

Case studies: How ICT is helping to deliver the low carbon economy

Title: Dynamic IT Environment – Flexible Energy Consumption



Company: Fujitsu Siemens Computers

Summary of what has been achieved:	Energy savings through dynamic IT infrastructures
Parties involved:	Fujitsu Siemens Computers
Sector/s:	Information Technology Industry
Outcome:	Energy cost savings of up to 70% through the use of the "FlexFrame for Oracle" Dynamic Data Centre solution

Key Objectives

Deployment of dynamic IT infrastructures makes IT operations more flexible and IT resources can be better matched to current service needs resulting in reduced energy consumption.

Description

Flexible energy consumption in IT systems through the use of dynamic IT solutions is achieved by integrating the management tools required to monitor the IT infrastructure into the management environment of application vendors (e.g. Oracle) so that IT systems respond better to applications resource needs and therefore allocate IT resources in a more flexible way.

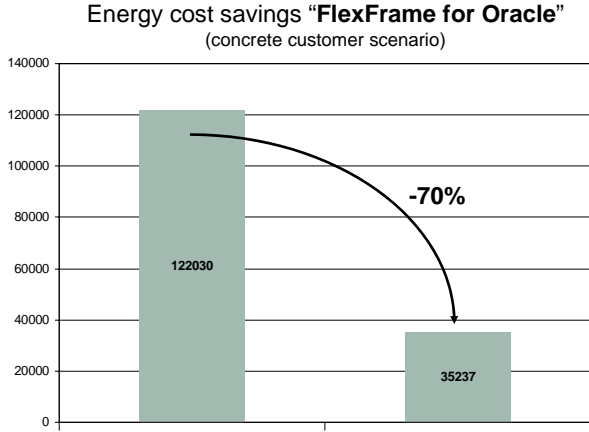
1. When peak loads situations necessitate server farm scaling or if it is necessary to react to error situations, management tools ensure that additional servers are activated only when they are really needed and do not waste energy running in idle mode.
2. IT administrators are also provided with support to optimize IT resource utilization. Servers not currently needed, can be switched off when workloads drop. In such scenarios, automation technology simplifies the implementation of energy efficient day/night operation.
3. Dynamic data Centre solutions also feature an energy efficient N:1 redundancy concept. In this case, all that is needed is a standby server in a server farm. If a server fails, the standby server is activated automatically. If permitted by the Service Level Agreement, the standby server need not even be switched on so that no energy is wasted.
4. Shared storage systems in a NAS/SAN environment ensure better utilization of disk capacity and therefore support energy efficient operation.

Environmental Benefits



Flexible Energy Consumption through Dynamic IT Solutions (e.g. FlexFrame for Oracle)

- All Oracle services are managed by the Control Center
- Servers are only switched on / off due to requirement to avoid energy waste (e.g. idle mode)
- Energy efficient N:1 redundancy concept
- Shared storage systems (higher disk utilization supports energy efficiency)



A service oriented infrastructure significantly reduces energy consumption

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Energy cost savings of up to 70% through the use of the "FlexFrame for Oracle" the Dynamic Data Centre solution from Fujitsu Siemens Computers (concrete customer scenario).

Scope for further work

The above Dynamic Data Centre solution is for other application vendors available as well (e.g. "FlexFrame for SAP").