EPV for zLINUX
Release Notes

IT Cost
Under Control

Supporting
EPV for zLINUX V15

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About this manual

This manual provides a description of the most important enhancements in EPV for zLINUX V15.

Terminology

A “view” is an EPV report presented in an HTML page.

Renamed views

To optimize the space used by page menus the SYSTEM MEMORY BY VMACHINE view now includes the SYSTEM WSS MEMORY BY VMACHINE, SYSTEM RESIDENT MEMORY BY VMACHINE and SYSTEM LOCKED MEMORY BY VMACHINE views.

1. Major Enhancements

EPV for zLINUX V15 includes the following major enhancements:

- IBM z15 support;
- Capacity indexes derived from Measurement Facility counters;
- Detailed views about the state of each guest machine.

1.1. z15 support

New MIPS tables are provided, including capacity values for IBM z15 machines:

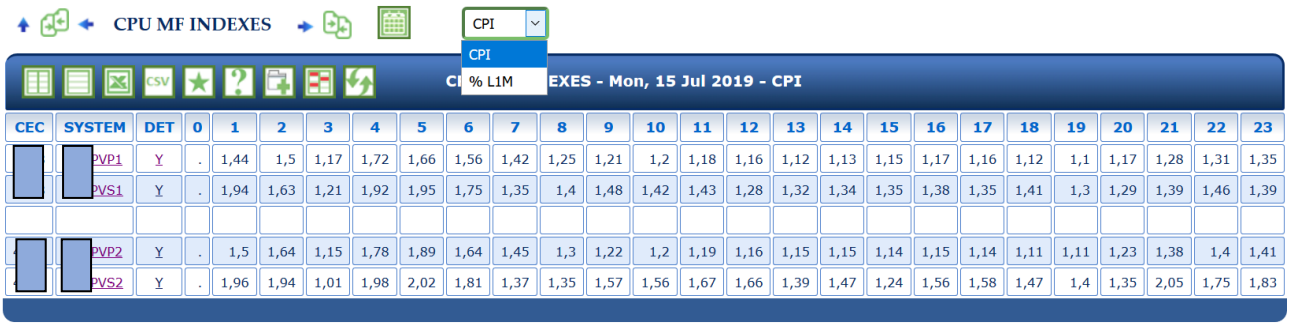
- MIPSAR23, average Relative Nest Intensity (RNI) estimated IFL MIPS
- MIPSLR23, low Relative Nest Intensity (RNI) estimated IFL MIPS
- MIPSHR23, high Relative Nest Intensity (RNI) estimated IFL MIPS

1.2. Capacity indexes derived from Measurement Facility counters

All the CPU Measurement Facility (CPU MF) counters are collected.

The most relevant performance indexes are calculated and reported in daily and in trend views. They are:

- L1M (Level 1 Miss),
- CPI (Cycles Per Instructions).



CEC	SYSTEM	DET	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
[redacted]	[redacted]PVP1	Y	.	1,44	1,5	1,17	1,72	1,66	1,56	1,42	1,25	1,21	1,2	1,18	1,16	1,12	1,13	1,15	1,17	1,16	1,12	1,1	1,17	1,28	1,31	1,35
[redacted]	[redacted]PVS1	Y	.	1,94	1,63	1,21	1,92	1,95	1,75	1,35	1,4	1,48	1,42	1,43	1,28	1,32	1,34	1,35	1,38	1,35	1,41	1,3	1,29	1,39	1,46	1,39
[redacted]	[redacted]PVP2	Y	.	1,5	1,64	1,15	1,78	1,89	1,64	1,45	1,3	1,22	1,2	1,19	1,16	1,15	1,15	1,14	1,15	1,14	1,11	1,11	1,23	1,38	1,4	1,41
[redacted]	[redacted]PVS2	Y	.	1,96	1,94	1,01	1,98	2,02	1,81	1,37	1,35	1,57	1,56	1,67	1,66	1,39	1,47	1,24	1,56	1,58	1,47	1,4	1,35	2,05	1,75	1,83

Figure 1

1.3. Detailed views about the state of each virtual machine

For each virtual machine a daily view showing all the states at the Monitor interval is provided (only part of the measured states are shown in Figure 2 to fit the page).

SYSTEM TCPIP STATES DETAIL

SYSTEM TCPIP STATES DETAIL - Mon, 15 Jul 2019

TIME	% DORM LIST	% NODORM LIST	% DISP RUNN	% LOAD LIST	% CPU WAIT	% PAGE WAIT	% I/O WAIT	% SIMUL WAIT	% CONS WAIT	% IDLE NO SVM	% IDLE SVM
01:01	86,7	13,3	0	0	0	0	0	0	0	13,3	0
01:02	86,7	13,3	0	0	0	0	0	0	0	13,3	0
01:03	86,7	13,3	0	0	0	0	0	0	0	13,3	0
01:04	80	20	0	0	0	0	0	0	0	20	0
01:05	83,3	16,7	0	0	0	0	0	0	0	16,7	0
01:06	86,7	13,3	0	0	0	0	0	0	0	13,3	0
01:07	86,7	13,3	0	0	0	0	0	0	0	13,3	0
01:08	83,3	16,7	0	0	0	0	0	0	0	16,7	0
01:09	83,3	16,7	0	0	0	0	0	0	0	16,7	0
01:10	80	20	0	0	0	0	0	0	0	20	0
01:11	80	20	0	0	0	0	0	0	0	20	0
01:12	83,3	16,7	0	0	0	0	0	0	0	16,7	0

Figure 2

2. Usability enhancements

The following major usability enhancements are provided in this version:

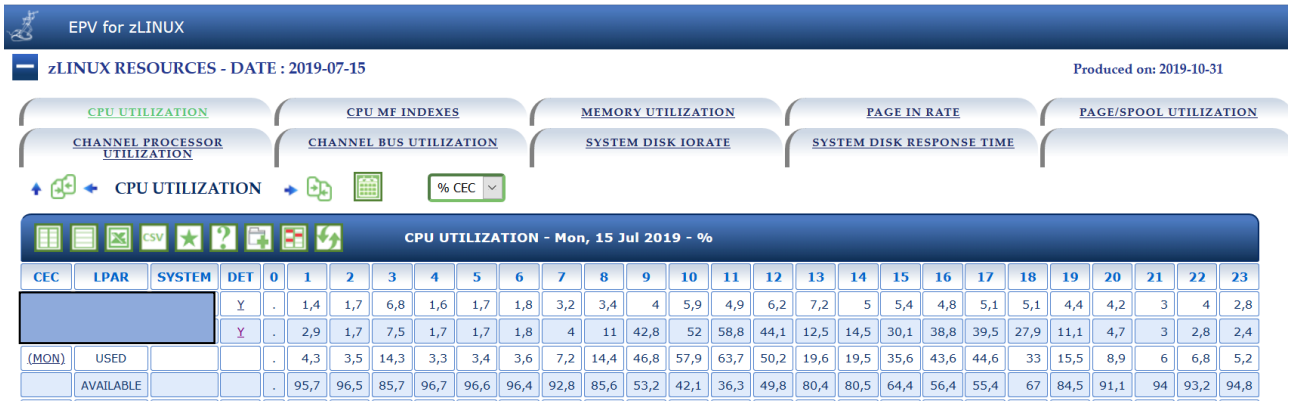
- New date format and date of page production
- MinMax function

2.1. New date format and date of page production

The date format for folders and file names has been changed from Dddmmmyy to Dyymmdd (e.g. from D18JUN19 to D190618). An automatic javascript code will take care of date conversion when moving from V14 to V15 pages and viceversa after the migration.

All the dates in the HTML pages are now in the yyyy-mm-dd format.

The production date of each page has also been included in each view.



CEC	LPAR	SYSTEM	DET	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
			Y	.	1,4	1,7	6,8	1,6	1,7	1,8	3,2	3,4	4	5,9	4,9	6,2	7,2	5	5,4	4,8	5,1	5,1	4,4	4,2	3	4	2,8
			Y	.	2,9	1,7	7,5	1,7	1,7	1,8	4	11	42,8	52	58,8	44,1	12,5	14,5	30,1	38,8	39,5	27,9	11,1	4,7	3	2,8	2,4
(MON)	USED			.	4,3	3,5	14,3	3,3	3,4	3,6	7,2	14,4	46,8	57,9	63,7	50,2	19,6	19,5	35,6	43,6	44,6	33	15,5	8,9	6	6,8	5,2
	AVAILABLE			.	95,7	96,5	85,7	96,7	96,6	96,4	92,8	85,6	53,2	42,1	36,3	49,8	80,4	80,5	64,4	56,4	55,4	67	84,5	91,1	94	93,2	94,8

Figure 3

2.2. MinMax function

A MinMax function has been added in the Daily Trends to highlight, with different colours, the minimum and maximum value reported.

You just need to click the new MinMax icon

Min and Max colour can be chosen by the user by customizing the HigherNumberColor and LowerNumberColor in the EPV_CONFIG_V15.TXT parameters file provided in the JAVA folder.

3. New Views

The following table reports the list of the new views together with a short description.

COMPONENT	VIEW	DESCRIPTION
RESOURCES	CPU MF INDEXES	Hourly profile of the L1M (Level 1 Cache misses) and CPI (Cycles Per Instruction) Measurement Facility indexes
WORKLOADS	SYSTEM CEC USAGE	Hourly profile of CEC CPU usage
WORKLOADS	SYSTEM CEC USAGE DETAIL	Profile of CEC CPU usage at Monitor interval
WORKLOADS	SYSTEM CPU MT	Hourly profile of SMT (Simultaneous Multi-Threading activity)
WORKLOADS	SYSTEM CPU MT DETAIL	Profile of SMT (Simultaneous Multi-Threading activity) at Monitor interval
WORKLOADS	SYSTEM vmuserid STORAGE DETAIL	Interval profile of storage utilization of a virtual machine
WORKLOADS	SYSTEM vmuserid STATE DETAIL	Interval profile of virtual machine states
SYSTEM DAILY TRENDS	CPI BY SYSTEM	Daily profile of the CPI index by system and time shift
SYSTEM DAILY TRENDS	%L1M BY SYSTEM	Daily profile of the L1M index by system and time shift
SYSTEM DAILY TRENDS	SYSTEM CPI INDEX	Daily and hourly profile of the L1M index of a specific system
SYSTEM DAILY TRENDS	SYSTEM %L1M INDEX	Daily and hourly profile of the CPI index of a specific system

4. Customer support

For any technical problems or questions about EPV for zLINUX please email:

epv.support@epvtech.com

For any other issue about EPV for zLINUX please email:

epv.info@epvtech.com

Related documentation

The following manuals complement the information provided in this manual:

- *EPV for zLINUX V15 Installation and Customization Guide*
- *EPV for zLINUX V15 List of Views*
- *EPV for zLINUX V15 Database Layout*
- *EPV for zLINUX V15 Preparing Input for a Demo*
- *EPV V15 User Interface*
- *EPV V15 Operations Guide*