# ELOCITY S O F T W A R E

#### zVPS, zView and zPro Product Update

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#### **Product updates**

- Global Installer
- zMON
- zWRITE
- zTCP
- zVWS
- Portal
- zMAP
- zView
- zALERT
- zPRO



# Introduction

# Velocity Software continues to invest in FULL performance management

- Performance Analysis
  - PAV, etc...
- Capacity Planning
  - zView monthly charting
  - Weekly/Monthly reporting
- Operations
  - zOperator
  - zAlert
- System Adminstration, Cloud, Chargeback
  - zPro



### Handle console files

- Console files from all products go to ZVPS
- Provide a pre-configured SFPURGER setup
- Require an easy way for customers to send logs
  - ZVPS can be autologged nightly
  - Read in and consolidate console logs
  - View consolidated logs with Portal



#### Handle console files

ZVPS FILELIST A Directory = SFSZVPS	0 V 169 Trun	c=169 Siz	e=115        Line=3	l Col=1 A	Alt=0	
-	cype Fm Format	Lrecl	Records	Blocks	Date	Time
	0115 Z1 V	102	330	6	1/16/13	0:00:11
	0116 Z1 V	95	7	1	1/16/13	
SFPURGER 20130	0115 Z1 V	102	44	2		
ZALERT 20130	0114 Z1 V	102	1301	18	1/16/13	0:00:11
ZALERT 20130	0115 Z1 V	102	2676	37	1/16/13	0:00:11
ZMAP 20130	0115 Z1 V	102	324	5	1/16/13	0:00:11
ZMON 20130	0115 Z1 V	122	863	14	1/16/13	0:00:11
ZTCP 20130	0115 Z1 V	102	2225	42	1/16/13	0:00:11
ZVWS 20130	0115 Z1 V	107	98	2	1/16/13	0:00:11
ZWRITE 20130	0115 Z1 V	102	295		1/16/13	
INSTALL 20130	0114 Z1 V	111	135		1/15/13	
	0114 Z1 V	102	409		1/15/13	
	0114 Z1 V	122	865	15	1/15/13	0:00:11
	0114 Z1 V	102	2214		1/15/13	
	0114 Z1 V	129	99		1/15/13	
	0114 Z1 V	102	302		1/15/13	
•	fresh 3= Quit			-	) 6= So	
	rward 9= FL /r					rsor
DMSWFL1249I Director	ry has been ten	nporarily	accessed as	filemod	e Z	
====>						
				Х	EDIT	1 File

#### Handle console files

**PORTAL Version 4147** 

tion for z/VM from Velocity Software, Inc.

Performance zVWS administration zTCP administration zVPS administration Help

Show zVPS console logs

		Available zV	PS Console Logs
PRO Available Log File	S		La contra
S	elect one or more logfiles the	at you wish to view or downlo	ad
Download	View	Upload	Reset

INSTALL		28	(1990)
🦲 16 Jan 2013 (7)	🧶 12 Jan 2013 (90)	🧶 08 Jan 2013 (225)	📃 04 Jan 2013 (50)
📃 15 Jan 2013 (330)	🥘 11 Jan 2013 (538)	📃 07 Jan 2013 (292)	📃 03 Jan 2013 (174)
🦲 14 Jan 2013 (135)	🦲 10 Jan 2013 (45)	🦲 06 Jan 2013 (42)	📃 02 Jan 2013 (328)
📃 13 Jan 2013 (45)	🧶 09 Jan 2013 (460)	🦲 05 Jan 2013 (43)	📃 01 Jan 2013 (42)
SFPURGER			
📃 15 Jan 2013 (44)	📃 11 Jan 2013 (44)	🦲 07 Jan 2013 (44)	📃 03 Jan 2013 (51)
📃 14 Jan 2013 (44)	📃 10 Jan 2013 (47)	📃 06 Jan 2013 (44)	📃 02 Jan 2013 (44)
📃 13 Jan 2013 (44)	🦲 09 Jan 2013 (44)	🦲 05 Jan 2013 (44)	📃 01 Jan 2013 (44)
12 Jan 2013 (44)	🔲 08 Jan 2013 (44)	🔲 04 Jan 2013 (44)	



#### Handle console files

	zVPS Console Log Display - INSTALL								
	12 Jan 2013								
Display 2	5 v record	s Showing 1 t	to 25 of 90 entries	First Previous 1 2 3 4 Next Last Search:					
Seq	origin	Locate and the second se	Message						
1			LOGOFF AT 09:30:57 PDT SATURDAY 01/12/13						
2	ZVPS	2013-01-12	CONNECT= 00:44:10 VIRTCPU= 000:00.03 TOTCPU= 000:00.04						
3		2013-01-12							
4	ZVPS	2013-01-12	Ready; T=0.01/0.01 09:30:56						
5			filel * * z						
6			Ready(00028); T=0.01/0.01 09:28:46						
7	ZVPS	2013-01-12	DMSWFL002E File * Z not found						
8		2013-01-12							
9			Ready; T=0.01/0.01 09:28:43						
10			DMSVML2060I SFSZVPS:ZALERT. accessed FORCERW as file mode Z						
11			vmlink .dir zalert. (w						
12			09:27:16 * MSG FROM ZALERT : PAGE RATE IS 47 (30)						
13			09:26:16 * MSG FROM ZALERT : PAGE RATE IS 35 (30)						
14			09:23:16 * MSG FROM ZALERT : PAGE RATE IS 31 (30)						
15	ZVPS	2013-01-12	09:22:16 * MSG FROM ZALERT : PAGE RATE IS 49 (30)						
	2								





#### Show availability of MIB groups on ESALNXUP

ESALNXU	P 单 🖲 😫						
$\checkmark$						Linux Node Status	
Time	Node	State	<sou< th=""><th>urce&gt;</th><th>&lt;-Uptime-&gt; days:hh:mm</th><th>&lt;-Local Time-&gt; &lt; Metrics Available</th><th> &gt;</th></sou<>	urce>	<-Uptime-> days:hh:mm	<-Local Time-> < Metrics Available	>
15:02:00 15:02:00 15:02:00		Up	VSI		52 06:27 122 02:48 401 22:41	13/01/18 00:01 TCP UDP IP ICMP IF SYS UCD HOST V 13/01/18 08:05 TCP UDP IP ICMP IF SYS UCD HOST V 13/01/17 15:01 TCP UDP IP ICMP IF SYS UCD HOST V	/si

#### Add memory overcommit to ESASTR1

Also in subsum.overcommit

<mdc> Rsdnt</mdc>	Diag 98	Capt- ure Ratio	Over- commit Ratio
42801	16K	0.994	6.81
42861	16K	0.994	6.81
44677	16K	0.994	6.81
42945	16K	0.994	6.81
43266	16K	0.994	6.81
42773	16K	0.994	6.81

#### Additional return code

- When a criteria option results in no returned data
- RC=309





# ESAPARM EXEC can specify multiple virtual machines that are autologged at midnight

ESAMAP = 'ZMAP ZVPS'

Read-only mount points can be detected

hstmem.rwflag TM 01

ESAHST2	单 0 😫									
$\checkmark$								L	INU)	KHOST Storage
Time	Node/ Group	Index	<mega< th=""><th>lizat: Byte&gt; Used</th><th>Pct</th><th></th><th>Alloc Units</th><th></th><th></th><th>Storage Description</th></mega<>	lizat: Byte> Used	Pct		Alloc Units			Storage Description
14:59:00	slesllx	10	4219	0	0.0	0	1K			Swap space
14:59:00		7	293	293	100	0	1K			Cached memory
14:59:00	slesllx	32	247	0	0.0	0	4K	r/w	No	/dev
14:59:00	slesllx	6	494	129	26.1	0	1K			Memory buffers
14:59:00		3	4713	489	10.4	0	lK			Virtual memory
14:59:00		31	11080	3714	33.5	0	4K	r/w	Yes	U/ 6-4
14:59:00	slesllx	1	494	489	98.9	0	lK			Physical memory
14:59:00	slesll	31	6929	3786	54.6	0	4K	r/w	Yes	
14:59:00	slesll	10	4211	0	0	0	1K			Swap space
14:59:00	slesll	7	160	160	100	0	lK			Cached memory
14:59:00	slesll	6	495	141	28.5	0	lK			Memory buffers
14:59:00	slesll	3	4705	369	7.8	0	lK			Virtual memory
14:59:00	slesll	1	495	369	74.7	0	lK			Physical memory



# Allow for 32 byte mount point display hstmem.desc||hstmem.descr Several Linux screens support node groups Per-CPU metrics display on ESALNXS





32 bit counters for DASD I/O Enhanced LPAR metrics Support for longer mount point name When storage constrained

- SHARE ABSOLUTE 3%
- COMMAND SET RESERVED \* 5000
   Support up to 32 virtual CPUs
   Support z196/EC12
   Additional updates and fixes



# Stability, resiliency and performance fixes To make sure zTCP can get resources

- SHARE ABS 3%
- COMMAND SET RESERVED \* 3000

Verify that SNMP has a 'nice' setting of -10





## Stability and bug fixes Significant amount of work on SSL

- Packaged as zSSL
- Soon to include client certificate support

Web server works very well with VM SSL

zVWS is instrumental in use of zView and zPro

Ships with 5 web server virtual machines





## Javascript updates Add console handling screen





Stability and bug fixes Include process 'nice' value on **ESALNXC** Increase counter sizes **HiperPAV** information on ESADSD1 FCX/zHPF report changes Support up to 32 vCPUs Support z196/EC12

3 00	00:00	: 00	01/17/1	.3 Pa	ge 954
ss	-> -	<stora< td=""><td>ge(k)&gt;</td><td>Proc</td><td>NICE</td></stora<>	ge(k)>	Proc	NICE
rms			RSS		
****	en e	*****	****		
		847	324		o
		0	0	4 0 0	-5
		o	o		õ
	- 0	11559	5828	4	-10
		2335			0
		2247	868	4	0
.3 0 .3 2	0:00 4:00	0:00 0:00 Cache	01/17/ PAV < BASE T		rPav>
.3 0 .3 2	0:00 4:00	0:00 0:00 Cache	PAV <		rPav>
.3 0 .3 2 itus low	0:00 4:00 > Shr	0:00 0:00 Cache	PAV < BASE T		rPav>
.3 0 .3 2 itus low	0:00 4:00 > Shr No	):00 ):00 Cache STGID	PAV < BASE T	-Hipe ype	rPav> Pool

No 0120

0120





- Many requests for custom graphs
- Provide a mechanism to create graphs with any data that can be generated with ESAEXTR
- Runs automatically with ZMAP
- Charts appear in zView
- Chart data is available for custom use outside of zMAP/zView





#### Introduces a new control file RUNCHART PARMS ;Chart Syntax

 Charts can be generated by MINUTE, DAY, WEEK, MONTH or a user selected period ;Chart Syntax: type days strt stop extr parm ; Where type is MINUTE/DAILY/WEEK/MONTH ; "days" is the previous "n" days ; TimesT is called with these parms

;	type	days	strttime	stop	extractname	parm
CHART	MINUTE	1	08:00	17:00	LXCPUMIN	LINUX001
CHART	MINUTE	1	08:00	17:00	LXSTORMN	LINUX001
CHART	MINUTE	1	08:00	17:00	LXSWAP	LINUX001
CHART	MINUTE	1	08:00	17:00	LXBLKIO	LINUX001
; HART ; HART CHART CHART	DAILY DAILY DAILY DAILY	1 1 1 1	00:00 00:00 00:00 00:00	24:00 24:00 24:00 24:00	LPARCPUS LPARCPUS UXACT UXACT	lparname System: LINUX001
CHART	WEEK	7	00:00	24:00	UXACT	System:
CHART	WEEK	7	07:00	17:00	LXCPU	LINUX001
CHART	MONTH	31	00:00	24:00	UXACT	System:
CHART	MONTH	31	*	*	LXCPUM	LINUX001
CHART	MONTH	31	*	*	LXSTOREM	LINUX001
CHART CHART	NDAYS NDAYS	31 31	*	*	LXCPU LXSTORE	LINUX001 LINUX001
CHART	NDAYS	35	*	*	UDIO	LINUX001
CHART	NDAYS	35	*	*	USTOR	LINUX001
CHART	NDAYS	35	*	*	UCPU	LINUX001



- Extracting data LXCPUMIN ESAEXTR
- 'Title' becomes the heading of the graph
  - Variables &USERID, &SDATE, &EDATE

```
EXTRACT: ; First extract system data

Title = 'Linux CPU Analysis by Node &USERID &SDATE'

Title = '*Labels CPU Sys_CPU User_CPU'

TITLE = '*Yaxis Percent'
```

```
X = 'STOPTIME'
Y = 'NODE'
Y = 'UCDSYS.TOTCPU ' ;cpu utilization
Y = 'UCDSYS.SYSTPCT'
Y = 'UCDSYS.USERPCT'
```

- &USERID is the qualifying parameter passed
- Additional 'Title' statements define the graph labels and Y-Axis legend





#### Output data uses specific file names for identification

```
LINUX001 CTLXC016 A2 V 80 Trunc=80 Size=543 Line=0 Col=1 Alt=0

|...+...1...+...2...+...3...+...4...+...5...+...6.

===== TITLE: Linux CPU Analysis by Node &USERID &SDATE

===== Labels: CPU Sys_CPU User_CPU

===== Yaxis: Percent

==== "20130116", "080000", "080100", "linux001", "0.5", "0.31", "0.16"

==== "20130116", "080100", "080200", "linux001", "0.3", "0.20", "0.07"

==== "20130116", "080200", "080300", "linux001", "0.3", "0.00", "0.26"

==== "20130116", "080300", "080400", "linux001", "0.3", "0.15", "0.10"

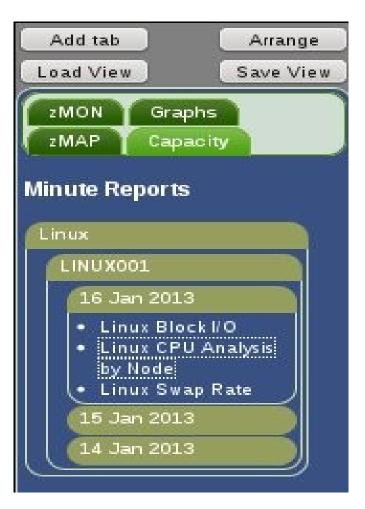
==== "20130116", "080400", "080500", "linux001", "0.3", "0.19", "0.07"

===== "20130116", "080400", "080500", "linux001", "0.3", "0.19", "0.07"
```



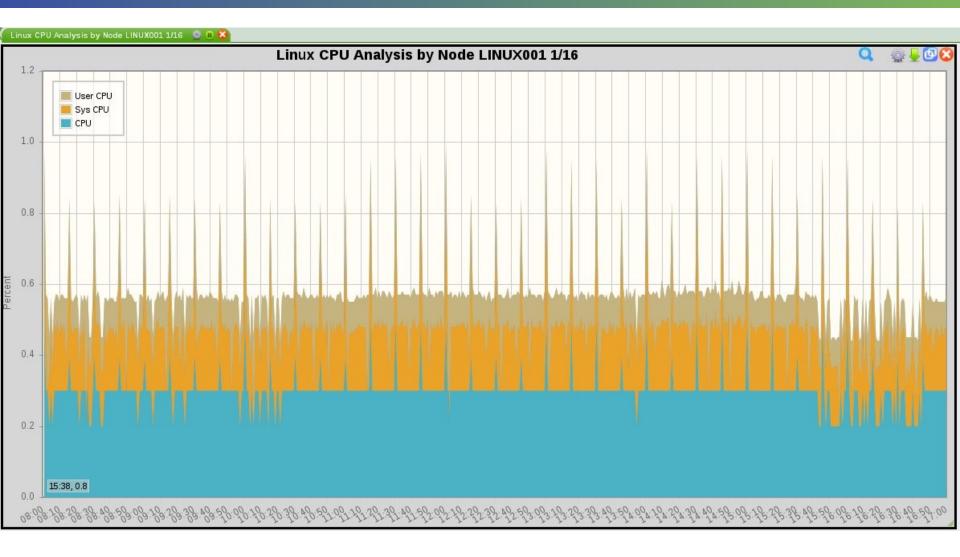


In zView





# zМар



# 



The following samples are provided

LPARCPUS – LPAR utilization LXBLKIO - Linux block I/O LXCPU - Linux CPU utilization by type LXCPUM – Monthly Linux CPU utilization by type LXCPUMIN – Minute Linux CPU utilization by type LXSTORE – Linux storage usage by type LXSTOREM – Monthly Linux storage usage by type LXSTORMN – Minute Linux storage usage by type LXSWAP – Linux swap rate UCPU – User CPU utilization UDIO – User DASD I/O rate USTOR – User storage usage UXACT - User wait analysis





- Graphs can be generated manually
  - Testing new
  - Recovering graph data from history
- From ZMAP (always log off when completed) RUNCHART parms

where parms are as follows:

DAILY yyyymmdd

WEEK week\_number

MONTH month\_number

NDAYS

MINUTE yyyymmddd





- Automatic chart deletion
- In RUNAUTO PARMS

#### CHARTCNT 6 8 7 3 1

Keeps 6 monthly files,

8 weekly files,

- 7 daily files,
- 3 minute files and
- 1 NDAYS file

for each graph specified in RUNCHART PARMS file.





## Stability and support fixes Reduced local browser storage requirements Capacity Planning chart processing/display

Newer functions (eg: Capacity charts) require updates in other base products

 Make sure everything is up to date to get the latest support



# zView

#### zView menu

- Expandable sections
- Select a list item to display
- Tabbed display area
- Tab can be saved as a view
- Loaded later
- Made into default

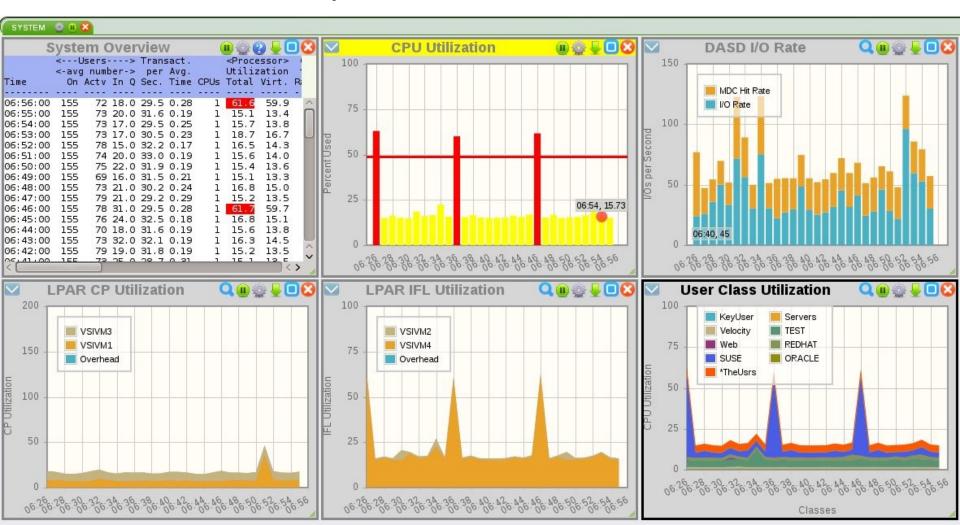






#### zView display

Default startup view





# zView displayView handling





# zView displayView handling





#### Future development...

- CECLIST enhancements
  - Enterprise view
- Security
- Sort display columns
- CSV downloads
- Tablet support
- Single server view
- Distributed server view (Windows, other Linux/Unix, etc)





#### Allow specification of TRAP on LEVEL statement

- Synonym of ALERT
- Triggers an SNMP trap

Support cascading alerts

One alert triggers another alert

Add new standard variables

- &code Alert code
- &tlevel Trigger level





#### Generalized notification system

- Allows specification of emails or traps that can be sent to users for specific alerts
- Triggered by NOTIFY on the LEVEL statement
- Messages can be sent out at certain times of day
- Calendar mechanism available to exclude specified dates





#### Added SMSG support when running disconnected

- Available commands, STATUS, RESTART, STOP
- Configuration file allows specification of authorized users

When running disconnected, alerts execute at 10 seconds after each minute

New LTEXT directive which allows a separate text message on LEVEL statements

Alert counting support

- Turned on with COUNT option on ALERT statement
- Display with &tcount variable

Code optimizations and fixes





#### Coming soon...

- Initial notification when using LIMIT statement
  - Provides first notice that a threshold has been exceeded
- Better handling of disconnected session
  - Allow re-connect and disconnect from 3270
- Alert logging
  - All alerts that would come up on the display
  - Controlled at alert level
  - Retention of both alert and notification log files



# Support for VM:Secure as directory manager, ESM and SMAPI

- New configuration keywords
- VM:Secure config requirements in README





#### Wizards

#### Allows common tasks to be done quickly

System Status	Manage Users z/VM Adm Directory Maintenance	n Velocity Products Security Tools Help
	Cloning zPRO Server Expirations IP Address Maintenance	
	Group Freespace zPRO Wizards	New User Wizard
	Welcome to	User Minidisk Wizard User Storage Wizard New Proxy Wizard
		User Network Wizard User SFS Wizard





#### Wizards

Add minidisk wizard

		Add Minidisk Wizard							
-Minidisk definition									
Userid: S11S2RS1 🗸	Virtual address: 0207 🥥	Devtype: 🛛 💙 🥝	Add						
Disksize: 2000 🕖	AllocType: 🛛 🗸 🥑	Location: DEMOECKD 🗸	Check Space						

#### Storage wizard

	User	Storage Wizard
<b>Default storage </b>	Units: Megabytes 🗸	Change
Maximum storage 🥝 Value: 128	Units: Megabytes 🗸	
	Value: 128	Default storage       Image: Im



zPro

#### New spool display option

				<b>zPRO</b> Sy	/stem {	status - f	Spool repo	ort by us	er					
Spool Files Summary Report - Click on a user to expand Sort Blks Sort User														
	r files/blo		nter files/blocks			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	es/blocks:							
1,779			256 26,235		0		167,865							
User: ES4MON 188		22,911	1 229	9 0	0	and the second se	23,140							
User: MAINT 187		23,035	0 0	0 0	0		23,035							
User: ESAMON 33	1	12,651	0 0	0 0	0		12,651							
	5	Select Page	Reset	Purge	Xfer	Hold	Nohold	SysHold	I Sy	ysFree				
	Display	ay <u>10 v</u> rec	ecords Copy	y CSV PDF	Print							Search:		
	Showin	ng 1 to 10 of 33	3 entries							Fir	rst Previou	us 1 2	3 4 Next	t Last
	Sel	Queue	Owner ID	Spool ID	Class	Device	Records	Copies	Hold	L				Dist
	0				Т	CON	11,966	I man	1	2013-01-02	00:00:02			ESASERVE
	M	RDR	ESAMON	3895	Т	CON	10,995	001	I NONE	2013-01-02	00:00:02			ESAWRITE
1	ň		ESAMON		т	CON	26			2013-01-03	16:10:57			ESAMON
	M		ESAMON		т	CON	13,845			2013-01-03	00:00:02			ESAWRITE
	ň				Т	CON	14,910			2013-01-03	00:00:02			ESASERVE
	M				Т	CON	16,530			2013-01-04	00:00:07			ESAWRITE
	ň				Т	CON	17,512			2013-01-04	00:00:07			ESASERVE
	M				Т	CON	15,465			2013-01-05	00:00:08			ESAWRITE
	ň				Т	CON	16,599			2013-01-05	00:00:08			ESASERVE
	M				Т	CON	16,721			2013-01-06	00:00:07			ESASERVE
							1.1							
	6 11	11,911	1 1	1 0	0	7	11,912							
User: SUSELNX2 0	٥	0	1 9,051		0		9,051							
User: DSADEV 229	3 8	8,059	2 42	2 0	0	231	8,101							



zPro

#### New spool display option

						ZPRO S	ystem S	Status	- Spool al	l syster	m		
U	Select Page	Reset	Purge	Xfer	Hold	Nohold	SysHold	Sy	/sFree				
Displa	y 25 🗸 re	ecords Copy	y CSV PDF	Print						Se	arch:		
Showin	Showing 1 to 25 of 2,035 entries I 2 3 4 5 Next Last											Last	
Sel	I 🗧 Queue	Owner ID	Spool ID	Class	Device	Records	Copies	😝 Hold	Date	🗧 Time	Filename	Filetype	Dist
	RDR	DSADEV	0353	Т	CON	76	001	USER	2011-04-21	14:42:18			VSIMAINT
	RDR	DSADEV	0304	Т	CON	14	001	USER	2011-03-09	16:56:01			VSIMAINT
0	RDR	DSADEV	0290	Т	CON	14	001	USER	2010-12-14	12:42:27			SYSPROG
	RDR	DSADEV	0287	Т	CON	32	001	USER	2010-12-10	14:13:29			SYSPROG
O/	RDR	DSADEV	0350	Т	CON	99	001	USER	2011-04-20	16:20:07			VSIMAINT
	RDR	DSADEV	0302	Т	CON	1,849	001	USER	2011-02-18	14:42:56			SYSPROG
0	RDR	DSADEV	0301	Т	CON	54	001	USER	2011-02-18	14:12:54			VSIMAINT
	RDR	DSADEV	0246	т	CON	69	001	USER	2010-09-15	11:19:26			VSIMAINT
0	RDR	DSADEV	0317	Т	CON	195	001	USER	2011-03-22	09:42:20			VSIMAINT
	RDR	DSADEV	0316	т	CON	141	001	USER	2011-03-22	08:51:48			VSIMAINT
0	RDR	DSADEV	0303	Т	CON	54	001	USER	2011-03-07	16:45:51			VSIMAINT
	RDR	DSADEV	0307	Т	CON	23	001	USER	2011-03-18	14:56:17			VSIMAINT
0	RDR	DSADEV	0484	Т	CON	482	001	USER	2011-08-15	14:42:29			VSIMAINT
	000	DEADEN	0.245	T	CON	67	001	LICED	2010 00 02	00.00.40			FRANON



## User status actions

## • On a single user

E

#### zPRO System Status - User Display

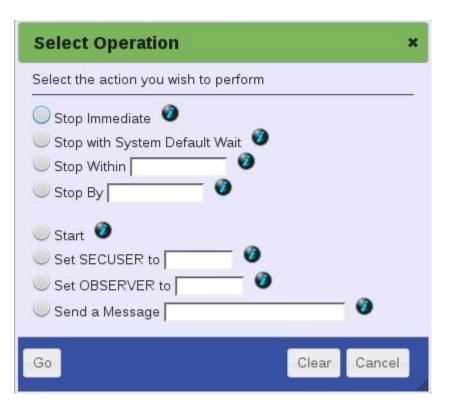
			A still a st		Calar									_		
	eset All		Action		Colors	S										
Display	y 20 v re	cords	Copy CSV	PDF P	rint								Search:	sll		7
showin	ig 1 to 18 of 18	8 entries (	filtered from	1,334 tot	al entries		Sele	ct Opr	eration					×	ous 1 N	Next Last
Sel	Serid Userid	Status	is 🔁 User type	CPU Util	VM Size MB	e 🗧 Share	Select	the activ	on you wi	sh to pe	rform				Active Secuser	Active Observer
0	RMTS11G1	DSC	USER	0.085	256	5 100R	Osto	p Immed	diate 🥑						ROTHR	
0	SLES11	DSC	USER	0.206	512	2 100R/20.01068A-S	-	÷								
	SLES11X	DSC	USER	0.321	. 512	2 100R	<ul> <li>Stor</li> </ul>	p with S	System De	afault Wa	ait 🤒					
	SLES11X2	DSC	USER	0.287	1024	4 100R	O Sto	p Within			0					
	S11S2ORA	DSC	USER	0.056	1024	4 100R	-	·	1	- 0						
	RMTS11G2	InActive!	USER	0.000	0	0 0	💛 Stop	b By [		-	2					
	S11RS001	InActive!	USER	0.000	<i>i</i> 0	0 0		-								
	S11RS002	IInActive In Section		0.000	, 0	0 0	🔵 Star	rt 🥑								
	S11RSC Clic	k for mor	e options	0.000	0	0 0		SECUS			0					
	S11RS004	InActive!	USER	0.000	, 0	0 0										
	S11RS005	InActive!	USER	0.000	, 0	0 0	Set	OBSEF	RVER to		- 🧿					
	S11RS006	InActive!	USER	0.000	, 0	0 0	Sou	nd a Mes					0			
	S11RS007	InActive!	USER	0.000	, 0	0 0	U Sen	d a me	sage				-			
	S11RS008	InActive!	USER	0.000	, 0	0 0										
	S11RS009	InActive!	USER	0.000	, 0	0 0	Go					Clear	Cancel			
	S11S2GLD	InActive!	USER	0.000	, 0	0 0	00					Cicui	Cancer			
	S11S2RS1	InActive!	USER	0.000	, 0	0 0							1001	11	L	
	S11S2RS2	InActive!	USER	0.000	, 0	0 0	0	0	0	0	0	0	0	0		



#### User status actions

#### Or select multiple users

Re	eset All		Action		Colors				
)isplay	/ <u>20 v</u> re	ecords C	opy CSV	PDF	rint				
howing	g 1 to 18 of 1	8 entries (fi	ltered from	1,334 tota	al entries)				
Sel	Juserid	Status	User type	CPU Util	VM Size MB	🔶 Sha			
0	RMTS11G1	DSC	USER	0.085	256	100R			
ŏ	SLES11	DSC	USER	0.206	512	100R/			
Ö	SLES11X	DSC	USER	0.321	512	100R			
	SLES11X2	DSC	USER	0.287	1024	100R			
0	S11S2ORA	DSC	USER	0.056	1024	100R			
	RMTS11G2	InActive!	USER	0.000	0	0			
~	S11RS001	InActive!	USER	0.000	0	0			
~	S11RS002	InActive!	USER	0.000	0	0			
~	S11RS003	InActive!	USER	0.000	0	0			
~	S11RS004	InActive!	USER	0.000	0	0			
~	S11RS005	InActive!	USER	0.000	0	0			
	S11RS006	InActive!	USER	0.000	0	0			
	S11RS007	InActive!	USER	0.000	0	0			
(1999)	S11RS008	UnActive	USER	0 000	0	0			





#### Security changes

- Control which directory options a user can set
- Maximum amount of storage
- Maximum absolute share
- Allow RACF user to not have to reset their password on first login
- Allow RACF user to not be required to change their password at set intervals
- Designate who can view/alter
  - DASD, CTC, OSA, FCP, Vswitch





#### Development ideas

- User accounting setup and tracking
- Auto start server after cloning
- Dirmaint configuration
- Multiple device attach at clone time
- DCSS waterfall
- Specific userid/IP address at clone time
- Mobile/tablet support





#### User accounting setup and tracking







#### User accounting setup and tracking

#### **Cost & Accounting Wizard**

User accounti					
Userid: Selec	t 🗸				
-Today		1	This month —		
	Usage	Cost		Usage	Cost
CPU Hours	.183	3.660	CPU Hours	4.209	84.180
Memory GB	18.6	18.6	Memory GB	3422.4	427.8
Storage GB	0.14	0.14	Storage GB	3.22	3.22
IFT Xmit GB	2.133	0.0711	IFT Xmit GB	1.6353	1.6353
DC Factor		44.9422	DC Factor		1033.6706
Total		67.4133	Total		1550.5059
- 10					
	-Cost factors -			1	
		Cost			
	CP	U: \$	20 Per CPU Hour	0	
	Memo	ry: \$	1 Per GB/Hours	0	
	Storag	je: \$	1 Per GB/Month	0	
	IFT Xmit G	B: \$	1 Per GB Xfer/Mo	nth 🧑	
	Data Center fa	actor:	2 🕖	The second	





#### **Dirmaint configuration**

onfig files	E <u>x</u> tent Control	A <u>u</u> thfor C	ontrol					
Regions	Iame Volid VMR0 VMR0		End End End	DevType 3390-03 3390-03	Add Delete Modify		De     Cate Rotating     content	lete Available Reg
Region Nam Exclude UserID MAINT SYSDUM	Minidisk 12*	Start: Start <u>A</u> dd Delete M <u>o</u> dify	E 🗆 3	d 3 ults evice Type 5 390-64 6	ev Tyı 390 ▼ iize 5536 14748364	Add Delete Mod <u>i</u> fy	01	VMR003
UserID:	Minidisk:	1	Devi	ce Type: Size	e:	Add		_





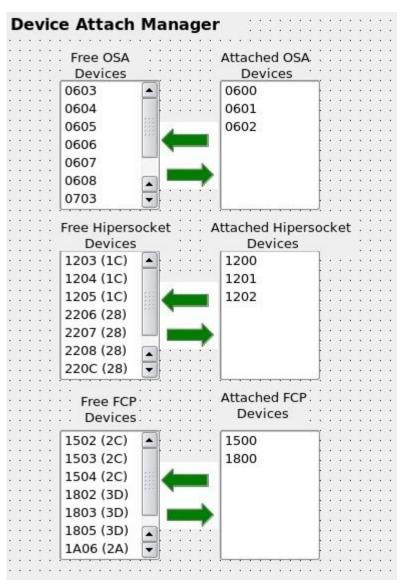
#### Specific userid/IP address at clone time

Form3			
Clone new image(s	) from golden image LINUX	001	
○ <u>C</u> reate a single	userid O Create a <u>m</u> ultipl	e userids Count 🛛 🔶	
Virtual Machine Na	me Pattern	Password(Same password for	or all):
X Enter virtual ma	· · · · · · · · · · · · · · · · · · ·	dresses X Add nodes to zTCP Available IP Addres	· · · · · · · · · · · · · · · · · · ·
ZA002MVW ZA003MVW ZA004MVW ZB006COL ZB007COL ZB008COL ZB009COL	192.168.7.90 192.168.7.200 192.168.7.202 192.168.7.91 192.168.7.92 192.168.7.203 192.168.7.93	192.168.7.94 192.168.7.95 192.168.7.98 192.168.7.99 192.168.7.204 192.168.7.205 192.168.7.206	



## zPro

#### Multiple device attach at clone time





# Conclusion

#### **Questions?**

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