

VELOCITY
SOFTWARE

Capacity Graphs

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- Long term graphs to analyze trends
- 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

RUNCHART PARMS Configuration

	Type	Days	Start	Stop	Extract	LPAR, Node or User name
Chart:	MINUTE	1	08:00	17:00	LCPUMIN	nodename
Chart:	MINUTE	1	08:00	17:00	LSTORMN	nodename
Chart:	MINUTE	1	08:00	17:00	LXSWAP	nodename
Chart:	MINUTE	1	08:00	17:00	LBLKIO	nodename
Chart:	DAILY	1	00:00	24:00	LPARCPUS	_____
Chart:	DAILY	1	00:00	24:00	LPARCPUS	lparname
Chart:	DAILY	1	00:00	24:00	UXACT	System:
Chart:	DAILY	1	00:00	24:00	UWAIT	username
Chart:	DAILY	1	00:00	24:00	LSTORE	nodename
Chart:	DAILY	1	00:00	24:00	CLASCPU	_____
Chart:	DAILYT	60	00:00	24:00	LPARCPUM	_____
Chart:	DAILYT	60	00:00	24:00	CLASCPU	_____
Chart:	WEEK	7	00:00	24:00	UXACT	System:
Chart:	WEEK	7	08:00	17:00	LCPU	nodename
Chart:	WEEK	7	08:00	17:00	CLASCPUP	_____
Chart:	WEEK	7	00:00	24:00	LPARCPUS	_____
Chart:	MONTH	31	00:00	24:00	UXACT	System:
Chart:	MONTH	31	*	*	LCPUM	nodename
Chart:	MONTH	31	*	*	LSTOREM	nodename
Chart:	MONTH	31	08:00	17:00	CLASCPUM	_____
Chart:	MONTH	31	00:00	24:00	LPARCPUM	_____
Chart:	MONTHT	24	00:00	24:00	LPARCPUM	_____
Chart:	MONTHT	24	00:00	24:00	CLASCPUM	_____
Chart:	NDAYS	31	*	*	LCPU	nodename
Chart:	NDAYS	31	*	*	LSTORE	nodename
Chart:	NDAYS	35	*	*	UDIO	username
Chart:	NDAYS	35	*	*	USTOR	username
Chart:	NDAYS	35	*	*	UCPU	username
Chart:	NDAYS	35	*	*	LPARCPUS	_____

- Specify type
 - MINUTE, DAILY(T), WEEK(T), MONTH(T), NDAY
 - T = Trending – Append to existing data
 - NDAY = Last n days – history required
- Days
 - For trending and NDAY specify number of days, weeks or months
- Start Stop
 - Specify time range or *

- **EXTRACT**
 - Name of ESAEXTR file
 - Names shown are shipped as samples
 - Documented in zVIEW manual
 - First letter significant
 - C = Class
 - L = Linux
 - P or LP = LPAR
 - U = User

- Parm
 - Restrict data to specific class, LPAR, node or user
 - Lowercase values must be specified
 - Graph multiple variables for one class,user,node or LPAR or one value for all classes, users, node or LPAR
 - Extracts with no parm value can be further restricted
 - * on end allowed for wildcard character
 - Graph limited to one variable

- Graph customization – ESAEXTR TITLE stmts
 - Variables specified in title
 - Start date and time, end date and time, and userid
 - *TITLE = 'LPAR CEC Summary &USERID &SDATE'*
 - For ranges use *&sdate-&edate* and *&stime-&etime*
 - Graph type
 - Vertical and horizontal bar, stacked bar, area and stacked area, line
 - *TITLE = '*Type VBAR'*
 - Names for variables in legend
 - Multiple variables for one server
 - *TITLE = '*LABELS Run CPU_Wait Page_Wait I/O_Wait'*
 - Y axis label
 - *TITLE = '*Yaxis Percent'*

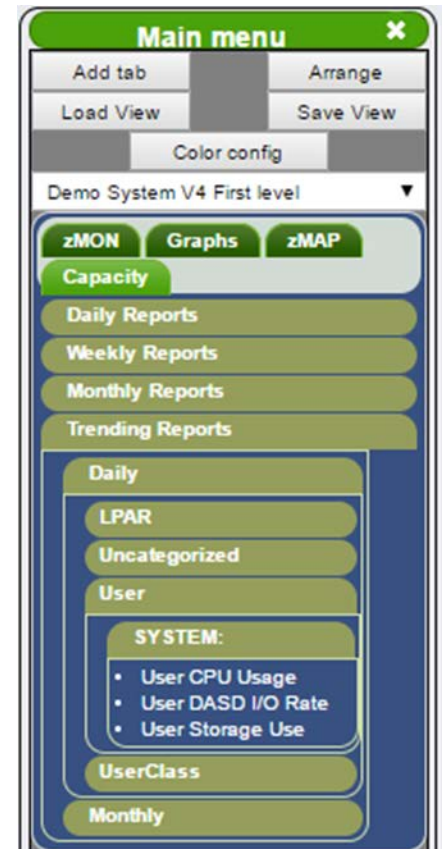
- **ESAEXTR Variables**
 - Usually $X = 'STOPTIME'$
 - Single or multiple $Y = 'variable\ name'$
 - Use *ZMAP PDR* or *HISTORY KEYWORDS* for variable names
- **CRITERIA**
 - Optional and can have multiple
 - $CRITERIA = 'SYTCUP.LCUPNAME \neg= Totals:'$

- INTERVAL
 - *INTERVAL* = 'xx'
 - IN for interval data (default)
 - Data points every 15 minutes
 - SU for summary data
 - Summarized intervals as follows:
 - DAILY Hour
 - DAILYT Day
 - WEEK Day
 - WEEKT Week
 - MONTH Day
 - MONTHT Month
 - Override in *extractname* ESAMAP file (base NDAYES ESAMAP)
 - *history_interval* parameter (seconds)

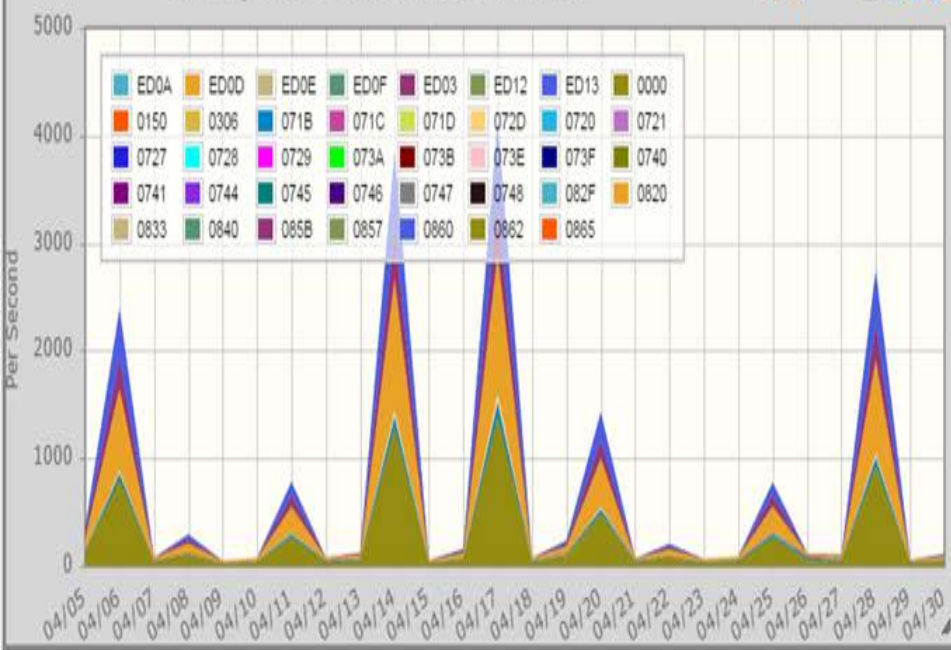
- Manually run on ZMAP
 - Test new capacity graphs
 - Catch up on old data
 - RUNCHART *charttype input extractname*
 - *charttype* – MINUTE, DAILY(T), WEEK(T), MONTH(T), NDAYS
 - *input* – (yyyy)mmdd, (yyyy)ww, (yyyy)mm, *
 - Default or * previous interval except MONTH(T) current month
 - DAILYT can use * to create initial trending days
 - *extractname* – File name of ESAEXTR file
- Make sure to LOG OFF ZMAP when finished!

- RUNAUTO PARMS – CHARTCNT
 - CHARTCNT 6 8 7 3 1
 - Number of monthly, weekly, daily, minute and ndays graphs to keep
- RUNAUTO PARMS – ADISKBLKS
 - Number of disk blocks to free before starting ZMAP run
 - Minimum 10,000
 - 15,000 if creating lots of capacity graphs
- If trending graphs important, backup ZMAP 191
- Complete documentation in zVIEW manual

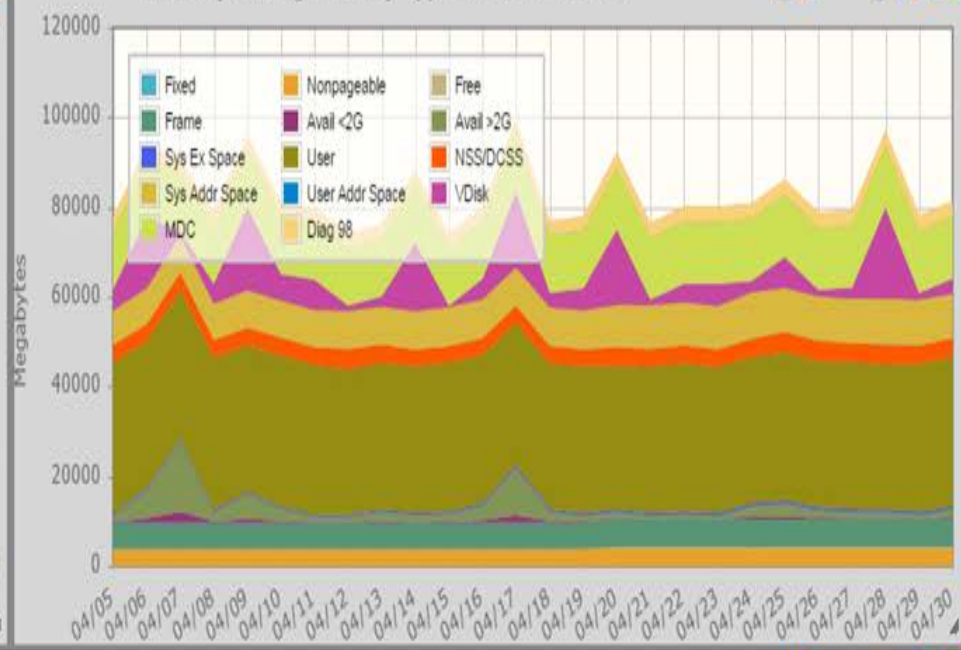
- Steps for capacity graphs
 - Identify resources you want to regularly monitor
 - Create ESAEXTR file
 - Update RUNCHART PARMS
 - Run ZMAP or wait until next day
 - Refresh (F5) zVIEW for new graphs
 - Select graphs in Capacity tab
 - Save as view
 - Relative dates in tab parms
 - Yesterday, Last business, Last week, Last month
 - Use URL to access view
 - Download (png, jpg, pdf) graphs



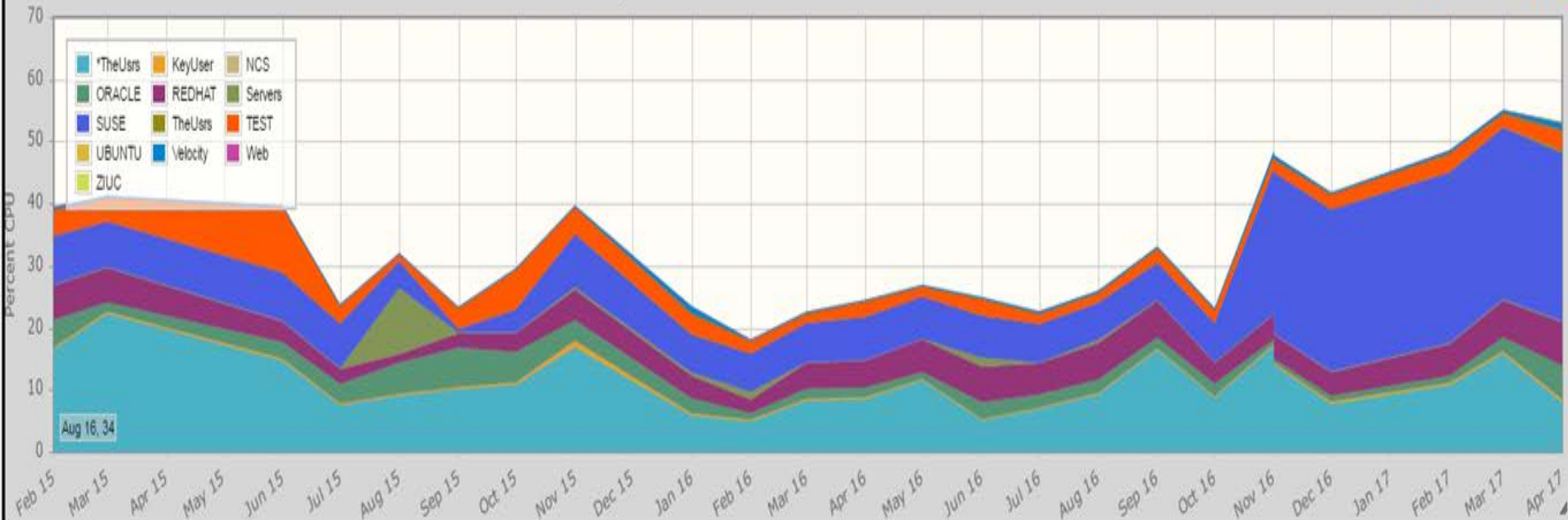
Monthly DASD I/O Rate 4/5-4/30 - DEMO



Monthly Storage Use by Type 4/5-4/30 - DEMO



Monthly User Class CPU - DEMO



Questions ?