

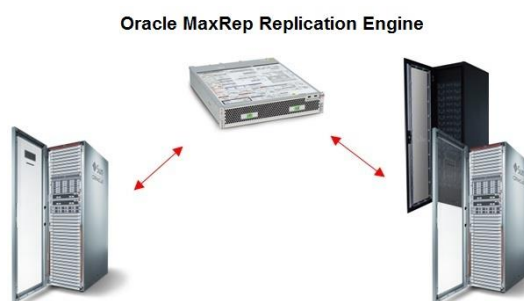
Oracle MaxRep for SAN



KEY FEATURES

- Application consistent recovery
- Local or remote synchronous and/or asynchronous continuous protection
- Multiple supported topologies meet any replication need
- Replication Engines can be clustered for high availability
- Check points and rollback
- 2X the throughput of the original Pillar Axiom Replication Engine
- Replication between Oracle FS1-2 flash storage systems and Pillar Axiom 600 storage systems
- The graphical user interface simplifies configuration

Oracle MaxRep for SAN improves application availability and data protection by offering a comprehensive set of replication choices. For many situations, local backups do not deliver the required recovery point objectives and recovery time objectives (RPO/RTO) for mission-critical applications. Local



backups also do not protect against environmental disasters. These disasters may disable a data center for an indeterminate time. It can be very costly to experience extended

downtime for critical applications. In extreme cases, it may directly impact a company's chances of survival. Oracle MaxRep for SAN addresses these business risks by providing an extremely flexible, full-functioned replication solution for the Oracle's FS1-2 and All Flash FS Storage Systems and/or Oracle's Pillar Axiom 600 storage system.

Comprehensive Replication Choices

Oracle MaxRep for SAN is an optional feature that consists of Oracle MaxRep Replication Engine and four license types:

1. Synchronous
2. Synchronous with application protection
3. Asynchronous
4. Asynchronous with application protection

The deployment type and business requirements drive license selection. Oracle MaxRep Replication Engine replaces the original Pillar Axiom Replication Engine and is updated to deliver 2X more throughput and increased scalability. The Oracle MaxRep Replication Engine supports both the Oracle FS1-2 and All Flash FS Storage Systems as well as Oracle's Pillar Axiom 600 storage system.

KEY BENEFITS

- Applications can be quickly restarted to minimize business downtime
- Data is protected 24/7 locally and worldwide
- Users can expect maximum uptime for all protected applications
- Easy to configure and manage

Oracle MaxRep for SAN provides maximum configuration flexibility and complete data protection. Several different replication methods are supported by Oracle MaxRep for SAN:

- Synchronous replication provides maximum protection and very short RPO/RTO.
- Asynchronous replication is ideal for long distances over public and/or private WANs.
- Encryption and compression are supported for data security and WAN-friendly operation.

For more sophisticated solutions, Oracle MaxRep for SAN offers one-to-many and many-to-one (fan-in and fan-out) topology support. Businesses can distribute replicated data, or conversely, consolidate data replication to a single protected disaster recovery site. The flexibility provides a comprehensive set of choices for key data protection needs.

Multi-hop configurations support a synchronous hop to a “hot-standby” disaster recovery site while also supporting a second asynchronous hop to a remote “bunker” site.

Rollback Capability to Avoid Data Corruption

The application consistency feature of Oracle MaxRep for SAN provides consistent recovery points. This allows protected applications to quickly come back up in a consistent state. The remote location can preserve multiple application-consistent checkpoints that allow flexibility in rollback points. Oracle Database, Microsoft Exchange, Microsoft SQL, as well as Microsoft applications supporting Microsoft's Volume Shadow Copy Service, are supported in application-consistent modes. This includes virtual server environments as well as physical servers.

Powerful Replication Engine

Oracle MaxRep for SAN utilizes a unique replication offload architecture. The heavy lifting of replication is separated from the Oracle FS1-2 or All Flash FS controller and placed in a powerful dual-socket eight-core replication engine. This allows high-speed encrypted and compressed replication without impacting I/O performance on the storage system or application servers.

For maximum uptime, Oracle MaxRep for SAN is the sine qua non for the most flexible and scalable replication solution on the market today.

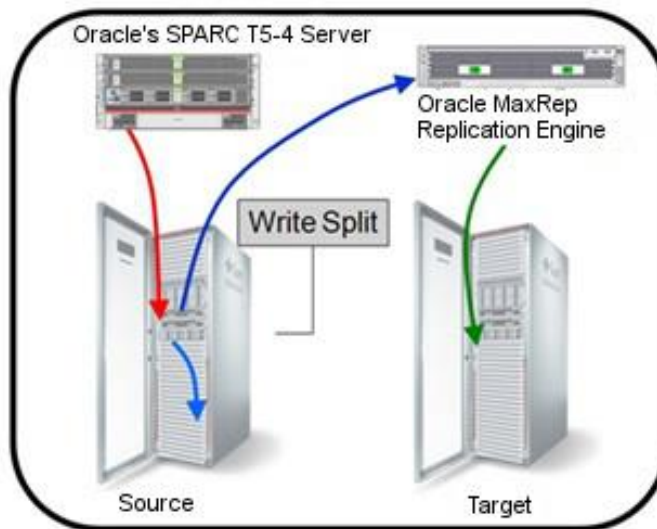


Figure 1. Write split between source and target

Warranty

Oracle MaxRep Replication Engine comes with a one-year warranty. For more information, review the [Oracle Hardware Warranty](#).

Oracle Premier Support

With Oracle Premier Support, you receive complete, integrated support to maximize the return on your Oracle investment—from software updates and operational best practices to proactive support tools and rapid problem resolution. For more information, visit [Oracle Premier Support](#).

Oracle Business Critical Service for Systems

For mission-critical support, Oracle Business Critical Service for Systems adds a whole new dimension of responsive, proactive support. This service level option ensures high availability for all critical servers and storage within your data center and reduces the risk and cost of downtime. If your data center requires the highest levels of availability and support, choose Oracle Business Critical Service for Systems. For more information, review [Oracle Business Critical Service for Systems](#).

ORACLE MAXREP FOR SAN (MANDATORY CAPACITY LICENSES AND ORACLE MAXREP REPLICATION ENGINE)

Oracle MaxRep for SAN Licenses—Sold in 1 TB Capacity Increments

Oracle MaxRep Asynchronous Replication	For remote long-haul (LAN/WAN) replication (transcontinental capable).
Oracle MaxRep Asynchronous Replication with Application Protection	For cases where restoring replicated volumes to a consistent point-in-time image is desired.
Oracle MaxRep Synchronous Replication	For local or metro replication.

Oracle MaxRep Synchronous Replication with Application Protection	For cases where restoring replicated volumes to a consistent point-in-time image is desired.
Oracle MaxRep Replication Engine Specifications	
Oracle MaxRep Replication Engine with 64 GB Memory (for factory installation)	Quantity: 1 to 8 supported for scalability
CPU	Intel E5-2528 CPU (eight core)
Cache	64 GB DDR3 DRAM
Expansion Slots	Six PCIe Gen 3
Standard Network Connections	Four 10 Gbit Ethernet ports
USB Ports	Four (two front, two rear)
Manageability	Remote management via Oracle Integrated Lights Out Manager (Oracle ILOM) port
Power Supply	Redundant – maximum 760 watts
RAID Controller	Internal eight-port 6 Gbit SAS PCIe HBA
Optional HBAs and NICs	<ul style="list-style-type: none"> Two 8 Gbit dual port Fibre Channel PCIe HBAs Two dual-port 10 Gbit Ethernet PCIe RJ45 NIC card Three dual-port 10 Gbit Ethernet PCIe copper/fiber SFP+
Replication Configurations and Modes Supported	<ul style="list-style-type: none"> Point to point Multipoint “n” way Many to one One to many Multihop Bidirectional
Maximum Throughput	3 TB/day replication
Maximum Replicated LUNs Supported	1,024 LUNs

ORACLE MAXREP REPLICATION ENGINE DIMENSIONS, POWER, AND ENVIRONMENTAL SPECIFICATIONS

Rack Options	Description
Racked	All components rackmounted, cabled, tested, and shipped as a complete system
Not Racked	Components shipped individually for installation in a customer's existing rack
Power Specifications	
Frequency	50 Hz – 60 Hz
Rated Line Voltage	100 – 240 VAC
Rated Input Current	100 – 127 VAC 7.2 A 200 – 240 VAC 3.4 A
Dimensions/Weight—Oracle MaxRep Replication Engine	
Height	87.4 mm (3.4 in.)
Width	445.0 mm (17.5 in.)
Depth	527.8 mm (20.8 in.) including PDU handles
Weight	18.5 kg (40.8 lb.)
Environmental Specifications—Operating	
Temperature	5°C – 35°C
Relative Humidity	10% – 90% noncondensing
Environmental Specifications—Nonoperating	

Temperature	–40°C – 70°C
Relative Humidity	Up to 93% noncondensing

ORACLE MAXREP REPLICATION ENGINE REGULATIONS (MEETS OR EXCEEDS THE FOLLOWING REQUIREMENTS)

Regulations ^{1, 2, 3}	<ul style="list-style-type: none"> Product Safety: UL/CSA 60950-1, EN 60950-1, IEC 60950-1 CB Scheme with all country differences EMC Emissions: FCC CFR 47 Part 15, ICES-003, EN55022, EN61000-3-11, EN61000-3-12 Immunity: EN55024 Emissions and Immunity: EN300 386
Certifications ²	<ul style="list-style-type: none"> North America (NRTL) European Union (EU) International CB Scheme BIS HSE Exemption (India) BSMI (Taiwan) RCM (Australia) Customs Union EAC (Customs Union) CCC (PRC) MSIP (Korea) VCCI (Japan)
European Union Directives	<ul style="list-style-type: none"> 2006/95/EC Low Voltage Directive 2004/108/EC EMC Directive 2011/65/EU RoHS Directive 2012/19/EU WEEE Directive

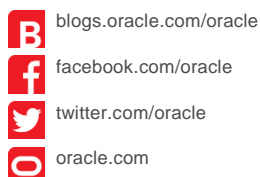
1. All standards and certifications referenced are to the latest official version. For additional detail, please contact your sales representative.
2. Other country regulations/certifications may apply.
3. In some cases, as applicable, regulatory and certification compliance were obtained at the component level only.



CONTACT US

For more information about Oracle MaxRep for SAN, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

CONNECT WITH US



Hardware and Software, Engineered to Work Together

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