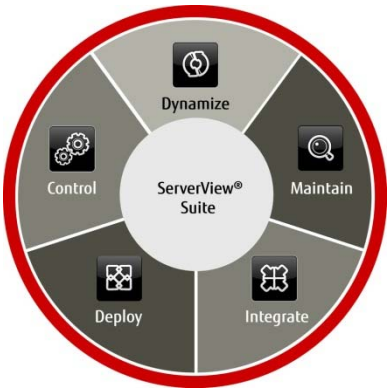
Datasheet
FUJITSU Software ServerView Resource Orchestrator V3.1 Virtual Edition

Increase efficiency of day-to-day server operations in consolidated physical and virtual server environments

With ServerView Resource Orchestrator Virtual Edition (ROR VE), Fujitsu offers a system management tool that delivers integrated administration of physical and virtual servers. It also optimizes server life-cycle management, and provides an innovative high-availability approach. By unifying and simplifying management across both physical and virtual environments, IT organizations can increase the efficiency of their day-to-day server operations. Moreover, the automated server failover capability enables implementation of cost-effective high-availability solutions.



Main features	Benefits
Unified management	
■ Integrated administration of virtual and physical servers	■ Increases efficiency of all server operations and reduces Total Cost of Ownership (TCO)
Simplified Life-cycle Management	
■ Automated server operations	■ Significantly shortens deployment time and enables easy scaling of server farms in response to workload changes
■ Intuitive monitoring and management GUI for basic daily operations of blade systems	■ Easy to use - minimizes operational errors and improves administration efficiency
■ Visualization of network topology (NetworkViewer)	■ Easier to check actual network configurations and analyze the impact of network errors
■ Uniform interface triggers VM guest live migration for different hypervisor technologies	■ Enables execution of live migrations regardless of hypervisor technology in use
■ Built-in operating system image management	■ Simplifies the management of multiple server images
Cost efficient high availability	
■ Protection for heterogeneous environments (mixed physical and virtual servers, different operating systems and hypervisors)	■ Offers a uniform high-availability solution for all servers supporting a complete business process
■ N+1 server failover concept	■ Saves cost of spare server hardware
■ Automated server failover	■ Significantly shortens server recovery time - storage or network administrators need not be involved

Topics

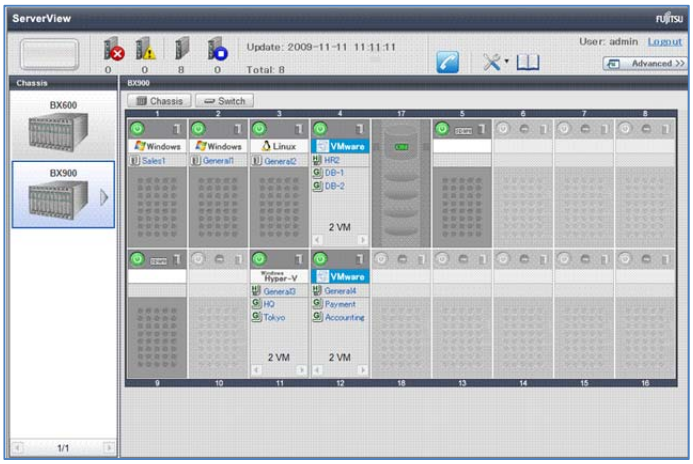
Unified Management

ROR VE provides centralized monitoring for PRIMERGY, PRIMEQUEST and SPARC Enterprise servers from Fujitsu as well as for selected x86 servers from other vendors. This eliminates the need to check different management consoles when monitor hardware states or power consumption.

ROR VE allows server administrators to easily confirm the network configuration. The integrated NetworkViewer shows the status of network resources and connections and visualizes the network topology for physical and logical networks including physical servers, LAN-switch blades, external LAN switches, VLANs, virtual switches and VMs.

For effective management of mixed virtual and physical environments, ROR VE provides a unified interface for common daily administrative tasks like, power control, start, stop, or reboot operations. Physical and virtual resources and their relationships are shown within a single console. There is no longer a need to launch specific management consoles for different virtualization products to perform basic management tasks. In addition, for more complex management tasks, ROR VE offers good integration with external management consoles.

In virtualized environments even live migration operations of virtual servers can be triggered in a uniform way, for all supported hypervisor products, directly from the ROR VE management console. When VMs are temporarily migrated away from their original physical servers, ROR VE allows administrators to quickly and safely bring them back to their original place. This is true not only in maintenance situations but also where VMs were consolidated onto fewer servers - for example over-night in order to save energy. ROR VE stores the original location of each VM and any time, at the push of a button, can migrate a VM back to its original place.



BladeViewer – The intuitive management interface

On top of the traditional server management console, ROR VE offers an innovative and simplified user interface using a clear representation of the blade servers within their enclosures. This realistic graphical representation shows their resource states and allows administrators to easily monitor their status. Startup, shutdown or reboot operations can be performed directly using this interface. It means administrator can manage blade systems remotely as if they were standing directly in front of them. It also enables less experienced staff to easily perform basic daily operations.

Use of e-mail event notifications avoids the need to continuously monitor the management console. To speed up troubleshooting procedures, ROR VE provides a one click display of technical support contact information on detection of errors. In addition, ROR VE integrates with other hardware-specific management consoles when more detailed information is required.

Simplified Lifecycle Management

ROR VE enables fully-automated server deployment for entire server farms through integrated cloning and remote system image distribution capabilities. Compared to manual deployment processes, this accelerates assignment or re-assignment of applications to one or several virtual or physical servers significantly. Administrators can now setup and scale server farms more easily and much faster in response to workload increases or business expansion.

Furthermore, ROR VE makes it possible to create system image backups, which are centrally managed on the admin server.

Leveraging the integrated fully-automated server deployment capabilities, ROR VE also simplifies and speeds up hardware maintenance by easy and automated restoration of system images, after hardware components have been replaced. Server downtime due to maintenance tasks can now be reduced to a minimum.

Cost-efficient High-Availability

ROR VE enables implementation of a cost-efficient N+1 high availability concept. It enables IT managers to protect more servers without paying a premium for dedicated HA software. By assigning one or more spare servers to multiple production servers it is possible to automatically failover those production servers, to a spare server, when hardware or operating system failure occurs. Business applications can be resumed without administrator intervention. Compared to manual recovery processes, server recovery time is greatly reduced, resulting in faster reaction to server failures. This works in both physical and virtual server environments.

Technical details

Admin Client		
Hardware		FUJITSU PRIMERGY RX, BX and TX systems or PC
Operating Systems	**Microsoft**	Microsoft Windows Server 2012, 2012 R2 SE/DCE (x86, x64) [21] Microsoft Windows Server 2008 SE/EE, 2008 R2 SE/EE/DCE (x86, x64) Microsoft Windows Server 2003 R2 SE/EE (x86, x64), SP2 or later Microsoft Windows XP Professional, SP2 or later Microsoft Windows Vista Business, Enterprise and Ultimate Microsoft Windows 7 Professional, Ultimate, Enterprise Microsoft Windows 8, 8.1 Pro, Enterprise
	RedHat	Red Hat Enterprise Linux AS/ES 4.x, 4.8 (x86, x64) [18] Red Hat Enterprise Linux 5.x, 5.7 (x86, x64) [18] Red Hat Enterprise Linux 6.0, 6.1, 6.2 (x86, x64) [18]
Other software prerequisites		Microsoft Internet Explorer 8,9, 10, 11, Firefox ESR17 Java 2 Runtime Environment 1.5 or later

Admin Server		
Hardware		FUJITSU PRIMERGY RX, BX and TX systems
	Notes	At least dual core CPU and 10 GB of memory; 5 GB free disk space or more
Operating Systems	**Microsoft**	Microsoft Windows Server 2012, 2012 R2 SE/DCE (x86, x64) [12,17] Microsoft Windows Server 2008 SE/EE, 2008 R2 SE/EE/DCE (x86, x64) [12,17] Microsoft Windows Server 2003 R2 SE/EE (x86, x64), SP2 or later [17,23] Microsoft Hyper-V on Windows Server 2008 SE/EE(x64) [17] Microsoft Hyper-V on Windows Server 2008 R2 SE/EE/DCE [17] Microsoft Hyper-V 3.0 on Windows Server 2012 SE/DCE [17]
	Red Hat	Red Hat Enterprise Linux 5.3 up to 5.10 (x86, x64) [17] Red Hat Enterprise Linux 6.0[18], 6.1[18], 6.2, 6.3, 6.4 (x86, x64) [17]
	VMware	VMware vSphere 4.0 ESX [17] VMware vSphere 4.1ESX, ESXi [17] VMware vSphere 5.0, 5.1, 5.5 ESXi [17]
	Notes	When running the admin server on a hypervisor product, installation is only supported in a VM guest running one of the operating systems listed above. For admin server high-availability, only installation on a Hyper-V cluster or VMware[18] configuration is supported
Other software prerequisites		FUJITSU ServerView Operations Manager (Windows) V6.0 or later.
Software options		FUJITSU ServerView Virtual-IO Manager (VIOM) 3.0 or later (when using VIOM based I/O virtualization)[21] FUJITSU ServerView Resource Coordinator VE I/O Virtualization Option (when using HBA Address Rename Service for I/O Virtualization) FUJITSU ServerView Update Manager FUJITSU ETERNUS SF Storage Cruiser (when using server switchover with access path reconfiguration for SPARC Enterprise Servers and ETERNUS) VMware vCenter Server 4.0/4.1 or 5.0 (when using VMware managed servers) [21] Microsoft System Center Virtual Machine Manager 2008 R2 or 2012 (when using Hyper-V managed servers[21]

Managed Servers		
Hardware	**FUJITSU PRIMERGY BX**	BX900: BX920 S1/S2/S3/S4[9], BX922 S2, BX924 S2/S3/S4[9], BX960 S1 BX600: BX620 S4/S5/S6 BX400: BX920 S2/S3/S4[9], BX922 S2, BX924 S2/S3/S4[9]
	FUJITSU PRIMERGY RX	RX100 S5/S6/S7[18] RX200 S4/S5/S6/7/S8 RX300 S4/S5/S6/S7/S8 RX600 S4/S5/S6 RX500 S7
	FUJITSU PRIMERGY TX	TX150 S6/S7 TX200 S4/S5/S6 TX300 S4/S5/S6
	FUJITSU PRIMERGY CX	CX122 S1
	FUJITSU PRIMQUEST	1400S/S2, 1400E/E2, 1400L/L2, 1800E/E2, 1800L/L2
	FUJITSU SPARC Enterprise	M3000, M4000, M5000, M8000, M9000, M10-1, M10-4, M10-4S T4-1, T4-2,T4-4 T5120, T5220, T5140, T5240, T5440
	Notes	At least 30 MB of memory or 100 MB of free disk space
Operating Systems	**Microsoft**	Microsoft Windows Server 2012, 2012 R2 SE/DCE (x86, x64) [12,19] Microsoft Windows Server 2008 SE/EE, 2008 R2 SE/EE/DCE (x86, x64)[12,19] Microsoft Windows Server 2003 R2 SE/EE (x86, x64), SP2 or later [12] Microsoft Hyper-V on Windows Server 2008 R2 EE/DCE [6,14,15,19] Microsoft Hyper-V 3.0 on Windows Server 2012 SE/DCE [6,14,15,19]
	Red Hat	Red Hat Enterprise Linux 5.3 up to 5.10 incl. Xen (x86, x64) [7,8,14,19] Red Hat Enterprise Linux 6.0[18], 6.1[18], 6.2, 6.3, 6.4 incl. KVM (x86, x64) [19]
	Novell SUSE	Novell SUSE Linux Enterprise Server 10 SP2, SP3, SP4 (x86, x64) [18,19] Novell SUSE Linux Enterprise Server 11 or SP1 (x86, x64) [19]
	Oracle	Oracle Enterprise Linux 6.0 (x86, x64)[18,19] Solaris 10 and Solaris 10 zones for x86 [18,19] Solaris 10 for SPARC Enterprise Servers [2,3,4,5,11,19] Solaris 10 zones for SPARC Enterprise Servers Solaris 11, Solaris 11 Oracle VM, Solaris 11 zones for SPARC Enterprise Servers
	VMware	VMware vSphere 4.0 ESX [14,15,16,19] VMware vSphere 4.1 ESX, ESXi [14,15,16,19] VMware vSphere 5.0, 5.1, 5.5 ESXi [14,15,16,19]
	Citrix	Citrix XenServer 5.5, 5.6 [7,10,14,19] Citrix XenServer 6.0, 6.1 [7,10,14,19] Citrix Essentials für XenServer 5.5, 5.6, Enterprise Edition [7,10,14,19]
Other software prerequisites		Fujitsu ServerView agent (Windows) V4.50.05 or later Fujitsu ServerView agent (Linux) V4.90.14 or later Fujitsu ServerView agent (VMware) V4.30-20 or later Fujitsu ServerView agent (Linux Xen) V4.81-14 or later Fujitsu ServerView agent (Solaris) V4.2 or later BMC BladeLogic RSCD Agent

HBA Address Rename Server		
Hardware		FUJITSU PRIMERGY RX, BX and TX systems or PC
Operating Systems	**Microsoft**	Microsoft Windows Server 2012, 2012 R2 SE/DCE (x86, x64) [12,17,21] Microsoft Windows Server 2008 SE/EE, 2008 R2 SE/EE/DCE (x86, x64) [12,17] Microsoft Windows Server 2003 R2 SE/EE (x86, x64), SP2 or later [17] Microsoft Hyper-V on Windows Server 2008 SE/EE(x64) [17] Microsoft Hyper-V on Windows Server 2008 R2 SE/EE/DCE [17] Microsoft Hyper-V 3.0 on Windows Server 2012 SE/DCE [17] Microsoft Windows XP Professional, SP2 or later [17] Microsoft Windows Vista Business, Enterprise and Ultimate [17] Microsoft Windows 7 Professional, Ultimate, Enterprise [17] Microsoft Windows 8, 8.1 Pro, Enterprise
	Red Hat	Red Hat Enterprise Linux 5.3 up to 5.10 (x86, x64) [17] Red Hat Enterprise Linux 6.0, 6.1, 6.2, 6.3, 6.4 (x86, x64) [17]
	VMware	VMware vSphere 5.0, 5.1, 5.5 ESXi [17]

Other Hardware Requirements		
FC Connectivity HBA	**FUJITSU PRIMERGY BX600**	FC Module 2 port (4 Gbps): BX600-FC42E
	FUJITSU PRIMERGY BX900	FC Module 2 port (8 Gbps): Emulex MC-FC82E
	FUJITSU PRIMERGY RX/TX	FC Ctrl Emulex LPe1150 MMF LC LP (4Gbps) FC Ctrl Emulex LPe1250 MMF LC (8Gbps) FC Ctrl 2 port Emulex LPe12002 MMF LC (8Gbps)
	FUJITSU SPARC ENTERPRISE	LPe12000, LPe12002, QLE2560, QLE2562, SE0X7F11F, SE0X7F12F
	Notes	When using HBA Address Rename Service the I/O virtualization (FC) option is required for SAN boot.
FC Connectivity Switch	**FUJITSU PRIMERGY BX400**	18/18 FC Pass-Thru blade (8Gbps) 18/8 FC Switch 14/26 port (8Gbps): Brocade BR5450
	FUJITSU PRIMERGY BX600	10/10 FC Pass-Thru blade (4Gbps) 10/6 FC Switch 12/16 port (4Gbps): Brocade Silkworm SW-4016 D4
	FUJITSU PRIMERGY BX900	18/18 FC Pass-Thru blade (8Gbps) 18/8 FC Switch 14/26 port (8Gbps): Brocade BR5450
	Notes	When using VIOM for I/O virtualization (BX only), then the BX FC Switch must be set to FC Access Gateway mode. The external SAN Switch must support NPIV for VIOM operation (e.g. Brocade Silkworm SW4101)
LAN Connectivity Switches	**FUJITSU PRIMERGY BX400**	36/12 GbE Switch/IBP (1Gbps): SB11a [1] 36/8+2 GbE Switch/IBP (1Gbps): SB11 [1] 18/8 GbE Switch/IBP (10Gbps): SBAX2 [1] 18/6 GbE Switch/IBP (1Gbps): SB6 [1] 18/6/6 GbE DCB Switch10Gbps (VDX2730)
	FUJITSU PRIMERGY BX600	30/12 GbE IBP Switch blade (1Gbps): SB9FV [1] 10/6 GbE IBP Switch blade (1Gbps): SB9V [1] 30/12 GbE Switch blade (1Gbps): SB9F 10/6 GbE Switch blade (1Gbps): SB9A 10/6+2 GbE Switch blade (1Gbps): SB9 10/6 GbE Switch blade (1Gbps): Cisco Catalyst Blade Switch 3040
	FUJITSU PRIMERGY BX900	36/12 GbE Switch/IBP (1Gbps): SB11a [1] 36/8+2 GbE Switch/IBP (1Gbps): SB11 [1] 18/8 GbE Switch/IBP (10Gbps): SBAX2 [1] 18/6 GbE Switch/IBP (1Gbps): SB6 [1] 18/6/6 GbE DCB Switch10Gbps (VDX2730)
	Notes	When using VIOM for I/O virtualization IBP switch blades are recommended. [1]

Distribution, Implementation, Documentation & Support	
User Interface	English, Japanese
User Skills	Basic knowledge of administration of operating systems (Windows, Linux, Solaris) and hypervisors (VMware vShere, Microsoft Hyper-V, Oracle VM, Citrix XenServer and RedHat KVM) is presumed. Installation, configuration and implementation require detailed knowledge of the ROR VE software product and the supporting software components and must be done by Fujitsu professional service or certified consultants.
Installation	By consultants specially instructed by Fujitsu only.
Documentation	User manuals are contained in machine readable form in the media pack or can be downloaded from http://manuals.ts.fujitsu.com
Media	The ROR VE media packs contain all ROR VE software components and the ROR VE manuals in pdf-format.
Conditions	This software product is supplied under conditions described in our current license agreement.
Warranty	Class: C
Maintenance & Support	Closure of a software maintenance contract is mandatory. For details about the service offering see: http://ts.fujitsu.com/services/maintenance_support/software_services.html
Ordering and delivery	ROR VE Right-to-Use licenses for the manager and the agents and ROR VE media pack CDs for Windows, Linux and for Solaris are available from our local sales representative/regional office. The right-to-use and media kits of the operating environment of the manager nodes and the managed nodes as well as supporting software like ServerView VIOM have to be obtained separately since they are not included in the ROR VE package.

For additional technical details, dependencies and restrictions, please consult the ROR VE support matrix available from your sales representative.

1) Modification of port group settings by ROR VE at switchover not available for IBP switches
2) Cloning and deployment for system images currently not supported
3) Backup & Restore currently not supported
4) Server switchover (based on I/O virtualization) currently not supported
5) Server switchover (based on Backup & Restore) currently not supported
6) Sharing of a spare server as ROR VE spare servers and VM HA spare servers is not supported.
7) Network Map display currently not supported
8) Launch of VM console currently not supported
9) For S3 universal multichannel is not supported
10) Requires ServerView Virtual-IO Manager for using switchover functions
11) Active spare servers currently not supported
12) Server Core installation option not supported
13) Operating the LAN switch in IBP mode is not recommended
14) Cloning for hypervisors is not supported
15) For backup & restore, hypervisor snapshot technology is used
16) Sharing of spare servers with Windows Server or Hyper-V Server is not supported
17) English, Japanese and German are supported
18) Project-specific
19) English, German, Japanese and Chinese are supported
20) Only supported in virtualized environments
21) For higher versions, support status depends on compatibility to versions mentioned in this data sheet
22) iSCSI boot support only on BX900/BX400 with VIOM
23) Not supported with redundant admin server

More information

Fujitsu platform solutions

In addition to FUJITSU ServerView Resource Orchestrator V3.1 Virtual Edition, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures
With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing products
www.fujitsu.com/global/services/computing/
- PRIMERGY: Industrial standard server
- PRIMEQUEST: Mission-critical IA server
- SPARC Enterprise: UNIX server
- ETERNUS: Storage system

Software
www.fujitsu.com/software/

More information

To learn more about FUJITSU ServerView Resource Orchestrator V3.1 Virtual Edition, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.
www.fujitsu.com/software

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at:
www.fujitsu.com/global/about/environment/

Copyright

Disclaimer

Contact
Fujitsu Limited
Website: www.fujitsu.com
2014-04-02 WW EN