Enterprises today are so dependent on IT that an unexpected operational disruption can plunge them into crisis. Cyber-attacks or natural disasters can cause serious business downtime leading to huge economic losses, compliance violations, reputational damage, and in severe cases, bankruptcy. IT environments are very complex and comprised of physical systems, virtualization, private cloud, and multiple public clouds. Enterprises need a comprehensive and robust Disaster Recovery (DR) solution to guarantee business continuity and data integrity in times of crisis.

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Introduction

Sangfor Disaster Recovery Management (DRM) is the most complete DR solution available offering all-inclusive protection for production workloads in physical x86 servers, virtualization, or cloud infrastructure. Flexible RPO/RTO options protect workloads of different criticality. The built-in automation and orchestration minimize human intervention error. The test-run, real-time monitoring and simple recovery capabilities ensure and verify an effective and reliable recovery plan.

The most common DR architecture scenarios are Active-Active (A-A) DR (within 100km inter-site distance) and Active-Passive (A-P) DR (beyond 100km inter-site distance). There are also two types of DR solutions based on production environments. First, aDR and aSC DR protect customer production workloads that run on Sangfor infrastructure (HCI/Cloud). Second, hDR protects customer production workloads that run on 3rd-party infrastructure.

Sangfor Cloud Platform (SCP) is a unified management tool for infrastructure, backup, DR, and security across multiple sites, both on-premise and off-premise. Sangfor DRM supports various DR scenarios such as on-premise DR, Cloud DR, planned migration, disaster avoidance, planned downtime, and inter-site load balancing.
Sangfor aDR

DR scenario: Active-Passive DR, production running on Sangfor HCI

Key Capabilities

01 Integrated into the Sangfor HCI platform providing 1 click VM-level DR, no additional software required.

02 A "local backup – offsite DR" solution providing continuous protection for seconds-level instant recovery from local CDP and a range of RPO options (from 1s to 1wk) for offsite DR using HCI.

03 Minimize bandwidth consumption using continuous data transfer from a breakpoint and compressed replication.

04 Incremental failback to production site from DR site.

05 With 1-click failover to DR site the network can be preconfigured to minimize RTO to minutes.

06 Main SCP and standby SCP to eliminate single point of failure.

07 Visualized DR monitoring with detailed operation status and alerts.

08 Built-in DR testing to verify DR effectiveness without business disruption.

09 Easy to use, no learning curve.
Sangfor aSC

DR scenario: Active-Passive DR, production running on Sangfor HCI

Key Capabilities

01 Automatic failover

02 Ultimate business continuity with 0 RPO and near-zero RTO

03 Easy to deploy and manage

04 Start from 4 nodes, greatly lowering the entry threshold

05 Capable of working with DR to facilitate an A-A + A-P business continuity scheme

06 Unified and visualized management

07 Flexible workload allocation to maximize resource utilization with the co-existence of stretched virtual volume and traditional virtual volume
**Sangfor hDR**

**Active-Passive DR, production running on 3rd-party virtualization other than Sangfor HCI**

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**RTO Requirement**

- **Low**
  - **Quick Recovery DR**
    - With 30-minute disaster recovery switching, can choose any historical point data to quickly restore once or multiple times.

- **Medium**
  - **VM Synchronization DR**
    - It has the capability of disaster recovery and switching within 5 minutes and can restore services in seconds after a failure. According to the bandwidth situation, it can achieve RPO = 0.

- **High**
  - **CDP Hot Standby DR**
    - It has the capability of disaster recovery and switching within 1 minute and can restore services in seconds after failure. According to the bandwidth situation, it can achieve RPO = 0.
**Key Capabilities**

- Support agentless V2V for VMware.
- DR synchronization process visualization.
- One-click DR rehearsal and switch back.
- Switch to HCI and observe the resumption of business operation.
- Supports mainstream x86 servers and hypervisor virtual to virtual (V2V) replication.
- Supports centralized monitoring for all switching tasks and presents the status of the switching stage and the target VM.
- Supports one-key termination of switching and ending of rehearsals, greatly reducing the difficulty of business switching.
- On-demand virtual machine configuration optimization, advanced option settings (important virtual machine, NUMA, HA options, etc.).
- Configuration adaptation: configuration adaptation of CPU, memory, disk, network card, etc., and replaced by HCI best practice configuration.
- Driver self-adaptation: automatically adapts to driver compatibility, and replaces the original heterogeneous platform driver with HCI tools to ensure high-performance operation after disaster recovery.

**Sangfor Cloud DR**

**DR scenario: Cloud DR or DRaaS**

Sangfor Cloud DR achieved via Sangfor Managed Cloud Services (MCS).
Key Capabilities

Simpler, Flexible, and unified hybrid cloud BCDR solution

Flexible DR scenarios:
1. Protects customers’ on-premise DC by replicating workloads to off-premise MCS
2. Protects customers’ off-premise hosted cloud in MCS by replicating workloads to customers’ on-premise DR site.
3. Protects customers’ off-premise hosted cloud in MCS by replicating workloads to MCS cloud in another region.

Sangfor MCS collaborates with local partners to deliver flexible DR managed services options:
1. Managed DRaaS
2. Assisted DRaaS
3. Self-services DRaaS

Disaster Recovery Consultancy

Initialization
At the initialization stage, the DRP objectives are defined based on Business Impact Analysis (BIA) results. The high-level business services’ RTO/RPO are defined based on criticality.

Assessment & Analysis
The existing IT infrastructure and operations are analyzed to assess their readiness and identify gaps. Application dependencies are assessed and applications’ RTO/RPO are defined based on criticality.

Design & Planning
The DR construction strategy and scope are defined. The DRP is designed based on the recovery scenario and the relevant RTO/RPO. The recovery workflow, drill test, and DR maintenance are planned and designed.

Execution
Implementation, drill-run, document the workflow & maintenance.

Optimization
The DR infrastructure is aligned with production changes. Drill-runs are conducted to ensure DR feasibility and the DRP is reviewed for optimization.
Solution Value Proposition

Simple
- All-in-one architecture without complex 3rd party integration
- Unified management for infrastructure and DR
- One-click test run and failover

Reliable
- Ultimate protection with zero RPO and near zero RTO
- Reliable bottom-up design
- Visualized DR management and real-time monitoring

Affordable
- No 3rd party DR and external storage integration
- Flexible CAPEX, OPEX, and managed services options
- Minimum footprint

Learn More

Please contact your local Sangfor sales representative for commercial information. Kindly find more solution details in the links below:

Sangfor HCI Whiteboard Video: DR