

Fujitsu software

ServerView
Resource
Orchestrator
DR Option



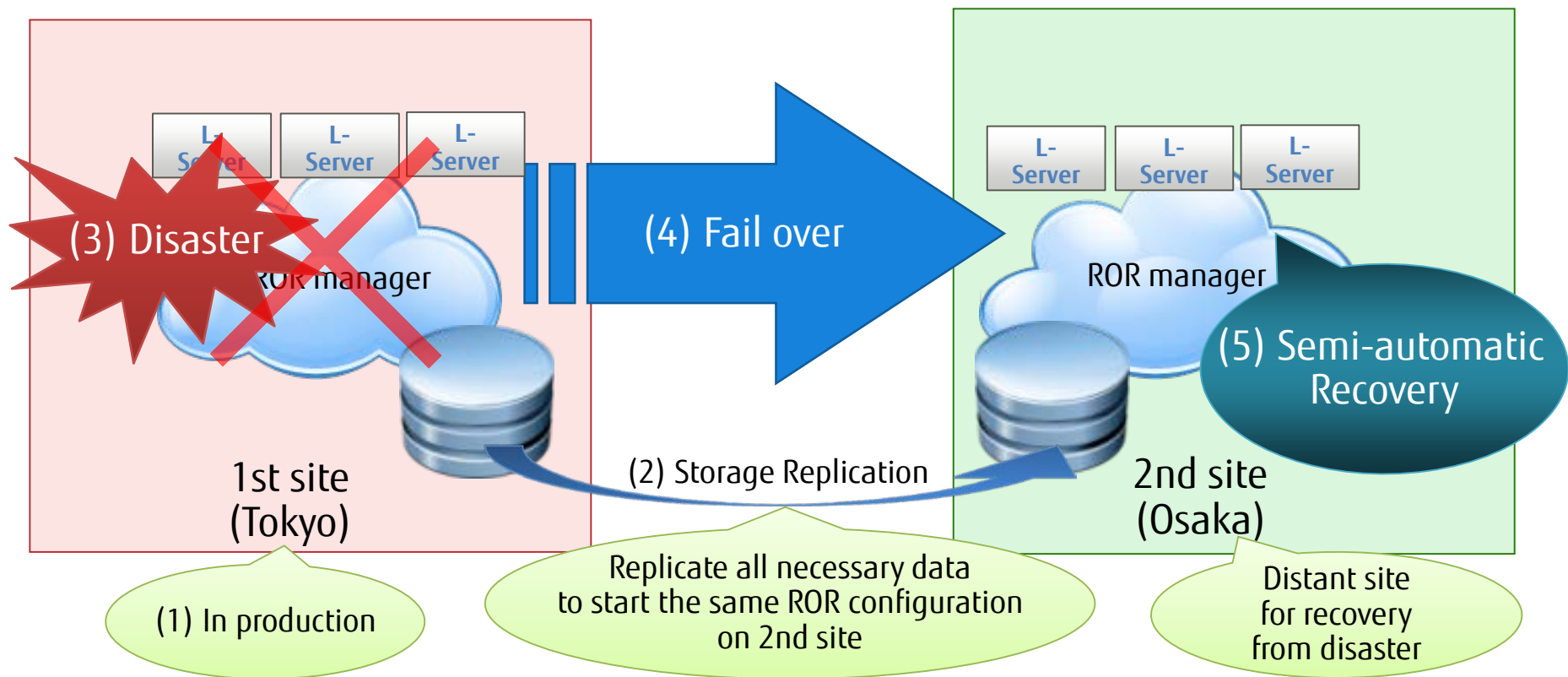
Introduction

- ◆ Overview
- ◆ Features and benefits
- ◆ System structures & requirements
- ◆ License

Overview

What is DR Option

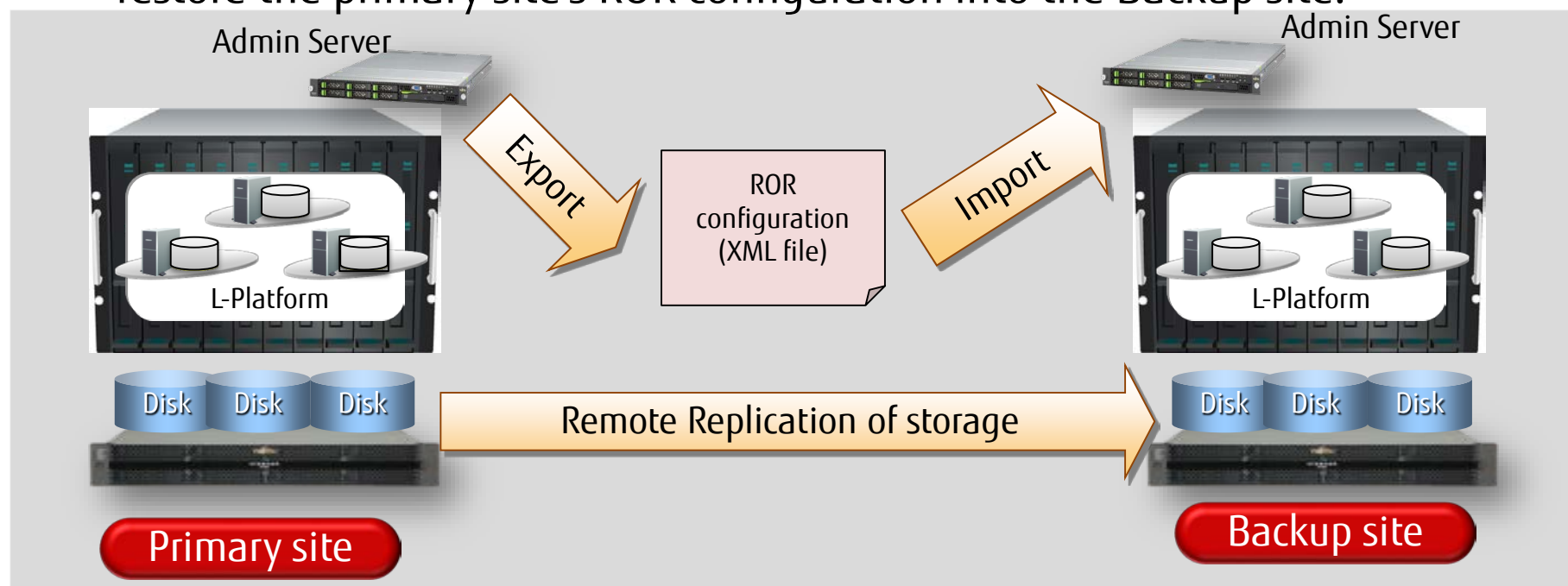
ServerView Resource Orchestrator DR Option provides disaster recovery protection of the ROR environment. It reduces the time to recover a ROR environment in the case of system failure.



- ◆ Product name: "**Fujitsu ServerView Resource Orchestrator DR option**"
- ◆ DR Option is available only in ROR Cloud Edition.
- ◆ DR Option is a "Right To Use" license; there is no dedicated Media Kit for this option.
- ◆ There is a different license structure for each DR system type: see page 13.

Basic ideas of DR option

- There are two sites – the **Primary site** for production and the **Backup site** for backup
- Usually the backup site can be used for a different purpose
- Use storage replication function to keep the primary and the backup site data in sync
- On the primary site, use ROR DR tools to export ROR configuration. Exported configuration file is automatically copied to the "backup site".
- When a disaster strikes at the primary site, use ROR DR Tools to import and restore the primary site's ROR configuration into the Backup site.

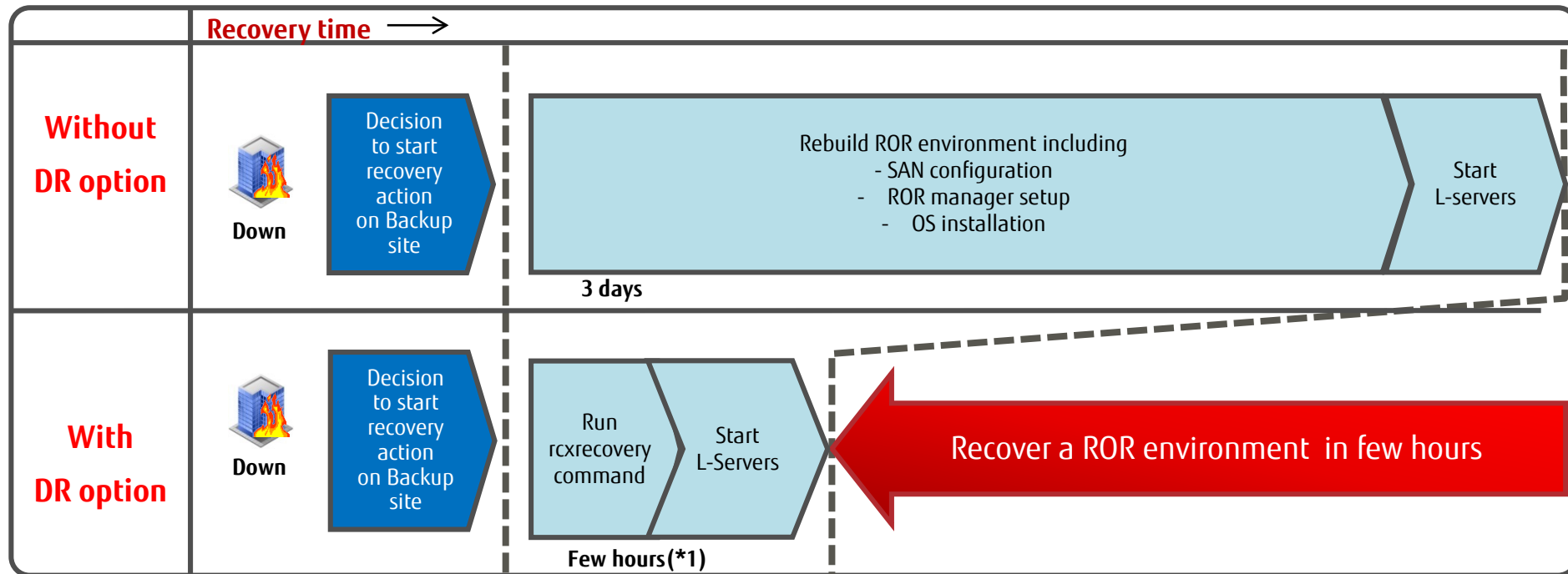


Features and benefits

Features and benefits (1/4)

■ Simple recovery operation

- Simple recovery operation eliminates the risk of operation mistakes and shortens recovery time



**1: Recovery time depends on system structure*

Features and benefits (2/4)

- DR option recovers not only VM L-Servers but also Physical L-Servers.
- DR option supports various failover scopes.
 - Whole site
 - Specific tenants
- DR option supports the following server types.
 - Blade Servers
- DR option supports multiple VM platforms.
 - VMware vSphere 4, 4.1, 5
 - Hyper-V(Windows Server 2008 R2 Enterprise/Datacenter)
- DR option supports multiple switchover methods
 - Physical L-Server switchover (physical OS)
 - Physical/virtual L-Server switchover (VM host/VM guest)
 - Virtual L-Server switchover (VM guest)

- DR option supports multiple vendor storage with their replication software.
 - Fujitsu ETERNUS Advanced Copy Manager
 - NetApp SnapMirror
 - EMC Solutions Enabler(Symmetrix)
 - EMC MirrorView(CLARiiON)
 - As for the other vendor's storage, please contact Fujitsu.

- DR option supports ETERNUS dynamic LUN mirroring function which simplifies LUN replication settings.

■ Effective utilization of backup site

- The backup site can be utilized for development and test or other lower priority production until DR fail over is done.
- Backup site can come back to its original configuration after Primary site recovers.

System Structures and Requirements

■ **Active - Standby**

This means that an idle or a test environment is running on the backup (Standby) site.

During failover, any idle or test environment running in the backup site is being shutdown and will completely be replaced by the primary site's environment.

■ **Active - Active(*1)**

This indicates both sites are running active production environments.

The configurations of both environments will be merged if a failover occurs.

*1: Not yet supported

System Requirement

Category		Conditions/Supported models			Remarks
Server	Models	PRIMERGY BX			BX600 is supported only in virtual L-Server switchover.
		PRIMERGY RX			Supported only in virtual L-Server switchover.
		PRIMERGY CX			Supported only in virtual L-Server switchover.
LAN switch	Models	LAN Switch blade for BX900/BX400			- Switch mode and End host mode are supported. IBP mode is not supported. - The other LAN switches may request manual operation during DR failover.
Storage	Disk resource type	Predefined LUN	ETERNUS	√	
			NetApp	SR	SnapMirror is supported as SR. MetroCluster is not supported.
			EMC	√	
		Dynamic LUN	ETERNUS	√	DLM (Dynamic LUN Mirroring) is supported on ETERNUS DX S2 or later model.
			NetApp	--	
			EMC	--	
	Storage vendor and replication software	ETERNUS (ACM-CCM)			
		EMC DMX, VMAX (SRDF)			
		EMC CX, VNX (MirrorView)			
		NetApp (SnapMirror)			SR support
	Connection[3]	FC			
		iSCSI			Supported only in virtual L-Server switchover. (see attachment for virtual L-Server switchover method)
		NAS			Supported only in virtual L-Server switchover.
OS	Physical	All supported native OS			
	Virtual	VMware Hyper-V			- VMware: Physical/virtual L-Server switchover supported. Virtual L-Server switchover supported for ESXi 5.x. - Hyper-V: Physical/virtual L-Server switchover supported. - OVM, KVM, SPARC Solaris containers are not supported

* For latest information refer Support Matrix on PRIMEWEB site

* As of 30th May, 2013

License

License (1)

- To use the ROR Disaster Recovery function,
DR Option licenses are required
 - All physical servers including spare servers in the primary and backup site must be licensed with the ROR Cloud Edition Server License.
 - To use the Disaster Recovery function, an additional DR option license is required for each managed physical servers in the primary site which will be configured for DR Failover to the backup site.
 - DR Option is a “Right To Use” license; there is no dedicated Media Kit for this option.
 - There is a different license structure for each DR system type: see next page .

System Type	License		Description
	Primary	Backup (Secondary)	
Active – Standby	CE+DR option	CE	ROR CE licenses are needed for servers both in the Primary and Backup site including any spare servers. DR option licenses are needed only for servers in the Primary site which are configured for DR. No additional DR Option licenses are required for the Backup site including the failback operation.
Active – Active	CE+DR option	CE+DR option	ROR CE licenses are needed for all the servers, including spare servers in both Primary and Backup site. DR option licenses are needed for the servers both in Primary and Backup site that are configured for DR Failover, mutual site backup.

Example: Active-Standby configuration

Primary site (Active)

Admin server (RX200S6)

Guest OS
ROR-M/SVOM/VIOM/
Storage Cruiser/ACM

ROR CE
license
DR license

ROR CE
license
DR license

BX920S2

(ESXi)

(vCenter)

Blade Chassis (BX900)

SAN Boot

Bkup2 OS1 OS2
Bkup1 datastore

Storage#1 (ETERNUS DX90S2)

Windows 2008 R2 E
ROR V3.1 SI 09
SVOM S2 55107
VIOM V3.0.08
SC V15.0B
ACM V15.0B
vCenter V5.0.0
ESXi V5

Backup site (Standby)

Admin server (RX200S6)

Guest OS
ROR-M/SVOM/VIOM/
Storage Cruiser/ACM

ROR CE
license
DR license

ROR CE
license
DR license

BX920S2

(ESXi)

(vCenter)

Blade Chassis (BX900)

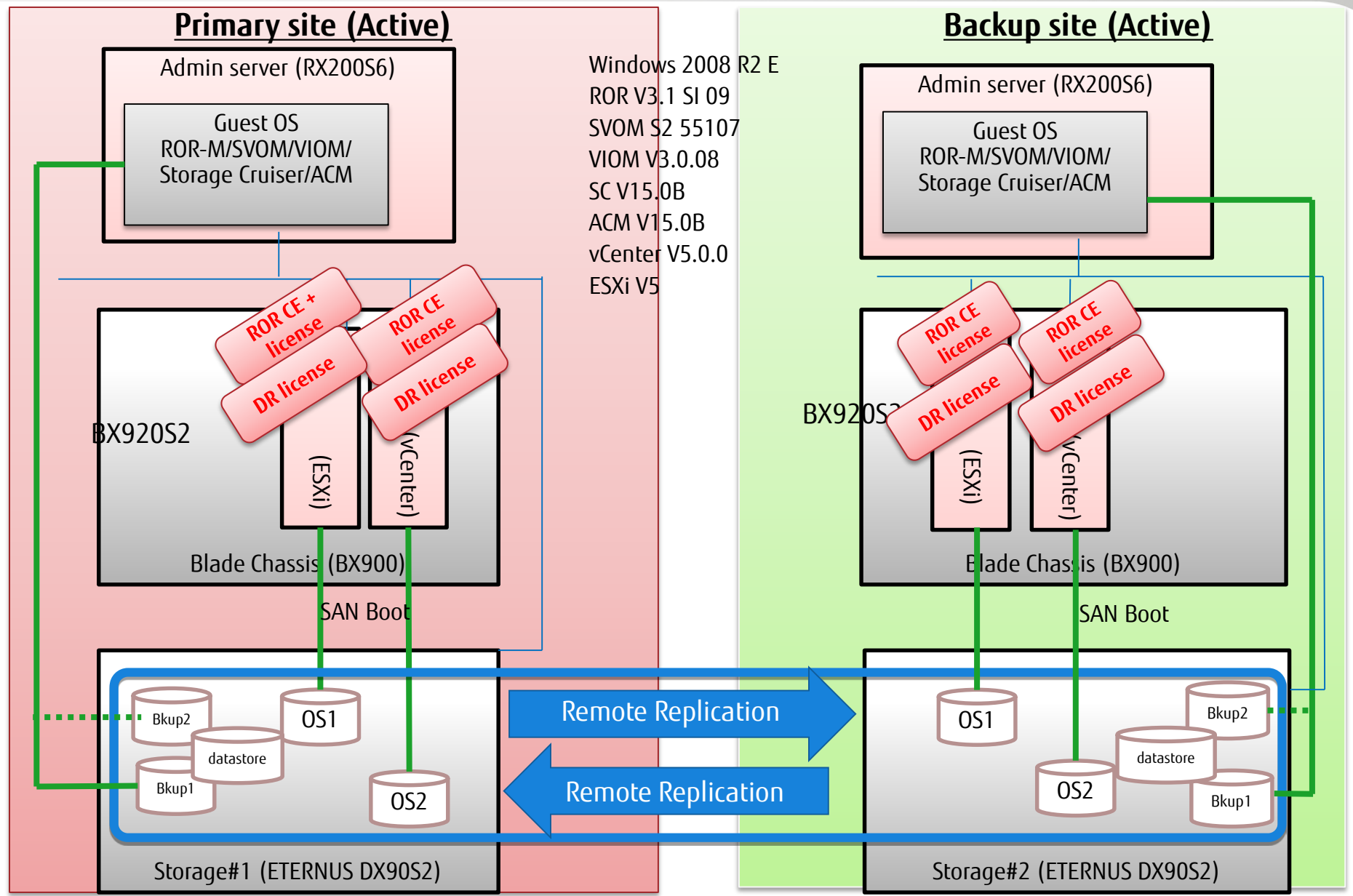
SAN Boot

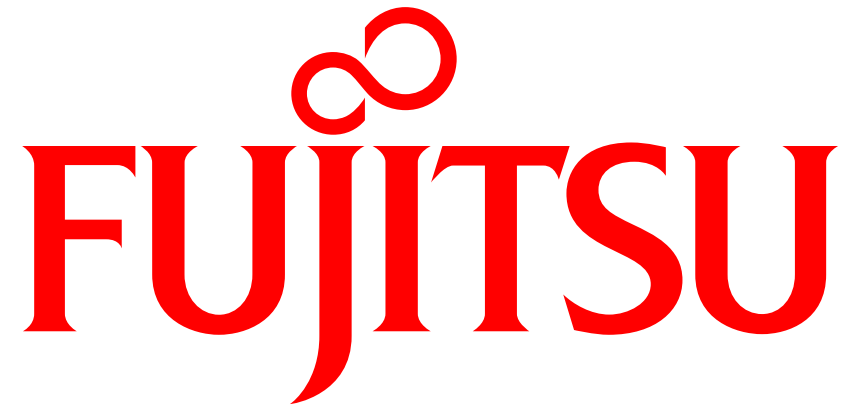
Bkup2 OS1 OS2
Bkup1 datastore

Storage#2 (ETERNUS DX90S2)

Remote Replication

Example: Active-Active configuration



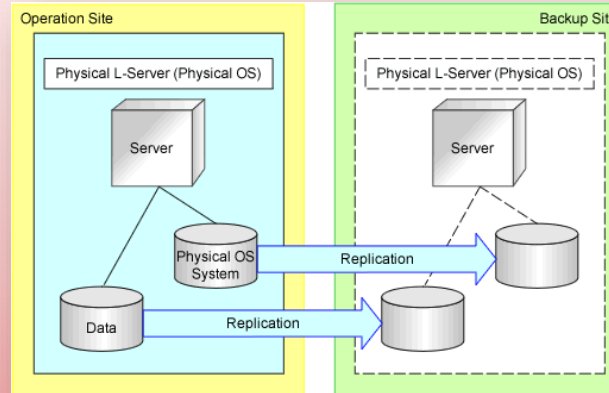


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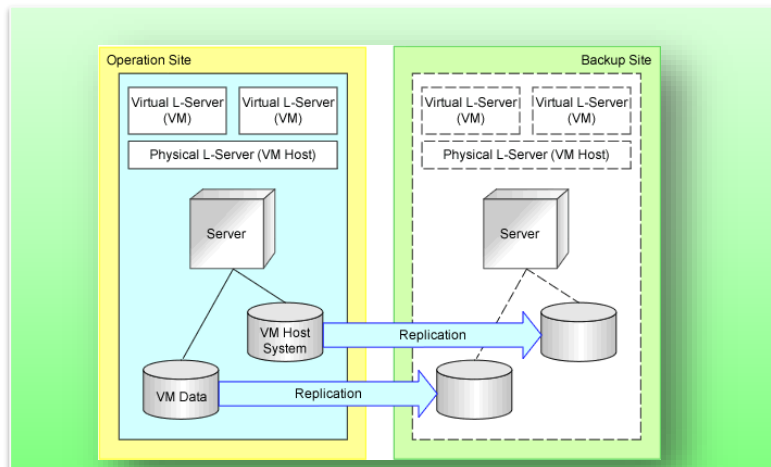
Attachment

Switchover Methods

1. Physical L-Server Switchover (Physical OS): Switch over of a physical L-Server in which a physical OS is installed.



2. Physical/Virtual L-Server Switchover (VM Host/VM Guest): Switch over of a physical L-Server in which a VM host is installed, or a virtual L-Server (VM) which operates on a VM host.



3. Virtual L-Server Switchover (VM Guest): Create the VM host for each site, and only switch over a virtual L-Server operating on the VM host.

