Data Sheet
FUJITSU Software Infrastructure Manager

Path to achieving software defined infrastructure

Need to eliminate complexities in a heterogeneous IT environment

The digital universe is growing at a rapid pace, and so the backbone to digitalization - IT infrastructure - needs to be extremely agile and flexible. It has become critical for organizations to make quick decisions and to ensure prompt service delivery to stay competitive in the market. But this is by no means an easy task considering the complexities involved in a multi-vendor, heterogeneous IT environment, where managing pools of resources in computing, storage and networking devices in silos can result in delayed decisions and impact competitiveness.

Gain agility and simplify IT operations

Enabling customers to drive towards achieving software defined datacenters, FUJITSU Software Infrastructure Manager (ISM) provides single, converged management for both the physical and the virtual environment, encompassing of computing, storage and network devices.
ISM saves significant time and OPEX by automating device configurations based on the company's operational policies, further tracking the status of each device and monitoring resource usage patterns. With Fujitsu's growing partner eco-system, ISM also helps track and monitor heterogeneous IT environments through integration layers – by providing integration into VMWare/Microsoft System center environments.

Accelerate growth and innovation

ISM helps simplify day-to-day IT operations.
Obtain actionable insights and act using programmable APIs:
- Track computing resources and reassign workloads to reduce power
- Increase storage utility based on data usage patterns
- Re-direct network traffic in the event of congestion

Obtain an integrated view and centralized control over a heterogeneous environment with ISM components:

DEPLOY
- Mass OS installation
- Automate all device configuration

CONTROL
- Node Management
- Health status monitoring
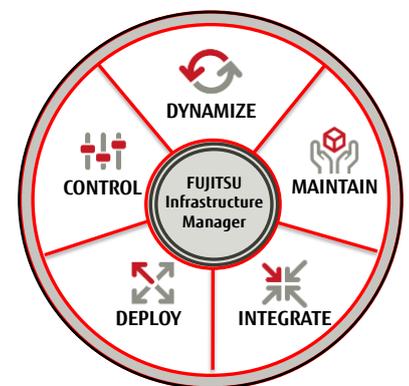- Capacity management
- Power management

DYNAMIZE
- Converged management
- Virtual-IO management (VIOM)
- Auto discovery
- Network topology management

MAINTAIN
-Update management
-Logging and auditing

INTEGRATE
- Integration into heterogeneous IT landscapes

Improve agility and customer response times

90% reduction in firmware update times*
50% reduction in power consumption*

*based on FUJITSU internal lab testing, in comparison to silo systems

http://www.fujitsu.com/infrastructuremanagement

Features and Benefits

Main features	Benefits
DEPLOY	
■ Swift and unattended mass OS installation	■ Significant reduction in IT administration work
■ Easy, secure and swift deployment	■ Reduce administration costs, guarantees reliability and availability
■ Create profiles and groups once, and then roll them out to any number of enclosures, servers, and storage arrays to ensure compliance and consistency.	■ Automate the configuration and installation process of server, storage and network components and increase productivity
CONTROL	
■ Comprehensive monitoring and analysis of converged IT infrastructure environment – single or group of nodes connected to the network	■ Centralized control over infrastructure enabling users to make faster decisions by viewing bottlenecks and system errors.
■ Resource utilization and right allocation through threshold settings and power capping	■ Reduces administration costs and increases infrastructure availability.
■ Companywide control of assets while maintaining desired level of security	■ Automates routine administration and ensures data security
■ Access to managed servers through a Single Sign-On from ISM	■ Enhance user experience with quick access to all managed servers with SSO from ISM, without the need to authenticate iRMC every time
■ Integrating Active Directory Groups in ISM	■ Enhance security and productivity by integrating Active Directory groups in ISM
■ Collect hardware settings regularly and indicate on GUI or emails if the hardware settings have been changed outside of ISM	■ Improve compliance support with alerts when alterations are detected
DYNAMIZE	
■ Centralized view of compute, storage and networking devices highlighting datacenter status and identify possible bottlenecks.	■ Reduces customer response time, with less effort and time to identify root cause of an issue across the devices registered to ISM
■ Integrated administration and identification of physical and virtual infrastructure devices connected to the network.	■ Optimizes infrastructure life-cycle management operations and provides high-availability.
■ Auto discovery of nodes when a device is added to the network	■ Accelerates the node setup process by automatically identifying any new servers or PSWITCH addition to the network
■ Virtual network performance and bottleneck analysis	■ Enables customers to identify network performance bottlenecks, thus proactively helping to ensure business continuity.
MAINTAIN	
■ Visibility of computing, storage and network resource utilization, performance of nodes and overall infrastructure	■ Meet service level agreements by having insight into possible bottlenecks in the infrastructure and taking quick action
■ Define the firmware version to be updated and execute secure firmware update required across devices or components. Execute manually or schedule the update in non-peak hours	■ Reduction in firmware update time and number of steps involved in computing, storage and networking updates, thus further reducing administration costs
■ Manage firmware updates according to baseline settings	■ Save time and improve productivity by ensuring HCL compatibility using baseline setting feature
■ Collect and track event logs for analysis. Obtain user-based event logs and access information for auditing	■ Faster trouble shooting or root cause identification.
■ Collect hardware status independently from OS condition by communicating with iRMC S5 directly	■ System hardware failure is reported immediately
INTEGRATE	
■ Seamless and easy integration into widely used enterprise management or vendor-specific server management solution	■ Provides a single point of control and administration in heterogeneous environments.

DOCUMENTATION

For more information including technical details please refer to data sheets, user manuals and further documents provided on the websites.

http://www.fujitsu.com/infrastructuremanagement

FUJITSU Software Infrastructure Manager Components

DEPLOY
All items required for collective deployment of server, storage and network devices and possible automation of the same

DEPLOY AND AUTOMATE

- Profile management
Enables template-based deployment with configuration for hardware components which includes administrator passwords, SNMP, NTP settings, RAID groups, and volumes saved as a profile, copied and applied as a batch to drive automated installation. This helps ensure compliance, consistency and increased productivity. You can also restore existing hardware configurations and create new profiles from existing hardware for simplified transition from existing software to ISM. Users can now configure IP address and other settings of ISM virtual appliance (ISM-VA) during VM deployment process

- Mass OS installation
Easy, swift configuration and unattended installation of operating systems on a scale of devices. Create and execute script which sets several configurations in the final phase of the installation sequence. Policy function is available with OS as well as BIOS/iRMC

CONTROL
One comprehensive web-based tool consolidates all the management tasks for high levels of availability, flexibility and efficient IT operation.

MONITORING AND CONTROL

- Node management
Discover and register nodes within your network, which consists of all infrastructure devices – servers, storage and network switches. Manage and visualize rack locations on datacenter floors and node positions within the racks. Node information includes model name, serial number and IP addresses of the node devices

- Health status monitoring
Track and monitor the health status of the converged infrastructure, which includes server, storage, network switch and facility. This can be visualized by configuring rack location on the floor or datacenter, enabling nodes to be managed intuitively and efficiently. Reduce monitoring costs by consolidating all error reports to one server, sending these to the system log. Users can now monitor security status which is detected by "Trend Micro Deep Security" and indicated on the Dashboard

- Event management
Monitor user operations based on events (SNMP traps) sent from converged IT infrastructure devices registered on ISM. Track parameters such as intake air temperature, CPU utilization and power consumption for each node to ensure it is within defined limits.

Set actions such as execution of user scripts or emails alerts at user level, based on company policy.

- Executing actionable insights
ISM provides flexibility to run external scripts to execute appropriate actions to ensure system availability, reduce network load, etc.

CAPACITY MANAGEMENT

- Threshold manager
Provides accurate warnings about utilization limits of node resources being reached, thus helping to easily identify current performance issues and to ensure constant service delivery.

POWER MANAGEMENT

- Power capping and monitoring functions
Provides power capping function for single devices or groups of devices. By setting the upper limit value of power consumption in a rack and also setting the priority of power capping for each node in the rack, automatic power consumption control can be performed.

INFRASTRUCTURE MANAGEMENT

- Inventory management
Collect information on monitored nodes such as serial number and firmware version. The solution provides the facility to export the gathered information to CSV format. It also provides advanced search support, that provides the information from within the inventory as well as the current page

- Multi-tenancy
Assign user access rights to each user or each node based on usage, and associate user groups with node groups. Restrict the infrastructure that can be monitored user-wise based on company policy to ensure security and meet customer SLAs. Users can now have direct and quick access to iRMC with a Single Sign-On from ISM, without having to enter their username and password every time.

DYNAMIZE
Accelerate, further simplify and dynamize life cycle operations. Become more flexible and make IT operations even more efficient.

CONVERGED MANAGEMENT

- Analytics
Collects and analyses data to pinpoint the root cause of system outages and performance issues with the converged datacenter registered to ISM. The dashboard has a customizable design layout, which can be used to highlight priorities to make quick and proactive decisions. Also obtain insight into multiple Infrastructure Management instances in the dashboard.

- **Auto discovery**
Speeds up the node setup process by automatically identifying any new PRIMERGY or PRIMEQUEST server or PSWITCH added to the network.

VIRTUAL-IO MANAGEMENT
- **Configure virtual MAC and WWN**
Virtualize LAN, SAN network, fibre channel and IO parameters. This feature helps eliminate the layer of complexity in current network architectures through virtualization of physical network addresses and clear separation of server management from LAN and SAN management.
- **Resource pooling of MAC and WWN**
ISM supports resource pool function of virtual MAC and WWN address. User can define address range and assign an ID when a new profile is created. When the profile is deleted, the assigned MAC/WWN is released and can be further re-assigned.

NETWORK TOPOLOGY MANAGEMENT
- **Network map**
Obtains a consolidated view of the network topology displaying network connections between multiple nodes of both physical and virtual environments automatically. Tracks possible network congestion and detect network failures in advance.
- **Virtual network analysis**
ISM provides virtual network packet analysis providing insights into performance of virtual network ports by port number and VMs. This helps customers identify network performance bottlenecks and proactively helps to ensure business continuity. Network status can be further analyzed by destination, traffic, packet loss and error.

MAINTAIN
Powerful tools and functions to prevent downtime, recover quickly and save costs.

UPDATE MANAGEMENT
- **Firmware baseline management**
Confirms the firmware versions of each node on the ISM GUI, and executes firmware update to multiple nodes simultaneously. Increases infrastructure availability by ensuring systems run on the latest firmware and avoids omission of update by managing firmware of each node batch wise. Schedule firmware updates in advance to run during non-peak hours and have hassle-free updates without interfering with business operations. Reduces user operations in preparing firmware data by downloading firmware from global flash, or downloading e.g., update DVD into ISM. ISM now firmware baseline management. It is now possible to define specific firmware baseline for all nodes ensuring HCL compatibility, check the nodes that do not comply and automatically update the firmware to the version defined by the baseline. Firmware updates using eLCM is now possible, without having the need for PXE/DHCP server and free from some network restrictions

Repository management
Manages repository of update modules that are imported from Update DVD.

PERFORMANCE MEASUREMENT
- **Performance monitoring**
Monitors the utilization of server, storage and network resources; enables long-term monitoring and utilization analysis for specific components; helps to detect resource bottlenecks and to guarantee service levels

INVESTIGATION
- **Archive management**
Device system logs and OS event logs are collected from managed node automatically in scheduled time. Collected logs can be viewed and used for further analysis.

- **Logging and auditing**
ISM records user events which includes resources accessed by users, destination, source addresses, time stamp and user login information.

INTEGRATE
Manage heterogeneous environments with full investment protection.

- **Integration packs**

ISM integrates with the following management systems:
- Microsoft SCOM
- Microsoft SCVMM
- VMware vCenter
- Ansible
- Openstack

Note: Openstack integration is limited to monitoring of the openstack environment on ISM.

- **RESTful API**
Manage node status and inventory information using REST API. Use programmable APIs or customized scripts to run operations and integrate into the existing management system.

DOCUMENTATION
For more information including technical details please refer to user manuals, white paper and further documents provided on the websites listed below:
http://www.fujitsu.com/infrastructuremanagement
http://manuals.ts.fujitsu.com/ism

FUJITSU Software Infrastructure Manager Editions

To meet different business requirements, FUJITSU Software Infrastructure Manager offers flexible options:

ISM Advanced:

It is a full-featured advanced version of ISM that provides comprehensive and robust infrastructure management capabilities across servers, storage, and network devices. With centralized management of entire data centres, companies can pave their path to achieving Software-defined data centre. Some of the advanced capabilities include a unified and intuitive dashboard, firmware baseline management to ensure hardware compliance, automated deployment of all nodes with profile management. It also monitors 3rd party vendor devices in addition to integrating into VMware®, Microsoft® System Center®, and Ansible environments.

Fig: ISM Advanced dashboard View

ISM Essential:

It is the standard version of ISM and serves as the entry point to infrastructure management. It provides essential monitoring capabilities and update functions across all supported devices including storage and network switches. It also provides health monitoring, inventory management, event management functions etc. It is available free-of-charge, but optional support pack is available at an additional cost.

Fig: ISM Essential dashboard view

Fig: Comparison of ISM Advanced and ISM Essential capabilities
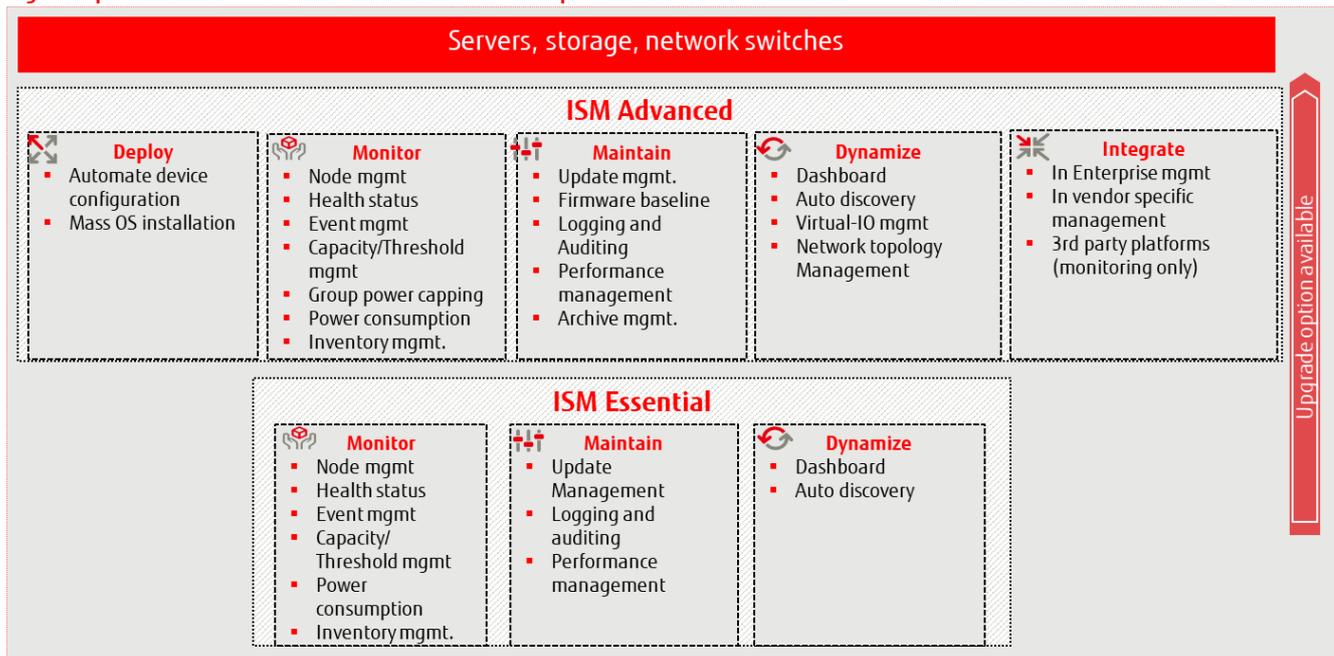
Note: All the functions described in the datasheet are available with ISM Advanced.

Technical Details System Requirements
ISM V2.5.0

System requirements for ISM-VA（virtual machines）

Item	Description
Number of CPU cores	2 cores or more
Memory capacity	8 GB or more
Free disk space	35 GB or more
Network	1 Gbps or higher
Hypervisor	Windows Server 2012 / 2012R2 / 2016/ 2019
	VMware ESXi 5.5 / 6.0 / 6.5/6.7
	Red Hat Enterprise Linux 7.2 / 7.3/ 7.4/7.5/ 7.6
	SUSE Linux Enterprise Server 12 PS3 / 15

System requirements for management terminals

Item	Description
Device	PC, Server, iPad, Android tablet, Windows 10 tablet
Display	PC, server and Windows 10 tablet：1280 x 768 pixels or more
	Tablet ：Display mounted to devices stated above
Network	100 Mbps or more
Web browser	PC, server and Windows 10 tablet： Internet Explorer
	Microsoft Edge
	Mozilla Firefox
	Google Chrome
	iPad ：Safari
	Android tablet：Google Chrome
Related software	Acrobat Reader（for viewing manuals）

Supported nodes

Product name	
Servers	FUJITSU PRIMERGY TX, RX, CX, BX Servers, FUJITSU PRIMEQUEST Servers
Storage	FUJITSU ETERNUS DX, AF, NetApp AFF, NetApp FAS
Network switches	FUJITSU Ethernet ToR Switch (PSWITCH 2048), Brocade, Cisco, Arista
Facility	PSU, CDU

For more details and specific list of supported devices and functionality, read:

Product license

Product name	Product form
FUJITSU Software Infrastructure Manager Server Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 1 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 5 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 10 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 20 Node Adv License V2.x	License key
FUJITSU Software Infrastructure Manager 100 Node Adv License V2.x	License key`

NOTE:
Each server and node license includes a service pack. Server license applies to the managed server which hosts ISM software
Node license is required for each device which needs to be registered and managed by ISM. Support license is required in addition to server and node licenses

More Information

Fujitsu optimized services

Products
www.fujitsu.com/global/products/
In addition to the Fujitsu Software Infrastructure Management, Fujitsu offers a full portfolio of other computing products.

Fujitsu portfolio
Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offerings, ranging from clients to datacenter solutions, and includes the broad stack of Business Solutions, as well as the full stack of cloud offerings. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve the reliability of their IT operations.

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Fujitsu green policy innovation

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