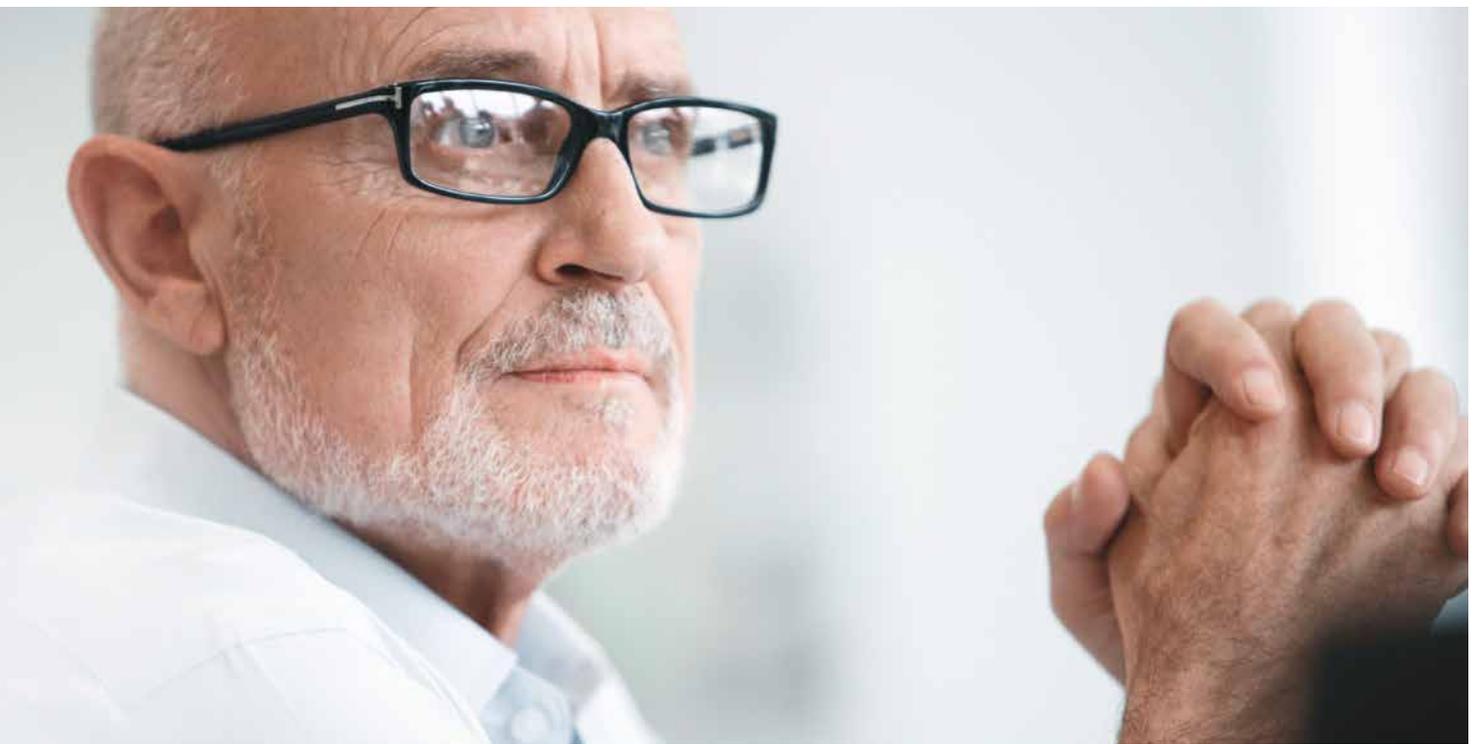


FUJITSU Data Center Management and Automation

Automated Contingency Management



shaping tomorrow with you



Could you deal with disaster?

Planning well beforehand is easier than explaining afterwards why you didn't. Even a minor outage of business-critical services can cause major impact on the company's revenue and, perhaps more importantly, its reputation. So having a clear plan of the actions to take after disruptive events – anything from a power outage or server failures to fire and natural disaster – will help maintain business as usual or get systems back into operation as quickly and smoothly as possible.

This is the function of contingency plans or manuals. A vital component of corporate risk management procedures, they define what action to take to ensure an appropriate response to incidents that disrupt normal business operation or threaten the company's existence:

- Business continuity (BC) plans describe the actions to take to keep the business running, e.g. the steps to make an instant switchover to a backup data center. A business continuity plan embraces all the company's assets –including its human resources, business partners, business processes, etc.
- Disaster recovery (DR) plans, on the other hand, are invoked when resources are out of action following a disruptive event. They describe the steps to take to restore resources and operations.

Disaster recovery and business continuity planning in IT

With functioning IT now the heartbeat of many enterprises, IT recovery and continuity is unsurprisingly a key part of contingency planning. In fact, a contingency plan for the data center is recommended or mandated by various standards, including ISO 27001 and ITIL.

The contingency plan or manual, a master plan of the actions to complete in the wake of an incident, has to provide all the details that crisis teams will need to take action correctly and reliably, even in the stress of an emergency situation. A good contingency plan

is also designed to ensure a prompt response before a situation escalates – for example by constant monitoring of sensor arrays in the data center.

Traditionally, contingency plans are drafted manually. But defining the recovery path for every part of the IT landscape and underlying infrastructure is a fraught exercise. Manual error creeps in; plans become outdated; or there is simply not enough detail. Inaccuracy could however lengthen recovery time, even make your plans unworkable in a real disaster.

To ensure action is taken promptly and correctly, it is also worth considering how contingency management processes can be automated, and to include not just the IT infrastructure but also important facilities such as cooling, and power supply. Configured correctly, IT infrastructure and facilities can be automated to cope with emergencies, freeing staff to perform more important duties.

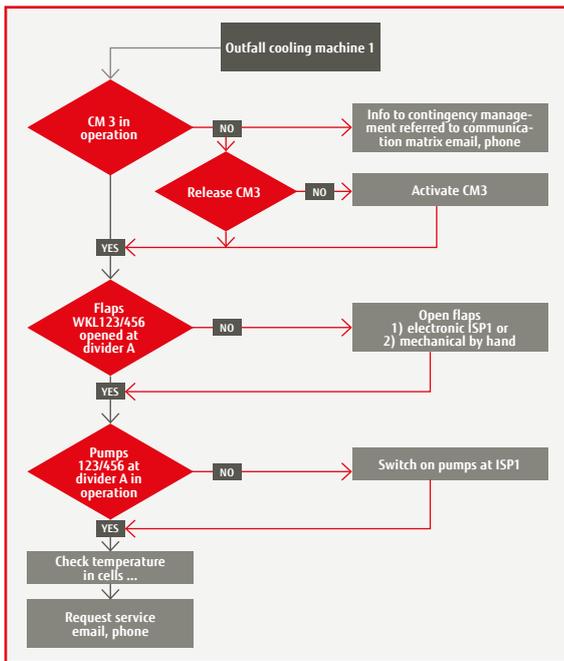
The Fujitsu approach for Automated Contingency Management

Part of the FUJITSU Data Center Management and Automation portfolio, the "Automated Contingency Manual" leverages existing plans and documentation to a new level. The contingency plan still has to be kept in printed form, but the digital version helps crisis teams quickly locate the information they need.

Combining digital continuity and recovery planning with process automation technology, the Fujitsu approach offers a range of functions for defining, automating and managing processes across department boundaries, as well as interfaces with the company's other IT management systems.

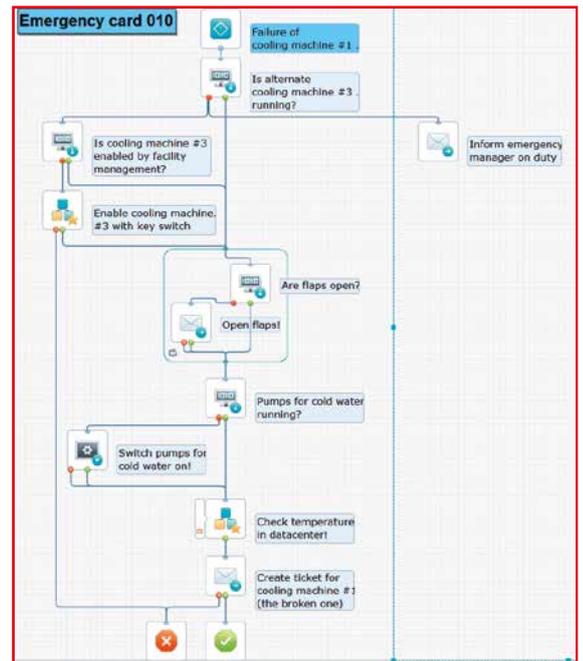
Crisis management teams have the information at their disposal to provide prompt, informed support to customers and company personnel, and to ensure critical resources are restored in line with declared recovery objectives.

Downtime cooling machines Emergency card 010



FUJITSU DCMA methodology and solutions in order to implement the contingency manual automation efficiently

Downtime cooling machines Emergency card 010



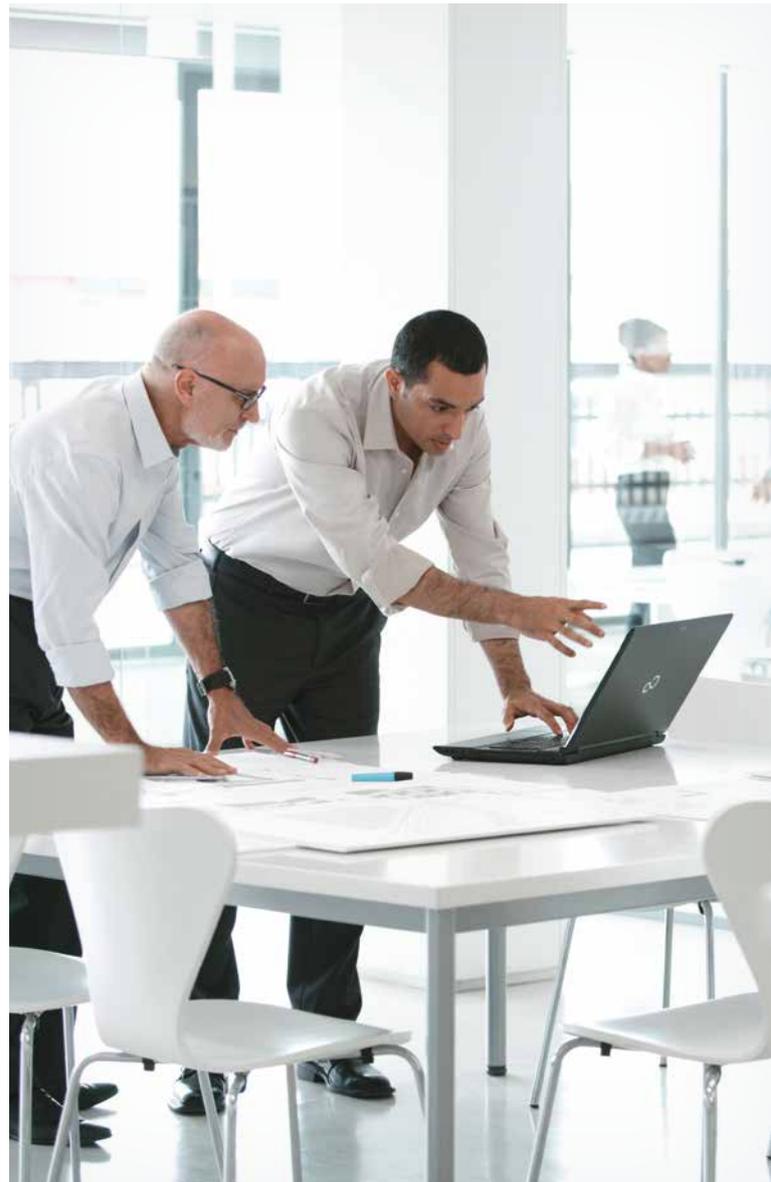
With automated processes combined with a smart human-machine interface, errors can be countered much faster in case of crisis. The integrated cockpit provides a sophisticated information and warning system, giving key personnel all the insights to oversee crisis management, with a clear overview of which actions need to be taken instantly, and who needs to be informed if the problem persists and cannot be resolved satisfactorily.

Automated Contingency Management – example

The first step is to define the overall process in the tool. This combines information from multiple sources and experts and specifies exactly what action is to be taken to deal with particular incidents. In the event of a problem such as failure in a cluster of redundant cooling systems, the appropriate emergency card can automatically be created from the data stored in the tool. This card provides a complete set of instructions. It states which measures run automatically – for instance, technical actions such as opening flaps and starting pumps, and messages sent automatically to responsible managers, admin and service staff – and which measures have to be initiated manually. These cards can easily be created and printed in an emergency, providing users with the most up-to-date version of information.

Customer benefits of the Automated Contingency Management

- Standardized cockpit and data storage
- Support of the emergency team / crisis management team
- Fast, effective support of crisis teams and managers
- Adherence to escalation procedures, all activities are documented
- Simpler, faster testing of defined emergency processes
- Cost savings and quality improvements for annual data center certifications
- Predefined interfaces to quickly connect IT processes, systems, sensor systems, facility infrastructure systems and people
- Emergency processes are initiated automatically, automatic diagnostics and self-help
- Documentation and automation with one solution
- Centralized library for standardization of processes
- Pre-defined, ready-to-run self-healing processes



Why Fujitsu

- Expertise on automating data center processes, especially contingency processes, combined with the ability to take a wider view of the client's business imperatives
- Fujitsu as a trusted partner – broad offer, independent consulting, best-of-breed portfolio
- Strategic IT consulting – transformation of business, service and contingency processes into executable applications
- Experienced team for services along the complete value chain (consult, design, build, operate, maintain)
- Preconfigured solutions – rapid implementation, excellent customer feedback
- Predefined blueprints and best practices
- Solutions can be adopted within existing data center landscapes – across all platforms, applications, IT services and organization units

Process automation with Fujitsu

The FUJITSU Data Center Management and Automation – Automated Contingency Management is based on process automation technology which can be used for other processes in the enterprise.

The Automated Contingency Management is an ideal starting point for venturing into process automation. As well as being an effective way to resolve emergency issues, process automation can enhance virtually all data center processes.

Process Automation integrates people, processes and technologies to streamline repeatable and automated actions across the organization and across multiple platforms.

Our Data Center Management and Automation (DCMA) solution values:

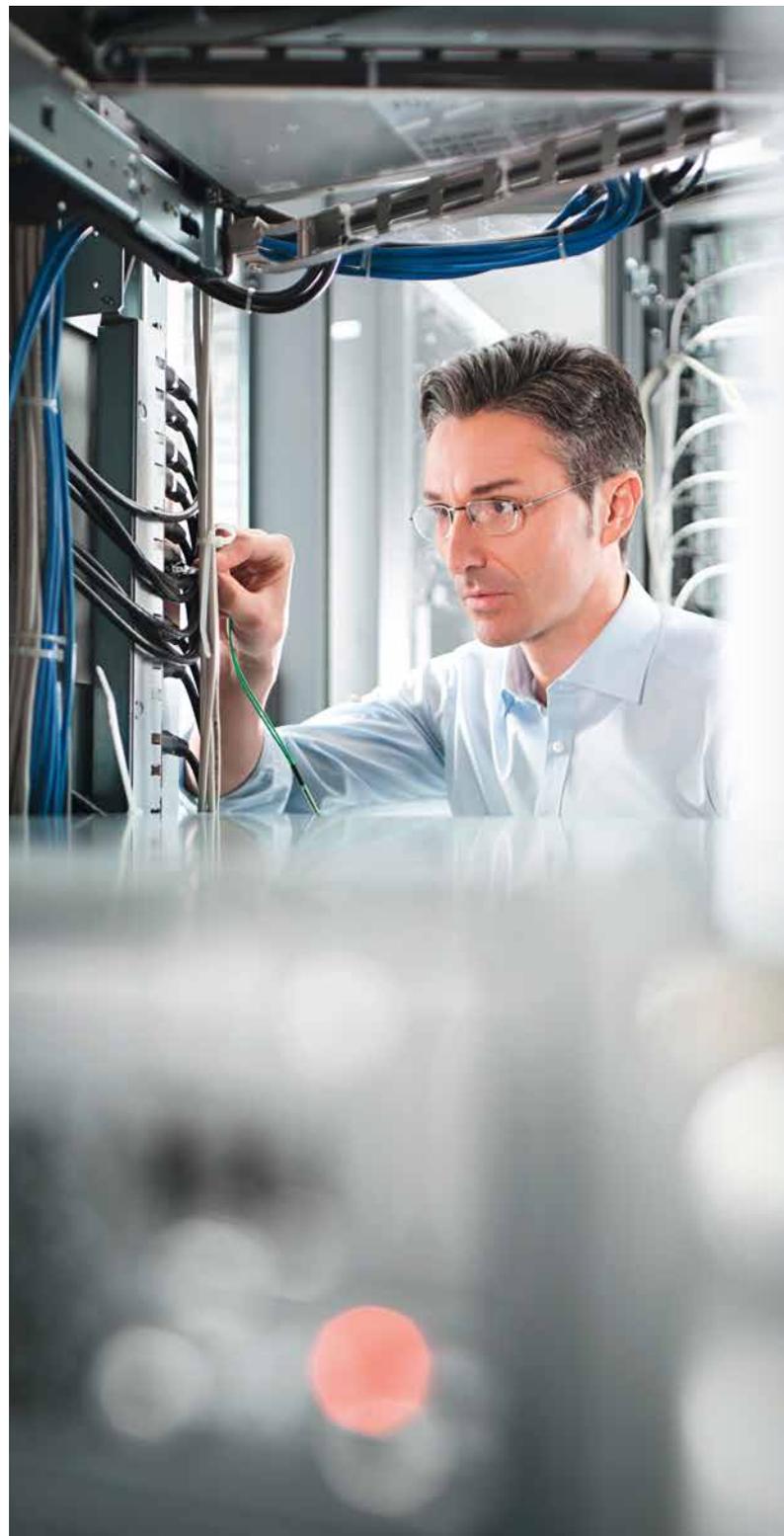
- DCMA is based on Fujitsu solutions, intellectual property and partner software integrated in a Fujitsu reference architecture.
- Long standing experience in managing and automating of huge Data Centers
- Combined automation and autonomy functionality for efficient IT service delivery
- Broad and innovative solution offering, honored with German Data Center Awards in 2013, 2014, 2015 and 2016

For more information about automating processes with Fujitsu, please contact/visit:

www.fujitsu.com/fts/solutions/business-technology/data-center-management-automation/solutions/

or see our YouTube video:

https://www.youtube.com/watch?v=Wbgby9_SEWI



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