



Cooking with Systems Director

→ Active Energy Manager ←



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Power System IBM Europe

Favourite Systems Director plug-ins for POWER/AIX

Active Energy Manager
VMControl Image Mgr
Workload Partition Manager

VMControl System Pools



Installation of AEM

Download Plugin for AIX from

<http://www.ibm.com/systems/software/director/resources.html>



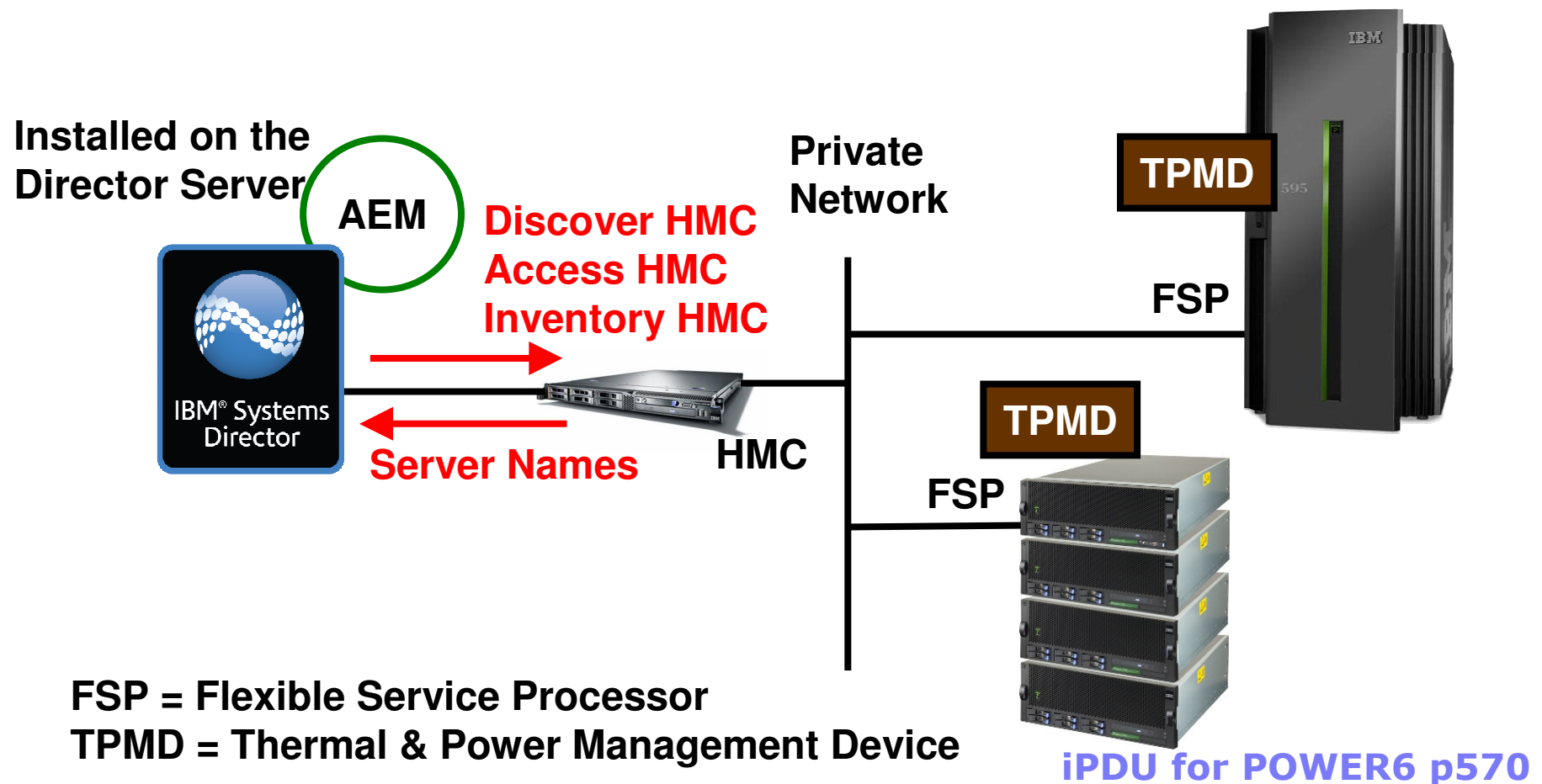
See AEM Install Movie

<http://www.ibm.com/developerworks/wikis/display/wikiptype/movies>

Movie covers “silent mode” but you could also use graphical install via VNC

Director 6 Active Energy Manager – Plug-in

- Managed at Server level
- No AIX Common Agent required



IBM® Systems Director

Welcome nag Problems 0 Problems 0 Compliance 6 Problems 0

View: All tasks

- Welcome
- My Startup Pages
- Find a Task
- Find a Resource
- Navigate Resources

- ⊞ Automation
- ⊞ Availability
- ⊞ Inventory
- ⊞ Energy
 - Active Energy Manager
- ⊞ Release Management
- ⊞ Security
- ⊞ System Configuration
- ⊞ System Status and Health
- ⊞ Task Management
- ⊞ Settings

✓ **Configuration Manager** 6.2.0
Ready
Configuration Plans Configuration Templates

✓ **Active Energy Manager** 4.3.0
Evaluation period expires on Sep 12, 2010 (in 9 days)
Purchase License

✓ **Remote Access** 6.2.0
Ready
Setup Remote Control

✓ **Storage Management** 6.2.0
Ready
SMI-S Providers Systems And Volumes
Storage Subsystems And Volumes

✓ **Network Management** 6.2.0
Ready

Active Energy Manager

Work with power-managed resources. View recent power usage. Configure power settings and automate tasks in response to power events.

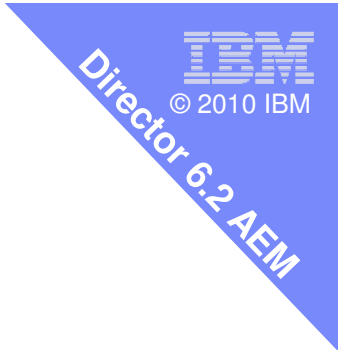
Status

Top 5 highest average input power values

| Today | Last 30 days |
|-----------------------------|-----------------------------|
| 1,577W Purple Power 77... | 1,588W Purple Power 77... |
| 962.607W p550-8way | 962.607W p550-8way |
| 615.496W orange-8203-E4A... | 625.278W orange-8203-E4A... |
| 556.54W red-8203-E4A-SN... | 570.53W red-8203-E4A-SN... |
| 520.938W bronze-8203-E4A... | 520.938W bronze-8203-E4A... |

Top 5 highest ambient temperature

| Today | Last 30 days |
|------------------------|------------------------|
| 41C IBM DPI | 41C IBM DPI |
| 39C IBM DPI | 39C IBM DPI |
| 28C diamond-8233-E8... | 28C diamond-8233-E8... |
| 26C orange-8203-E4A... | 26C orange-8203-E4A... |
| 25C 4 others | 25C 4 others |



Monitor

Select a resource and press Show Active Energy Information for quick access to energy-related properties and tasks.

Monitor Tasks

- [View trend data](#)
- [Calculate energy cost](#)
- [View Active Energy monitors](#)

Work with resources managed by Active Energy Manager. Navigate to a resource, right-click, and choose an action.

Actions

| Se... | Name | Type | Description |
|--------------------------|------------------------|---------------|------------------------------|
| <input type="checkbox"/> | Active Energy Mana... | Dynamic: Any | Resources managed by ... |
| <input type="checkbox"/> | Candidate Energy M... | Dynamic: Any | Resources requiring a fir... |
| <input type="checkbox"/> | Energy Managed Re... | Static: Group | Energy managed resourc... |
| <input type="checkbox"/> | Externally Metered ... | Dynamic: Any | Externally metered devic... |

Page 1 of 1 | 1 | Selected: 0 Total: 4 Filtered: 4

Manage

Set power caps and power savings mode. Configure power and environmental metering devices.


The number of resources using power management functions

| Currently | Today |
|-------------|-------------|
| 1 Power cap | 1 Power cap |

Management Tasks

- [Work with power policies](#)
- [Set power cap](#)
- [Set power savings options](#)
- [Configure metering device](#)
- [Configure cooling device](#)

Active Energy Properties

DisplayName:  diamond-8233-E8B-SN100271P Actions ▾

Access: ■ OK

Status: ■ OK

General | **Active Status** | Applied Activities | Configuration | Event L

→ **Highlights**

- Average input power: 319 watts
- Ambient temperature: 27 Celsius
- Input power capping: Inactive
- Power savings: Dynamic power

Details

| | |
|--------------------------------------|-------------------------------|
| Active Energy Manager support level: | Full |
| Last time metered: | September 2, 2010 10:21:15 AM |
| Nameplate power: | 4,000 watts |
| Average input power: | 319 watts |
| Maximum input power: | 399 watts |
| Average output power: | 289.396 watts |
| Minimum output power: | 260 watts |
| Maximum output power: | 388 watts |
| Ambient temperature: | 27 Celsius |
| Exhaust temperature: | |
| Effective CPU speed: | 57.424% |
| Input power capping: | Inactive |
| Input power cap: | |
| Minimum input power cap: | 303 watts |

Power Capping

Choose either an absolute power cap, or a percentage of the available power cap.

Activate Power Capping Deactivate Power Capping

Input power cap type:

Input power cap value:
 450W
 303W 860W

Values between 303W and 758W are not guaranteed

Targets:

| Name | Current power cap | Power Cap |
|-----------------------|-------------------|-----------|
| diamond-8233-E8B-S... | None | Inactive |

Page 1 of 1

Power Savings

System power usage can be regulated by selecting one of the following options:

No power savings
 Static power savings
 Dynamic power savings

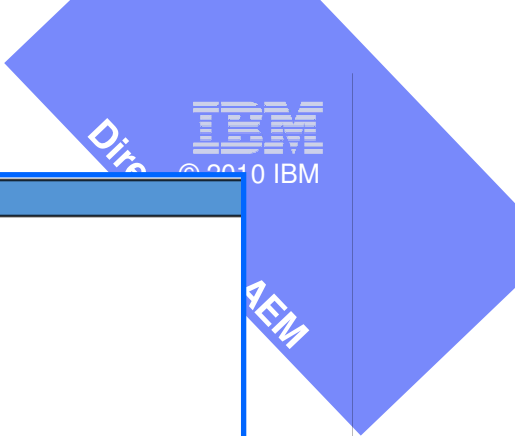
You have the option to favor performance or favor power

Favor Power Favor Performance

Targets:

| Name | Current power mode | Available power modes |
|-----------------------|------------------------------------|------------------------------------|
| diamond-8233-E8B-S... | Dynamic power savings, Favor Pe... | Static power savings, Dynamic p... |

Page 1 of 1 1 Total: 1

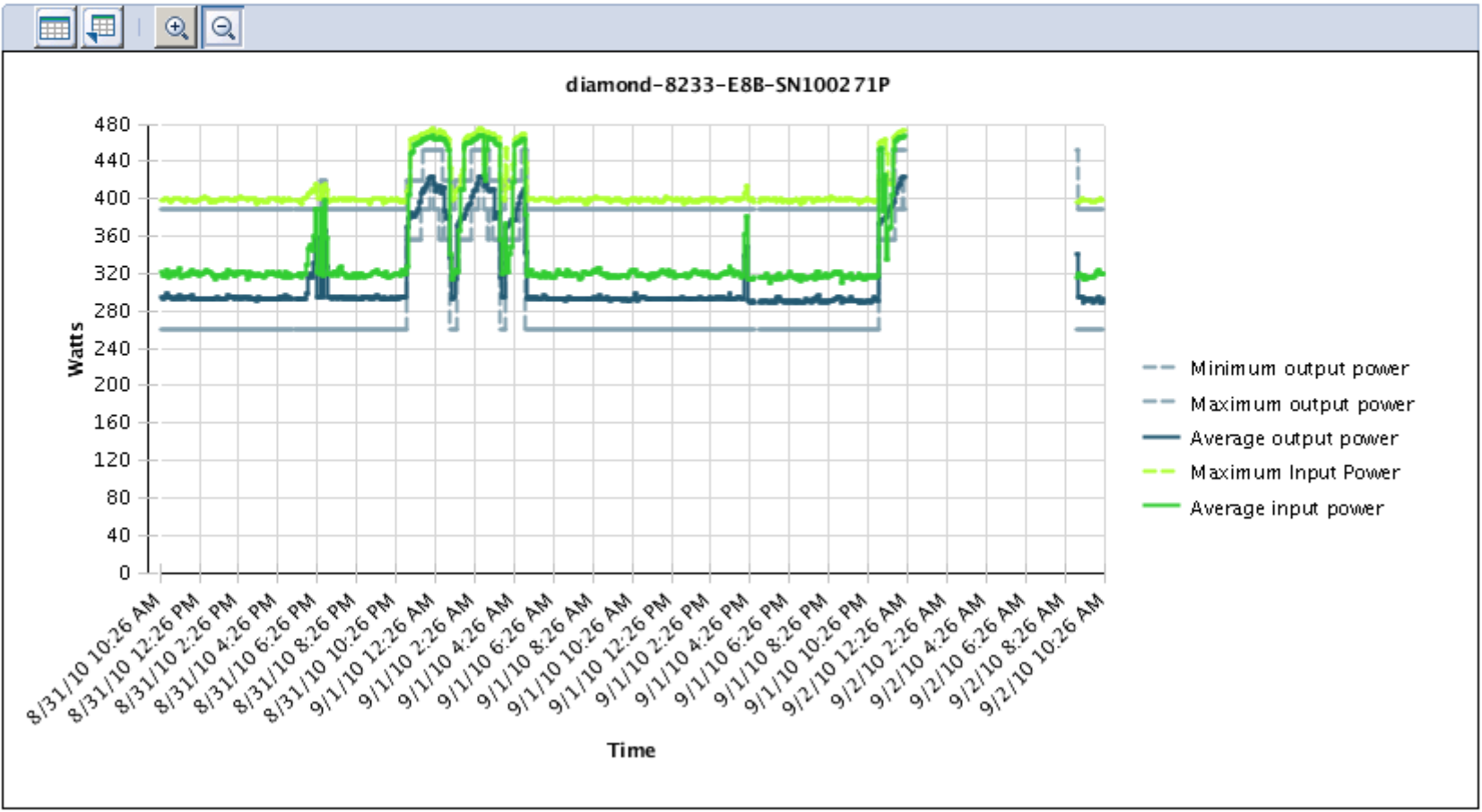


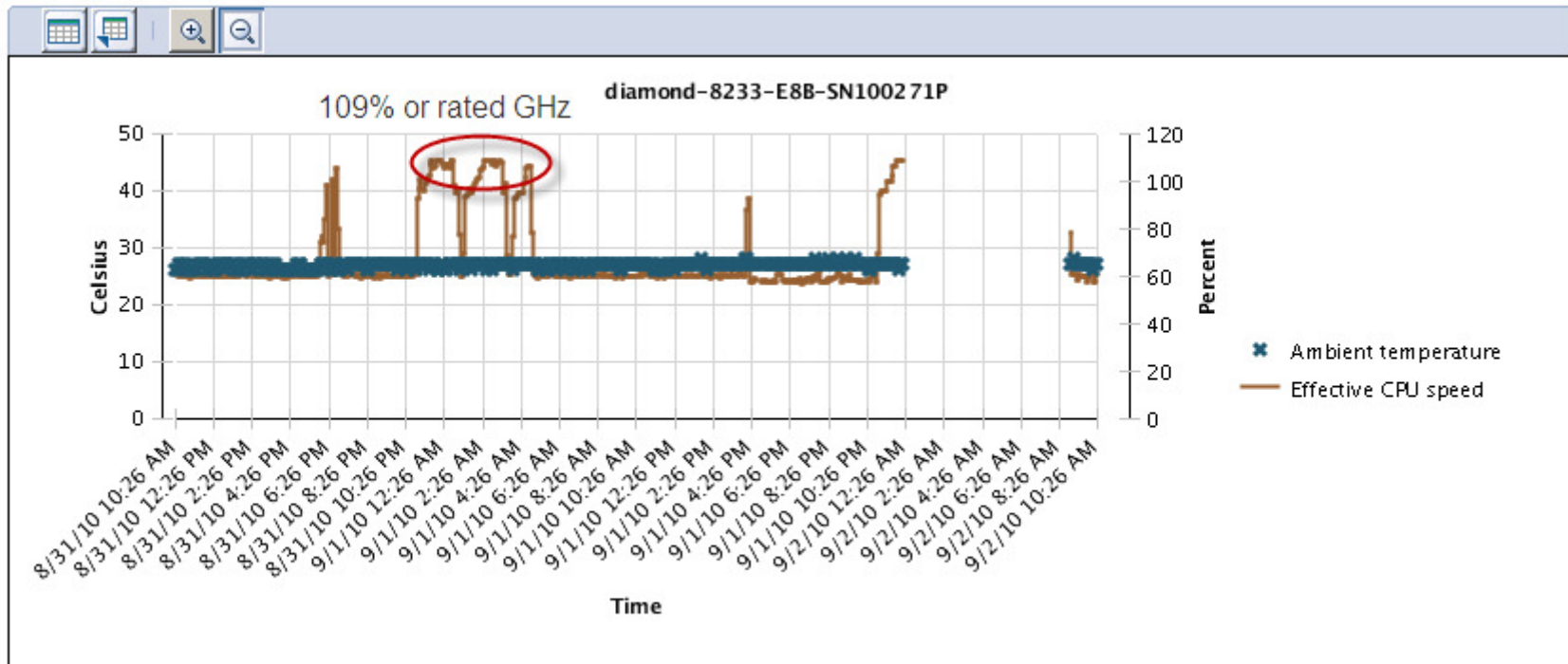
Trend Data

Target:

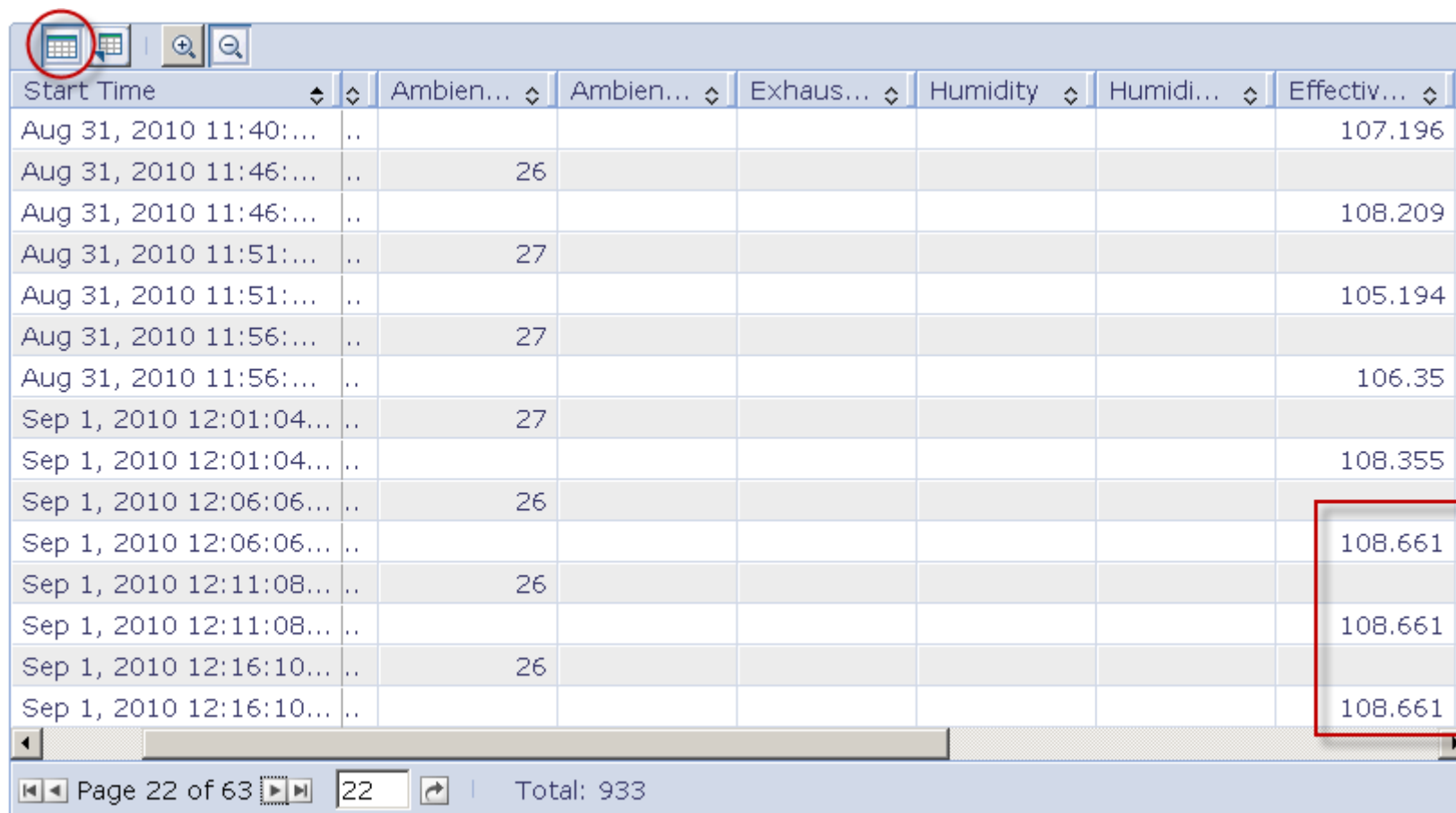
Time period: [Custom settings](#)

Chart: [Options](#)





Numeric view of the same numbers



| Start Time | Ambien... | Ambien... | Exhaus... | Humidity | Humidi... | Effectiv... |
|-------------------------|-----------|-----------|-----------|----------|-----------|-------------|
| Aug 31, 2010 11:40:... | .. | | | | | 107.196 |
| Aug 31, 2010 11:46:... | .. | 26 | | | | |
| Aug 31, 2010 11:46:... | .. | | | | | 108.209 |
| Aug 31, 2010 11:51:... | .. | 27 | | | | |
| Aug 31, 2010 11:51:... | .. | | | | | 105.194 |
| Aug 31, 2010 11:56:... | .. | 27 | | | | |
| Aug 31, 2010 11:56:... | .. | | | | | 106.35 |
| Sep 1, 2010 12:01:04... | .. | 27 | | | | |
| Sep 1, 2010 12:01:04... | .. | | | | | 108.355 |
| Sep 1, 2010 12:06:06... | .. | 26 | | | | |
| Sep 1, 2010 12:06:06... | .. | | | | | 108.661 |
| Sep 1, 2010 12:11:08... | .. | 26 | | | | |
| Sep 1, 2010 12:11:08... | .. | | | | | 108.661 |
| Sep 1, 2010 12:16:10... | .. | 26 | | | | |
| Sep 1, 2010 12:16:10... | .. | | | | | 108.661 |

Page 22 of 63 | 22 | Total: 933

They can also be exported to a spreadsheet

IBM Systems Director

Welcome root

View: All tasks

- Welcome
- My Startup Pages
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- Navigate Resources

Automation

Availability

Inventory

Energy

Navigate Resources

Trend Data(1)

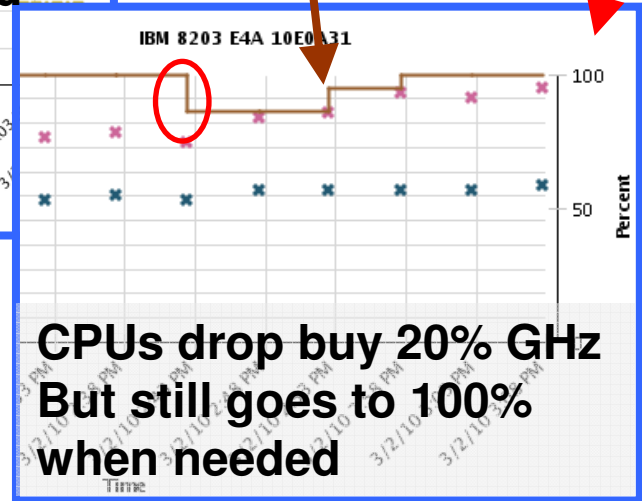
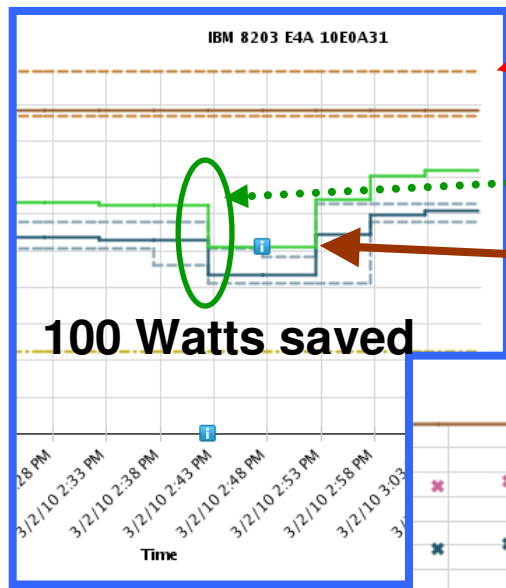
--- Select Action

Group: > All Systems (View Members)

Actions: 10E0A31

| Se... | Name | Type | Access |
|--------------------------|----------------------|--------|--------|
| <input type="checkbox"/> | IBM 8203 E4A 10E0A31 | Server | OK |

- Related Resources
- Topology Perspectives
- Create Group
- Remove...
- Rename...
- Add to
- Energy
- Extended Management
- Inventory
- Manage Power
 - Power Capping
 - Power Savings
 - Security
 - System Configuration
 - System Status and Health
 - Properties



Power Savings

System power usage can be regulated by selecting one of the following options:

- No power savings
- Static power savings
- Dynamic power savings

You have the option to favor performance or favor power savings:

- Favor Power
- Favor Performance

Targets:

| Name | Current power ... | Avai |
|----------------------|-----------------------|------|
| IBM 8203 E4A 10E0A31 | Dynamic power savi... | Stat |

POWER6

**CPUs drop by 20% GHz
But still goes to 100%
when needed**

Navigate Resources

Groups: All Systems (View Members)

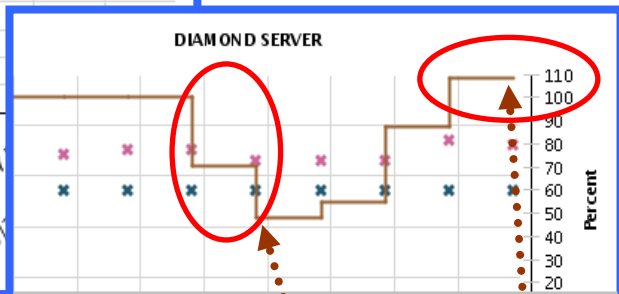
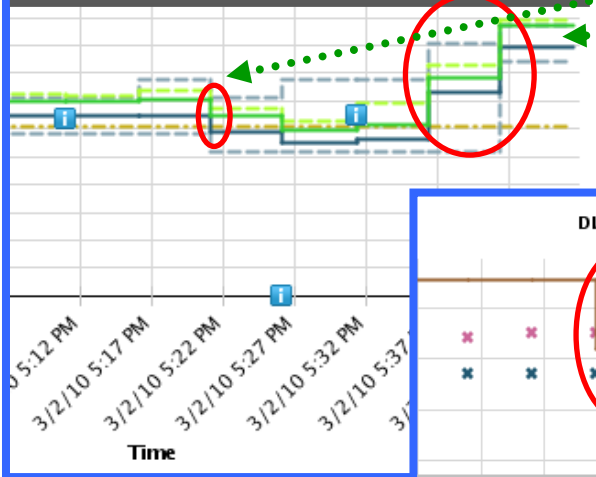
Actions [diamond] Search

| Se... | Name | Type | Access |
|--------------------------|----------------|---------------|--------|
| <input type="checkbox"/> | DIAMOND SERVER | Server | OK |
| <input type="checkbox"/> | diamond10 | Virtual Se... | OK |
| <input type="checkbox"/> | diamond3 AME | Virtual Se... | OK |

| | | |
|-------------------------------------|-------------------|--------------------------|
| <input checked="" type="checkbox"/> | DIAMOND SERVER | Related Resources |
| <input type="checkbox"/> | diamond10 | Topology Perspectives |
| <input type="checkbox"/> | diamond3 AME | Create Group |
| <input type="checkbox"/> | diamond3.aixncc.u | Remove... |
| <input type="checkbox"/> | diamond4 HPC | Rename... |
| <input type="checkbox"/> | diamond4.aixncc.u | Add to |
| Active Energy Properties | | Energy |
| Energy Cost Calculator | | Extended Management |
| Trend Data 2 | | Inventory |
| Manage Power | | Power Capping 1 |
| <input type="checkbox"/> | diamond7 Swingb | Power Savings |
| <input type="checkbox"/> | diamond8 | Security |
| <input type="checkbox"/> | diamond8.aixncc.u | System Configuration |
| <input type="checkbox"/> | diamond9 | System Status and Health |
| <input type="checkbox"/> | diamond9.aixncc.u | Properties |

50 Watts saved. Idle CPU already using intelligent power saving modes = 190 W

Power Input Watts 350 to 300 to 490



**CPUs drop by 50% GHz
3.55 GHz → 1.65 GHz
Then 3.86 GHz = 109%**

Power Savings

System power usage can be regulated by selecting one of the following options:

- No power savings
- Static power savings
- Dynamic power savings**

You have the option to favor performance or favor power savings:

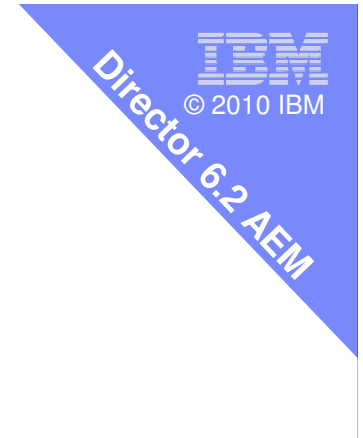
- Favor Power
- Favor Performance**

Targets:

| Name | Current power ... | Avail |
|----------------|-----------------------|-------|
| DIAMOND SERVER | Dynamic power savi... | Stati |

POWER7

Cooking with Systems Director What Next?



- Follow on sessions on particular areas:
 - Done Active Energy Management,
 - **9th September 2010 - Health Checks, Performance**
 - Graphs, Alerts and CEC performance
 - 23rd September 2010 - Drill Down and Up
 - HMC functions, AIX pConsole and dsh
 - 7th October 2010 - Automation plans
 - Updating HMC, firmware, VIOS and AIX,
 - VMControl Image Manager,

 - nag@uk.ibm.com



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Cooking with Systems Director

View | Info

Browse Space

Added by [naqger](#), last edited by [naqger](#) on Jul 14, 2010 ([view change](#))
Labels: (None)

Cooking with Systems Director

As a Systems Administrator you may have heard of IBM Systems Director 6, you may even have seen a presentation on it but have you wondered:

- What its like to actually use?
- What are the key features for POWER and AIX?
- How will it save me systems administration time and reduce weekend working?
- What do I need to run it and how do I get started?

Well 9:30 AM (UK time) on August 5th starts a series of live hand-on demonstration of Systems Director focused on AIX and POWER systems.

- The first session is a quick look around Systems Director running on AIX and the main features.
- The sessions aim to be 30 to 40 minutes long and once a fortnight.

Access:

- This will involve using the web based Genesys Webinar conference system which includes Voice Over IP so this is zero cost to you.
- A small tools needs to be download for this VoIP service otherwise you can use a phone for audio while watching the web session on screen.

Who:

- Nigel Griffiths on the EMEA Power Systems Advanced Technology Support has been using Systems Director 6 for a couple of years and uses it to manage our internal systems and save time too.

Longer term:

- These sessions are aimed at being techie to techie and in a dynamic cookbook style.
- You may want to install Systems Director after the second session and then follow along with the "master cook" to fully learn the recipes.
- As this format is a little experimental we look forward to your feedback and suggestions.
- If you are really keen you can download Systems Director 6 from <http://www.ibm.com/systems/software/director/resources.html> it is free but you need to get yourself a IBM Id but that takes only a minute or so.

Follow on sessions will include:

<https://www.ibm.com/developerworks/wikis/display/WikiPtype/Cooking+with+Systems+Director>