THE POSSIBILITIES ARE INFINITE FUJITSU

DATA SHEET

x10sure™ V3.0

Consolidation, Virtualization and High Availability – Made Easy

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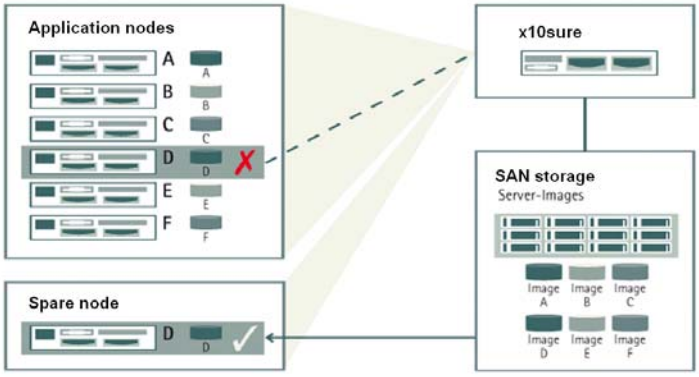
x10sure provides a cost efficient IT consolidation and high availability solution for small to medium size enterprises running Windows and Linux applications on x86/x64 architectures. x10sure integrates real and virtual servers, and storage into a highly available shared infrastructure. x10sure enables end-to-end redundancy and disaster recovery. The solution automatically monitors and recovers failed resources and restarts applications. The user gains a significant cost advantage over competing solutions because the architecture allows all available servers to be utilized for production except one designated as a spare server.

x10sure Failover Process Illustration

- x10sure monitors the application nodes.
- Application node “D” fails.
- x10sure detects the problem and powers down the failed application node.
- x10sure remaps the storage partition containing the operating image of the failed node to the spare node
- x10sure powers on the spare node.
- x10sure boots the identical operating image.
- The whole process is automated. The entire infrastructure can be administered using the intuitive user interface.



x10sure offer/feature	x10sure advantage/benefit
Infrastructure consolidation	• reduces TCO & investment by pooled servers & shared storage • achieves better utilization & higher flexibility • leads to standardized infrastructure for efficient administration
High availability – 1:1 / n:1 / n:m implementation	• reduces downtime – increases service levels & data accessibility • lowers cost of HA up to 60% vs. 1:1 HA cluster • protects pools of real and virtual servers – running any application • scales from very small 1:1 HA clusters up to 64 physical nodes • disaster recovery – in cooperation with replication services
Automation	• automates routine administration, freeing up resources • increases operational reliability thru simplifying administration • automated failover guaranties required service levels
Ease of use	• installs and operates easily • reduces operator skill/experience requirements • integrates multiple virtualization & storage options
Investment protection	• architecture for current & future needs • scales real and virtual servers and storage easily

Technical Prerequisites

Hardware Requirements

Control Node:

- A PRIMERGY server released for SLES10SP2 or a VMware VI3 Virtual Machine with SLES10SP2 as host OS
- The list of currently supported servers can be made available by your local sales.

Application Nodes:

- Up to 64 PRIMERGY servers, separated in up to 4 different server classes with one ore more spare nodes per class. All Application nodes within one server class must have identical hardware revision level and configuration.
- The list of currently supported servers can be made available by our local sales.

Storage Subsystems:

SAN Boot

- FibreCAT SX80/SX88/SX100 Dual Data Path access, optionally redundant storage subsystems with host-based mirroring (RAID1) using DDM
- FibreCAT CX300
- FibreCAT CX3-10, -20, -40
- FibreCAT CX4-120, -240, -480, -960
- NetApp FAS2xx, FAS9xx, FAS20xx, FAS30xx, FAS31xx, FAS60xx
- Other storage if released via IBP/VIOM

iSCSI Boot

- NetApp FAS2xx, FAS9xx, FAS20xx, FAS30xx, FAS31xx, FAS60xx
- FibreCAT SX80iSCSI

Application Node Shutdown and Power-On:

- via BX600 Management Blades
- via IPMI with IPMI compliant servers

Software Requirements

Control Node:

- Novell SUSE SLES10SP2 (x86_64), native or running in ESX 3.x, ESXi 3.5 or VMware Server based VM

Application Nodes:

- Microsoft Windows Server 2003 (SP2)
- Microsoft Windows Server 2008
- SUSE SLES 10SP2
- RedHat ES 5.2
- VMware ESX 3.x
- Citrix XEN Server 5
- Microsoft Hyper-V Server 2008
- ServerView Installation Manager 10.08.12 or higher
- ServerView S2 / ServerView Operations Manager and ServerView agents 4.80
- ServerView Virtual-IO Manager VIOM 1.1 (for BX600)

Storage Subsystems:

- For Multipath and RAID1:
  Management Software for FibreCAT SX80/SX88/SX100; optionally DDM (Windows) V 5.0 or higher
- For FibreCAT CX:
  Navisphere Management Suite V6.28 or higher
- For NetApp Filers: Data ONTAP® 7.2or higher; Windows® Host Utilities 5.0 or higher

Distribution, Installation, Documentation & Support

User Interface
English

Installation
x10sure configurations are installed by certified x10sure consultants only. A list of x10sure certified partners can be made available by your local sales.

Documentation
User manuals are part of the Media CD or can be downloaded from http://manuals.ts.fujitsu.com or can be ordered in printed form from http://fts-manualshop.com.

User Skills
Basic knowledge of Windows, Linux or ESX administration is presumed. Installation, configuration and implementation require detailed knowledge of the x10sure software and the supporting scripts and must be done by certified x10sure solution partners.

Service
One year 2nd and 3rd level support & update packages are available. First level support services are provided by the certified x10sure solution partners or are organized by our regional offices.

Media
The x10sure media CD contains all necessary software components and the x10sure manuals in pdf format.

Ordering and delivery
x10sure Right-to-Use licenses for the base package and for additional Application Nodes and Spare Nodes are available from our local sales representative, regional offices, or certified x10sure solution partners.

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