



# EMC RecoverPoint

## Continuous Data Protection for any Point-in-Time Recovery

### ESSENTIALS

#### Summary

- Replicates storage array LUNs
- Supports VMAX 10K, 20K, 40K, VNX, VNXe3200, VNX-F, VPLEX, XtremIO, and 3rd party arrays via VPLEX
- Enables VMware SRM recovery to any PiT

#### Value

- Achieve the required RPOs and RTOs of their business
- Address business continuity compliance in a changing regulatory climate
- Protect mission critical applications and data in physical and virtual environments
- Offer advanced MetroPoint topology for DR, designed for 3 datacenter availability and DR that can sustain 2 site failures.
- Lower TCO with a virtual edition deployment option

EMC RecoverPoint protects storage arrays LUNs and provides concurrent local and multiple remote data replication copies with continuous data protection for any PiT Recovery. It supports EMC VMAX 10K, 20K, 40K, VNX, VNXe3200, VNX-F, VPLEX, XtremIO and 3rd party arrays via VPLEX. Integrated with VMware Site Recovery Manager (SRM), it extends the protection capabilities with RecoverPoint SRA and VSI for any point in time recovery. It is also application agnostic.

### ARCHITECTURE

RecoverPoint delivers benefits including the ability to:

- Enable Continuous Data Protection for any PiT recovery to optimize RPO and RTO
- Ensure recovery consistency for interdependent applications
- Provide synchronous (sync) or asynchronous (async) replication policies
- Snap-Based replication (SBR) for VNX and XtremIO (async capability)
- Reduce WAN bandwidth consumption and utilize available bandwidth optimally
- Offer multi-site support with 1:n fan-out replication for higher protection and test operations. Also, n:1 fan-in for centralized DR site protecting multiple branch offices

### RECOVER TO ANY POINT IN TIME

RecoverPoint uses a journal-based implementation to hold the PiT information of all changes made to the protected data. Its replication policy supports a short RPO via journal technology that delivers DVR like roll back in time capability to a selected PiT for recovery just seconds before data corruption occurred, reversing the error.

### RECOVER WITH CONSISTENCY

With RecoverPoint technology, data is protected by Consistency Group (CG), preserving order consistency across the volumes contained within it. A journal, consisting of dedicated journal volumes, is assigned to each CG copy to maintain the PiT roll back capability otherwise known as a protection window. RecoverPoint is designed to ensure recovery consistency for one application or inter-dependent applications using a single CG or using separate CGs as part of a Group Set.

### REPLICATE WITH WAN EFFICIENCY AND RESILIENCY

RecoverPoint delivers remote data replication over WAN, at lower costs when replicating asynchronously. Its built-in WAN optimization consists of advanced bandwidth reduction algorithms such as write-folding, deduplication and compression that reduce WAN bandwidth consumption up to 90%. WAN optimization also ensures replication robustness with an improved resiliency that sustains 50% longer Round Trip Time (RTT) and higher packet loss to fully utilize the available lag optimization which prioritizes among asyn CGs on the same RPA that competes for WAN resources.



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## MULTI-SITE SUPPORT

The multi-site support of RecoverPoint in a 1:4 fan-out configuration provides multiple replications of production data to different target devices or sites for additional data protection or to support isolated software development test. A 4:1 fan-in configuration enables a centralized DR site implementation for branch office protection. Also, multi-site along with splitter sharing allows for more fan-in and fan-out topologies.

## RECOVERPOINT PROTECTS STORAGE ARRAY LUNS

RecoverPoint supports concurrent local and remote replications over any distance, sync or async. It makes data loss reversible and outages transparent so that organizations can achieve the required RPO and RTO goals. Architecturally it consists of an EMC Unisphere management GUI, a physical RecoverPoint Appliance (pRPA) or a Virtual RecoverPoint Appliance (vRPA \*VNX relevant only), and the write-splitter embedded in the supported EMC storage arrays. With EMC XtremIO, the data replication is a splitter-less implementation achieved by leveraging the highly efficient array-based snapshot technology native to the XtremIO platform.

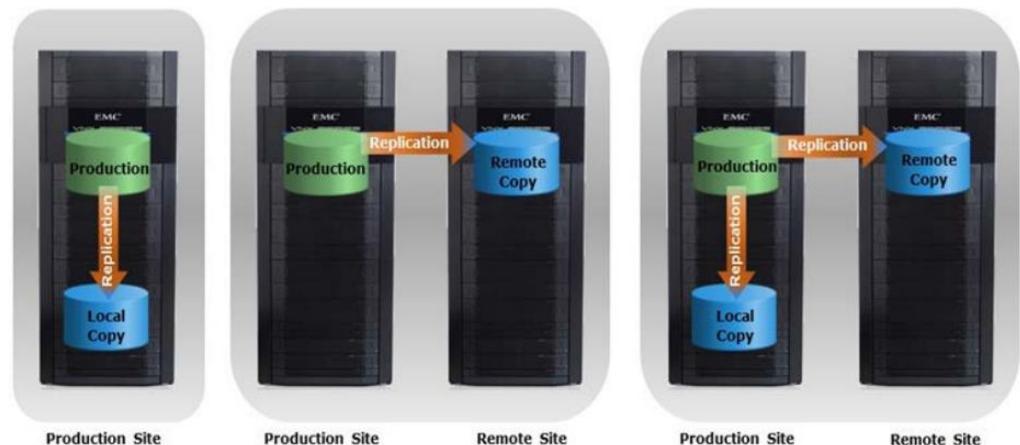


Figure 2: Illustration of local replication, remote replication, and concurrent local and remote replication

In addition to these benefits, it also offers the following features:

## SNAP BASED REPLICATION

The Snap and Replicate feature, an alternative to synchronous or asynchronous replication, is enabled by leveraging the intelligent array-based snapshot capability available in EMC VNX and XtremIO platforms. It enhances asynchronous replication with a user defined interval for replication. For EMC XtremIO, a low latency and high performance all flash array, a minimum of 60 seconds RPO is required.

## HETEROGENEOUS EMC ARRAY TYPE SUPPORT

RecoverPoint protects storage arrays LUNs allowing data replication of mixed EMC array types, in that the target array can be different from the source array type. This heterogeneous array support allows production environments using high performance XtremIO arrays to be protected with a more economical storage array platform at the remote site, helping to maintain data protection and keep the DR budget under control.

## METROPOINT TOPOLOGY

With the introduction of MetroPoint topology, EMC raises the bar by delivering the industry's first and only solution for 3 datacenter availability and disaster recovery that can sustain 2 site failures. MetroPoint topology is enabled by combining the best of [EMC VPLEX Metro](#), an active-active multi-site infrastructure, and RecoverPoint, for continuous data replication to the remote 3rd site. Comprehensive data protection continues even under the complete failure of one of the Metro region sites. The simultaneous protection of the Metro region by a distant 3rd site using RecoverPoint provides any PIT recovery from operational and disaster outages.

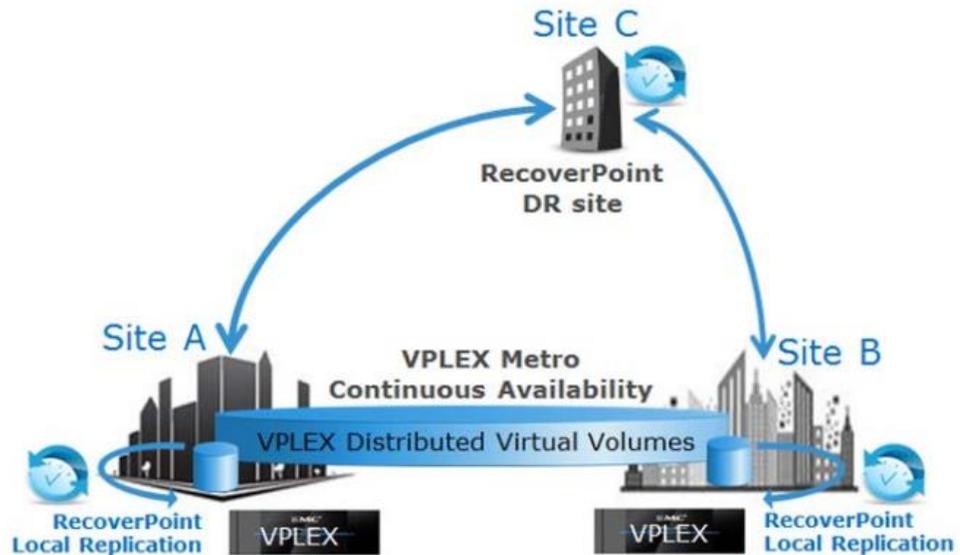


Figure 3: Illustration of MetroPoint topology

MetroPoint topology helps organizations to achieve a new level of continuous availability and data protection that completely closes the RPO/RTO gap, which no other vendor in the industry can claim. MetroPoint topology deployment includes:

- VPLEX Metro with Oracle RAC over two clustered datacenters in the metro region and a 3rd distant site for DR protection
- VPLEX Metro with SAP HA for active-active multi-site infrastructure over distance in the metro region and a 3rd distant site for DR protection
- VPLEX Metro with Microsoft Hyper-V Live Migration, Microsoft Failover Cluster and AlwaysOn Availability Groups with a 3rd distant site for DR protection

MetroPoint consistency group, built on the existing consistency group feature, is designed specifically for MetroPoint topology to protect applications and their data and ensure consistent recovery at re-start.

## RECOVERPOINT VIRTUAL EDITION FOR VNX

RecoverPoint virtual edition consists of RecoverPoint Appliance (RPA) software deployed as a virtual appliance in an existing VMware ESXi VM environment. This software option is currently available for VNX, VNXe3200 and VNX-F equipped with iSCSI support. RecoverPoint virtual edition is a flexible deployment option which offers maximum simplicity with no dependency on a physical appliance, lowering TCO.

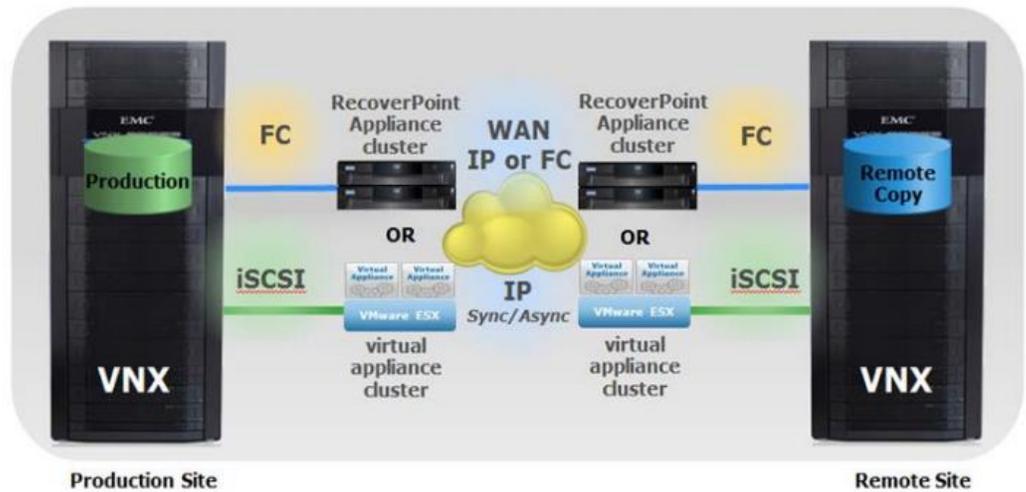


Figure 4: Illustration of RecoverPoint deployment options for EMC VNX

## TAKE THE NEXT STEP

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