

DATA SHEET

Data Center Efficiency Assessment OPTIMIZATION Services

Issue August 2009

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Introduction

OPTIMIZATION Services from Fujitsu offer efficient consultation packages for existing infrastructure environments at a fixed price. This has been made possible by systematically analyzing a large number of successfully implemented consultation projects. The solution methods used have been standardized and combined with the experience of the comprehensive product and solution skills provided by the Fujitsu group.

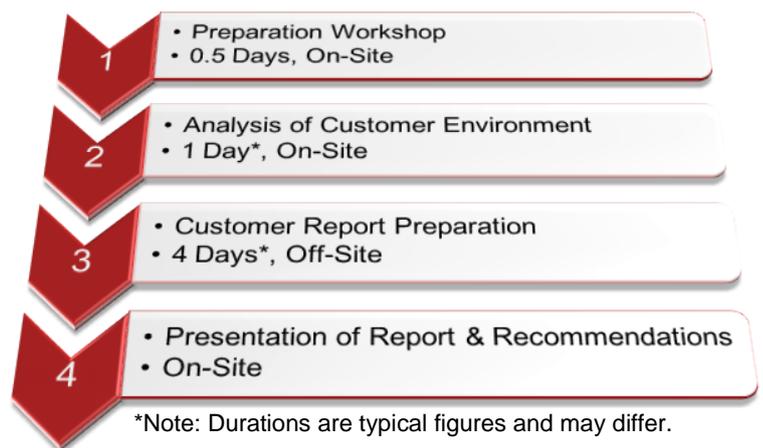
The resulting first-class consultation and analysis packages quickly provide customers with specific information and suggested improvements for the infrastructure involved.

Data Center Efficiency Assessment

Considerable investments are made in data centers but the infrastructure frequently does not meet the demands of IT operations. The Data Center Efficiency Assessment is used to clearly assess all the factors which affect the security, reliability and energy efficiency of your IT operations, and to make qualified recommendations for optimization measures which will increase the security and efficiency of your data center. In addition, the service also takes into account the economic viability of any recommendations made, to ensure maximum cost-effectiveness for your operations.

Customer Requirements

- Uncover and eliminate any unknown dangers in your data center infrastructure and operations (security gaps, safety hazards)
- Identify compliance issues with relevant corporate and legal requirements
- Understand how your IT infrastructure reacts to changes caused by external events and how your personnel and processes are equipped to deal with specific situations
- Requirement to develop Secure IT operations
- Requirement to optimize security, quality and energy efficiency to meet current and future company needs



Customer Benefits

This service delivers information and recommendations in the following areas:

- Energy usage information of the data center
- Power Usage effectiveness (PUE)
- Data Center Infrastructure Efficiency (DCiE)
- Mechanical & Electrical redundancy
- Current risks and areas of low efficiency
- Audit of downtime risks and recommended measures to reduce them
- Recommendations for coordinating and optimizing your investments using state-of-the-art security standards

Scope of Service

1. Preparation Workshop

There are many potential dangers which can affect IT operations. In order to optimally align our Data Center Assessments to your company’s specific needs, we first clarify beforehand some fundamental questions: how secure must your IT operations be? Or: how quickly must your system be available again? In a workshop with our consultants present the current technical options for improving the physical security and energy efficiency of the data center operations and examples of identified best practices.

2. Analysis of Customer Environment

The next step is an inspection on-site. This is where Fujitsu consultants identify and analyze possible weak points in the individual infrastructure areas; the following are decisive factors, such as

- location (environment, floor-space use)
- Air conditioning and refrigeration systems (air conditioning, air distribution, air conditioning supply, re-cooling)
- Fire and smoke protection (fire loads, fire areas, fire alarm system, sensors, sealing, covers, doors, extinguishers)
- Power Supply (transformer, cabling, UPS, power backup equipment, lightning and overvoltage protection, electromagnetic radiation and electromagnetic compatibility [EMC])
- Water supply (piping, drains, rain, surface and ground water drainage)
- Burglary / theft / sabotage
- Safety devices (access control, threat detection equipment, alarm, etc.)
- Physical network (server locations, cable routing, etc.)

3. Customer Report Preparation

Further to the on-site inspection the risk status of your IT operations are determined and assessed. Based on your specifications and our assessment results we develop a catalog of actions specially designed to meet your requirements. This is all detailed in an explanatory report and presentation.

4. Presentation of Report & Recommendations

Fujitsu consultants present and discuss the results and recommendations with you on-site.

Service Conditions

The Customer agrees to the following conditions as pursuant to the delivery of the service defined. The Customer agrees to make the following available to Fujitsu:

- Experienced personnel available for the duration of the service to enable access to inspected areas, provide answers to specific questions with regard to inspected items and to deliver customer requirements
- Latest location and floor plans scaled to 1:500, 1:100 or 1:50 made available to Fujitsu in paper format and on disk as a CAD file in dwg or dxf format for the relevant areas of investigation
- Relevant current technical installation documentation and revisions
- Relevant Information of the operation of the current and future hardware systems.
- Access to observe the current Data Center area to derive the necessary measurements
- Technical data of supply systems such as electrical connection with the necessary electrical connection services, emergency power supply, cooling, alarm and fault organization, etc.
- Information of currently used IT Equipment
- Information of the electrical power consumption of the computer equipment if known, or measured from the electricity supply distribution board
- Suitable rooms with projectors for the workshop
- Where appropriate and agreed, any other relevant data required in performing the service

Additional Information

The following optional chargeable service modules are available to you, and can be combined with this service:

1. Hardware Inventory

2. CFD Computer Simulation

Overheating in data centers is a big concern. Diagnosing and solving potential overheating weak-points using simulation to understand current situation and evaluate alternative designs is a very cost-effective alternative to testing various alternatives in situ. With this service heat distribution and airflow within the data center can be quickly measured and reported. Adjustments are then made to the simulation to assess efficiency improvements. These are then documented and reported to you.

Ordering and Delivery Information

This Consulting Service can be ordered via your Fujitsu account manager or the Email contact below.

Title	Data Center Efficiency Assessment
Order #	CPS:IT-ICN-11014F (20m ² - 50m ² floor space) CPS:IT-ICN-11015F (51m ² - 120m ² floor space) CPS:IT-ICN-11016F (121m ² - 250m ² floor space) >250m ² floor space - on request
Contact	Email: expert@ts.fujitsu.com

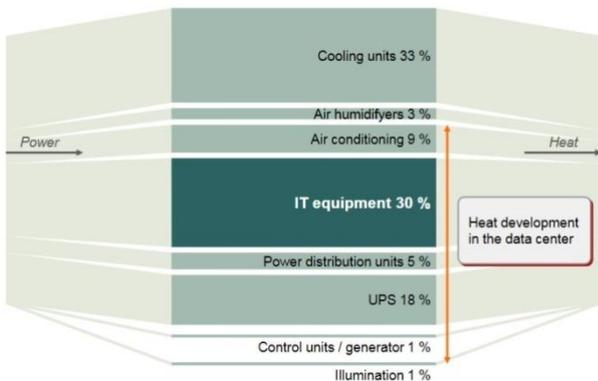


Figure 1: Energy Usage in the Data Center

Information about environmental care, policies, programs and our Environmental Guideline FSC03230:

ts.fujitsu.com/aboutus

Take back and Recycling information: ts.fujitsu.com/recycling