• 20090910	092200	LNXAS029	webshee	22130	15

Linux Application Accounting

- Defining applications

```

appname = 'PIDFILE'      appstring = 'PidFile'
appname = 'MineCrft'     appstring = 'minecraft'
appname = 'HVC'          appstring = 'hvc'
appname = 'DESKTOP'      appstring = 'desktop'
appname = 'oracle'       appstring = 'oracle'
    
```

Screen: ESALNXA Velocity Software - VSIVM4
 1 of 3 LINUX VSI Host Application Report

ESAMON 4.201 02/25
 CLASS * NODE BLAKEMC

Time	Node/ Group	Process/ Application name	ID	<---Processor Percent--->				
				Total	<Process> sys	<Children> user	syst	usrt
21:20:00	BLAKEMC	*Totals*	0	15.6	0.1	15.5	0	0
		kernel	2097K	0.0	0.0	0	0	0
		snmpd	98934	0.1	0.1	0.0	0	0
		MineCrft	81176	15.5	0.0	15.5	0	0
21:19:00	BLAKEMC	*Totals*	0	14.5	0.1	14.4	0	0
		snmpd	98934	0.1	0.0	0.0	0	0
		MineCrft	81176	14.4	0.0	14.4	0	0
21:18:00	BLAKEMC	*Totals*	0	14.4	0.1	14.3	0	0
		snmpd	98934	0.1	0.0	0.0	0	0
		MineCrft	81176	14.3	0.0	14.3	0	0

Linux Application Accounting

- Websphere argument string used for accounting
- wasadmin 27144 6846 0 Feb06 ? 00:43:13 /u01/was61/java/bin/java -
Declipse.security -Dwas.status.socket=34229 -Dosgi.install.area=/u01/was61 -
Dosgi.configuration.area=/u01/was61/profiles/appsrv/configuration -
Dosgi.framework.extensions=com.ibm.cds -
Xshareclasses:name=webspherev61_%g,groupAccess,nonFatal -Xscmx50M -
Xbootclasspath/p:/u01/was61/java/jre/lib/ext/ibmorb.jar:/u01/was61/java/jre/lib/ext/
ibmext.jar:/u01/J2EEProbe/DiagnosticsAgent/classes/IBM/1.5.0/instr.jre:/u01/J2EE
Probe/DiagnosticsAgent/classes/boot -classpath
/u01/was61/profiles/appsrv/properties:/u01/was61/properties:/u01/was61/lib/startu
p.jar:/u01/was61/lib/bootstrap.jar:/u01/was61/lib/j2ee.jar:/u01/was61/lib/Improxy.ja
r:/u01/was61/lib/urlprotocols.jar:/u01/was61/deploytool/itp/batchboot.jar:/u01/was
61/deploytool/itp/batch2.jar:/u01/was61/java/lib/tools.jar -
Dibm.websphere.internalClassAccessMode=allow -verbose:gc -Xms1024m -
Xmx1200m -
Dws.ext.dirs=/u01/was61/java/lib:/u01/was61/profiles/appsrv/classes:/u01/was61/c
lasses:/u01/was61/lib:/u01/was61/installedChannels:/u01/was61/lib/ext:/u01/was61
/web/help:/u01/was61/deploytool/itp/plugins/com.ibm.etools.ejbdeploy/runtime -
Dderby.system.home=/u01/was61/derby -Dcom.ibm.itp.location=/u01/was61/bin -
Djava.util.logging.configureByServer=true -
Duser.install.root=/u01/was61/profiles/appsrv -

zOPERATOR

Several requests to extend ESAOPER screen

zOPERATOR:

- Optional **no-charge** application component of zMON
- Uses standard zMON 3270 screen driver, existing function
- Scrollable 3270 console
- Messages can be searched by text, date or time
- All messages logged in daily files
- Actions can be set based on messages received
- Can be viewed from DIALed terminal or **zVIEW (WEB!)**

Console Management View

Performance zVWS administration zTCP administration zVPS administration			
Available zVPS Console Logs			
zPRO Available Log Files			
Select one or more logfiles that you wish to view or download			
<input type="button" value="Download"/>	<input type="button" value="View"/>	<input type="button" value="Upload"/>	<input type="button" value="Reset"/>
DXTZMAP			
<input type="checkbox"/> 14 Jun 2013 (4)	<input type="checkbox"/> 03 Jun 2013 (4)	<input type="checkbox"/> 23 May 2013 (4)	<input type="checkbox"/> 12 May 2013 (4)
<input type="checkbox"/> 13 Jun 2013 (4)	<input type="checkbox"/> 02 Jun 2013 (4)	<input type="checkbox"/> 22 May 2013 (4)	<input type="checkbox"/> 11 May 2013 (4)
<input type="checkbox"/> 12 Jun 2013 (4)	<input type="checkbox"/> 01 Jun 2013 (4)	<input type="checkbox"/> 21 May 2013 (648)	<input type="checkbox"/> 10 May 2013 (4)
<input type="checkbox"/> 11 Jun 2013 (4)	<input type="checkbox"/> 31 May 2013 (4)	<input type="checkbox"/> 20 May 2013 (6)	<input type="checkbox"/> 09 May 2013 (39)
<input type="checkbox"/> 10 Jun 2013 (4)	<input type="checkbox"/> 30 May 2013 (4)	<input type="checkbox"/> 19 May 2013 (6)	<input type="checkbox"/> 08 May 2013 (4)
<input type="checkbox"/> 09 Jun 2013 (4)	<input type="checkbox"/> 29 May 2013 (4)	<input type="checkbox"/> 18 May 2013 (6)	<input type="checkbox"/> 07 May 2013 (4)
<input type="checkbox"/> 08 Jun 2013 (4)	<input type="checkbox"/> 28 May 2013 (4)	<input type="checkbox"/> 17 May 2013 (6)	<input type="checkbox"/> 06 May 2013 (4)
<input type="checkbox"/> 07 Jun 2013 (4)	<input type="checkbox"/> 27 May 2013 (4)	<input type="checkbox"/> 16 May 2013 (6)	<input type="checkbox"/> 05 May 2013 (4)
<input type="checkbox"/> 06 Jun 2013 (4)	<input type="checkbox"/> 26 May 2013 (4)	<input type="checkbox"/> 15 May 2013 (4)	
<input type="checkbox"/> 05 Jun 2013 (4)	<input type="checkbox"/> 25 May 2013 (4)	<input type="checkbox"/> 14 May 2013 (4)	
<input type="checkbox"/> 04 Jun 2013 (4)	<input type="checkbox"/> 24 May 2013 (4)	<input type="checkbox"/> 13 May 2013 (4)	
INSTALL			
<input type="checkbox"/> 14 Jun 2013 (263)	<input type="checkbox"/> 02 Jun 2013 (553)	<input type="checkbox"/> 20 May 2013 (78)	<input type="checkbox"/> 09 May 2013 (6)
<input type="checkbox"/> 13 Jun 2013 (16)	<input type="checkbox"/> 31 May 2013 (12)	<input type="checkbox"/> 17 May 2013 (153)	<input type="checkbox"/> 08 May 2013 (257)
<input type="checkbox"/> 12 Jun 2013 (38)	<input type="checkbox"/> 30 May 2013 (6)	<input type="checkbox"/> 16 May 2013 (887)	<input type="checkbox"/> 06 May 2013 (5)
<input type="checkbox"/> 10 Jun 2013 (8)	<input type="checkbox"/> 29 May 2013 (317)	<input type="checkbox"/> 15 May 2013 (494)	<input type="checkbox"/> 05 May 2013 (155)
<input type="checkbox"/> 05 Jun 2013 (6)	<input type="checkbox"/> 28 May 2013 (6)	<input type="checkbox"/> 14 May 2013 (48)	
<input type="checkbox"/> 04 Jun 2013 (6)	<input type="checkbox"/> 23 May 2013 (63)	<input type="checkbox"/> 13 May 2013 (434)	
<input type="checkbox"/> 03 Jun 2013 (1050)	<input type="checkbox"/> 22 May 2013 (20)	<input type="checkbox"/> 10 May 2013 (14)	
SFPURGER			
<input type="checkbox"/> 14 May 2013 (8)	<input type="checkbox"/> 11 May 2013 (8)	<input type="checkbox"/> 08 May 2013 (8)	<input type="checkbox"/> 05 May 2013 (8)
<input type="checkbox"/> 13 May 2013 (8)	<input type="checkbox"/> 10 May 2013 (8)	<input type="checkbox"/> 07 May 2013 (8)	
<input type="checkbox"/> 12 May 2013 (8)	<input type="checkbox"/> 09 May 2013 (8)	<input type="checkbox"/> 06 May 2013 (8)	
ZALERT			
<input type="checkbox"/> 13 Jun 2013 (40)	<input type="checkbox"/> 03 Jun 2013 (48)	<input type="checkbox"/> 24 May 2013 (50)	<input type="checkbox"/> 14 May 2013 (52)
<input type="checkbox"/> 12 Jun 2013 (48)	<input type="checkbox"/> 02 Jun 2013 (38)	<input type="checkbox"/> 23 May 2013 (42)	<input type="checkbox"/> 13 May 2013 (70)
<input type="checkbox"/> 11 Jun 2013 (42)	<input type="checkbox"/> 01 Jun 2013 (52)	<input type="checkbox"/> 22 May 2013 (63)	<input type="checkbox"/> 12 May 2013 (42)

zVPS Application Metrics

- Requirement to go beyond z/VM and Linux metrics
- z/VPS provides over 4,000 unique metrics
 - z/VM System metrics
 - z/VM Virtual machine metrics
 - Network metrics
 - Linux System metrics
 - Linux Process metrics
- **Development to target the users:**
 - **Oracle**
 - **Websphere / java**

Java/WebSphere Metrics

Report: ESAJVM

Java Subsystem Analysis Report

Velocity Sof

Node/	<JavaClass> Memory		<-----Heap data----->						
Date	<-----Application----->		<--Loaded-->		pending	<-----sizes----->			
Time	Name	Type	Curr	/Sec	Final	Init	Used	Commit	Max
13:06:00									
S11R20RA	WAS Server1	JVM	15287	0	0	52.4M	100M	107.5M	268M
	WAS Server2longerna	JVM	15312	0	0	52.4M	85.4M	103.3M	268M

Report: ESAJVM

Java Velocity Software Corporate

ESAMAP 4.2.0

06/19/13

Node/	<---Non Heap Data--->				<--Thread Count data-->				
Date	<-----Application->		<-----sizes----->		Curr	Daemon	Peak	start	
Time	Name	Init	Used	Commit	Max	Live	Count	thrds	/sec
13:06:00									
S11R20RA	WAS Server1	0	101M	184.7M	0	58.0	55.0	55.0	0
	WAS Server2longerna	0	101M	171.9M	0	58.0	55.0	55.0	0



PROVEN PERFORMANCE

Oracle Metrics

Oracle Reports: (10, 11G , 12C supported , “x” AND “z”!)

- 40 metrics
- Configuration, subsystem I/O, SGA, PGA

ESAORAC: Oracle Configuration

Report: ESAORAC		Oracle Database Configuration Report						Velocity Software Corporate				ZMAP 4.2.0	

Node/ Date Time	<-----Database Description--->			<-----Database----->			<-----Storage Overview (MB)----->						
				<-----Start----->			<-----SGA----->			<-----PGA----->			
	DatabaseName	Instance	Version	Date	Time	Status	Size	Free	Max	Size	Max	MaxMan	

18:30:00													
oracle	orcl	orcl	10.2.0.4.0	2013/05/07	09:15	OPEN	133K	0	940K	1778K	532K	0	
S11R20RA	db01	db01	11.2.0.2.0	2013/06/28	12:46	OPEN	143K	0	1557K	1007K	0	0	

18:31:00													
oracle	orcl	orcl	10.2.0.4.0	2013/05/07	09:15	OPEN	133K	0	940K	1778K	532K	0	
S11R20RA	db01	db01	11.2.0.2.0	2013/06/28	12:46	OPEN	143K	0	1557K	1007K	0	0	

Oracle Metrics (I/O)

Oracle Reports: (Release 10, 11, 12 supported)

ESAORAS: Oracle Subsystem

```

Report: ESAORAS      Oracle Subsystem Analysis Report      Velocity Software Corporate      ZMAP 4.2.0
Monitor initialized: 08/06/13 at 18:28:15 on 2096 serial    First record analyzed: 08/06/13 18:29:00
-----
Node/      <---Database---> <-User Activity->  ----Physical Reads Activity---> <-Physical Write Activity-->
Date                               <Rate per second>  -----Rate per second-----> <-----Rate per second----->
Time      Name      Instance  Calls Comm Rollbk  Rds  Hits  Direct  I/O Bytes Writss CHits Direct  I/O  Bytes
-----
18:30:00
oracle  orcl      orcl      3175  114K  11139  026611  14593  2813  2801      12  23777  6377K  35646  35634      12
S11R20RA db01      db01      3201  342K  9767  035503  26838  57495  55324  2171  253111  4335K  29590  27893  1697
-----
18:31:00
oracle  orcl      orcl      3175  114K  11139  026611  14593  2813  2801      12  23777  6377K  35646  35634      12
S11R20RA db01      db01      3201  342K  9767  035503  26838  57495  55324  2171  253111  4335K  29590  27893  1697

```

Oracle Metrics (SGA/PGA)

Oracle Reports: (10.2, 11.2, 12 supported)

ESAORAG: General Storage Areas (SGA, PGA)

Report: ESAORAG Oracle SGA/PGA Analysis Report Velocity S
Monitor initialized: 08/06/13 at 18:28:15 on 2096 serial 34B42 First reco

```
-----
Node/                               <-----Shared Global Area (SGA)----->
Date      <--DataBase ----> Fixed Redo Buffer      <-----Pool sizes----->
Time      Name      Instance Size Buffr Cache Free Shrd Large Java Stream ShrIO
-----
18:30:00
oracle    orcl      orcl      133K  135K    0    0 1543K  268K 268K    0    0
S11R20RA db01      db01      143K  274K 1711K    0 1812K  268K 268K 268416    0
```

<-----PGA Data----->

```
<-Target-> InUse Alloc Free
Parm Auto          -able
-----
```

```
1778K 90752 1239K    0 881K
1007K 1832K    0 4544 1074K
```

z/VM 6.3 System Storage

Storage has changed - Ready to reclaim: free list?

Report: ESASTR3 Storage IBR / DPA Analysis Velo
 Monitor initialized: 07/16/13 at 15:27:11 on 2817 serial FE0A6 Firs

Time	<---Users--->			<-----Age List in Pages----->					<- Page-->		
	On	Actv	In Q	Target	size	Ready	Chngd	Refd	Ready	Chgd	Refd
15:29:00	69	38	13.0	2745K	1M	196K	0	0	703155	0	0
15:30:02	69	40	29.0	2745K	947K	140K	0	0	645887	0	0
15:31:00	69	43	17.0	2745K	951K	126K	0	0	641654	0	0
15:32:00	67	38	14.0	2745K	704K	90858	0	0	485985	0	0
15:33:03	66	40	13.0	2745K	628K	90042	0	0	426325	0	0

Report: ESASTR1 Main Storage Analysis Vel

Time	Users		Pages								
	Loggd	System	Fixed	Non-	Free	Frame	<Available>		Systm	User	
	On	Storage	Store	Pgble	Stor	Table	<2gb	>2gb	ExSpc	Resdnt	
15:29:00	69	138412K	2775	38741	414	1081K	84	1258K	10296	134M	
15:30:02	69	138412K	2775	38724	414	1081K	109	1649K	10194	134M	
15:31:00	69	138412K	2775	38672	415	1081K	178	1540K	10059	134M	
15:32:00	67	138412K	2775	38607	390	1081K	838	2974K	9869	89040K	
15:33:03	66	138412K	2775	38537	388	1081K	200K	46M	9717	58977K	

z/VM 6.3 User Storage

Storage has changed

IBR – Invalid but resident – Exstore replacement

Report: ESAUSTR		User Storage Analysis									V

	<-----Virtual Server Storage (Pages)----->								<Resident>		Page
UserID	Size	Alloc	Resi-	UFO	<--IBR-->		<AgeList>		<Unreferd>		slot
/Class			dent	Activ	TOT	>2gb	<2gb	>2gb	<2gb	>2gb	used

15:29:00	265M	169M	134M	133M	1756	1029	217	1.2M	142	331K	41M
User Class Analysis											
Servers	117K	18119	2060	454.0	287	256	0	1319	0	120	17421
ZVPS	49152	5409	2305	6.0	18.0	18.0	0	2281	0	13.0	4988
Linux	14336	1980	96	3.0	6.0	6.0	0	87.0	0	0	1929
TheUsers	265M	169M	134M	133M	1240	618	217	1.2M	142	331K	41M
Top User Analysis											
LNXT007	52.4M	39.2M	23M	22.1M	16.0	16.0	57.0	499K	0	241K	18M
LNXT009	52.4M	43.4M	36M	35.6M	166	20.0	0	27K	0	2220	8979K
LNXT010	52.4M	27.2M	24M	23.6M	188	50.0	90.0	160K	89.0	55K	4761K
LNXT013	52.4M	36.5M	30M	30.2M	212	92.0	1.0	175K	0	8116	7331K
LNXT011	52.4M	22.1M	22M	21.6M	14.0	14.0	53.0	167K	53.0	15K	1583K
LNXT017	786K	116K	19796	260.0	128	45.0	1.0	19K	0	2978	113K
LNXT002	524K	304K	53250	1471	10.0	10.0	8.0	52K	0	2765	302K

How Fast is your EC12?

Processor cache statistics available for z10, 196, ec12

Is percent busy as important as instructions per second?

Report: ESAMFC MainFrame Cache Analysis Repo
Monitor initialized: 09/02/14 at 14:00:02 on 2827

```
-----  
                <CPU Busy> <-----Processor-----> <  
                <percent> Speed/<-Rate/Sec->          <  
Time           CPU Totl User Hertz Cycles Instr Ratio C  
-----  
14:16:02      0 73.5 40.7 5504M 4065M 1110M 3.663  
                1 72.7 42.6 5504M 4023M 1143M 3.518  
                2 72.3 42.4 5504M 3999M 1162M 3.442  
                3 72.3 43.6 5504M 3998M 1196M 3.344  
                4 74.0 45.6 5504M 4085M 1295M 3.155
```


ZVPS Overview

Fully integrated “Performance Management”

- Systems, Network, Applications

Platforms:

- z/VM
- z/VSE
- Linux on z, x, p
- Solaris, Microsoft, Apple
- VMWare, KVM

Application subsystems

- Oracle, WAS/Java

ZVPS Roadmap

Objective:

- Be the leader
- Stay ahead of customer requirements

Performance Management: Capacity Planning, performance, operations, chargeback

z/VPS 4.2 (4Q14)

- z/VM 6.3 exploitation
- Oracle metrics
- Java metrics
- z/VM next support
- zOPERATOR enhancements
- zALERT enhancements
- zVIEW browser support catchup
- z/VM Next exploitation

ZVPS Roadmap

z/VPS 4.3 (2015)

- MQ metrics
- snmp V3
- Additional Oracle
- Additional Java
- Additional P/AIX support
- zVIEW dynamic graphing
- zOPERATOR Cross system
- zALERT enhancements
- zVIEW browser support catchup

z/VPS 4.4 (2016)

- z/VM Next exploitation
- z/NEXT support
- Additional FCP/SCSI topology
- VMWare catchup support

zPRO Overview

Fully integrated “Self Service”

- Cloud? 3270 replacement?

Features:

NO JAVA (very light weight)

NO SMAPI (keep it simple)

10 minute installation (oops, we just installed zpro)

z/VM Based (requires zVPS)

Priced accordingly

Fully managed

Chargeback

Performance management