

IBM Software Demos

IBM Director PowerExecutive Tool

IBM_Director_PowerExecutive_D_Jul06_Script

1a 0:00

The IBM PowerExecutive Tool allows direct power monitoring of selected IBM System x and BladeCenter® servers.

1b 0:13

As a plug-in feature of IBM Director, PowerExecutive can leverage Director's powerful grouping capabilities. This allows the administrator to examine power consumption of multiple servers which are grouped by a variety of attributes – for example,

0:23

application support,

0:26

server type

0:28

or location.

1c

In this demonstration, we need to monitor the blade and rack servers installed in our Chicago location.

With the information provided by PowerExecutive, data center administrators can properly size power input requirements and more accurately plan datacenter construction or modification projects.

1d

Here, we will be using PowerExecutive to understand current power consumption and identify strategies for more efficient usage of available power capacity.

2a

The PowerExecutive main window consists of three information panes.

2b 1:04

On the left, the navigation pane shows the list of servers installed in the Chicago location.

2c 1:12

Since we are interested in TOTAL consumption of all managed machines, we select the Power Managed Systems folder.

2d

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The Top section on the right now displays a summary table for the location. In this way, we can easily get a view of total power consumption.

2e 1:36

Notice the difference in current power consumption compared to maximum configurable draw based on power supply nameplate. This is one of the key advantages of PowerExecutive – it measures actual power usage across multiple servers. In this case, we uncover the potential to support more servers within our existing power capacity at this location.

2f 2:01

This table also provides thermal information regarding ambient temperature and BTU's generated by this group of blade and rack servers. For BladeCenter H installations, exhaust temperature will also be displayed. Temperature and BTU information is essential when planning data center cooling capacities.

3a 2:19

The third pane displays trend data over various time frames.

3b 2:24

We can maximize this frame for a better view.

3c 2:27

Here we select 48 hours of data. This will help us identify time frames where additional workload can be added without impacting power capacity.

4a 2:48

To identify target machines which may have unusually high or unique consumption patterns, we can display more detailed trend data by selecting an individual server. Now the trend data is displayed only for that server. Notice also that the power meter to the left indicates the

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static configuration max,

3:03

a shaded bar indicating current power in use,

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as well as a "high water mark" that shows the maximum actual power usage over the sampling interval.

4b 3:15

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For IBM BladeCenters, PowerExecutive provides detailed data for each of the components within the chassis. Here we see the components included in Power Domain 1.

4c 3:25

you can also can select an individual blade for further detail.

4d 3:32

To display the raw data collected by PowerExecutive, we can select to show the trend information as a table.

4e 3:40

If further analysis is required, the data is easily exported for use by other programs.

5a

By making this detailed power information easily available, PowerExecutive helps customers monitor actual power consumption to allow better utilization of available power resources, as well as develop better plans for future datacenter modification and construction based on more accurate power sizings.