

PURE// ACCELERATE DIGITAL KOREA 2021

BREAKTHROUGH

상상을 초월하는 혁신

쉽고 간편한 데이터 보호

플래시 어레이를 통해 구현하는 데이터 보호 전략

장순현 부장

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Pure Storage Korea

#PUREACCELERATE



Session Agenda

1. Today's BC/DR Landscape
2. Simplified BC/DR
3. What's New!
4. Architectural Considerations
5. Learn more here...

Today's BC/DR Landscape

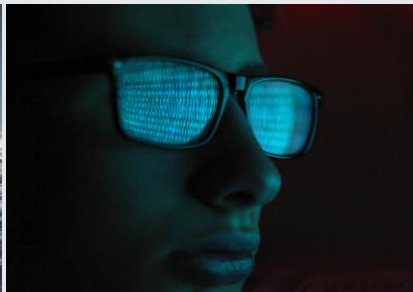
Keep Your Business Operating

Expecting the Unexpected

확산되는 RISK



자연 재해



인적 재해

증가되는 비용



Unplanned Downtime

업무 연속성 / 재해 복구

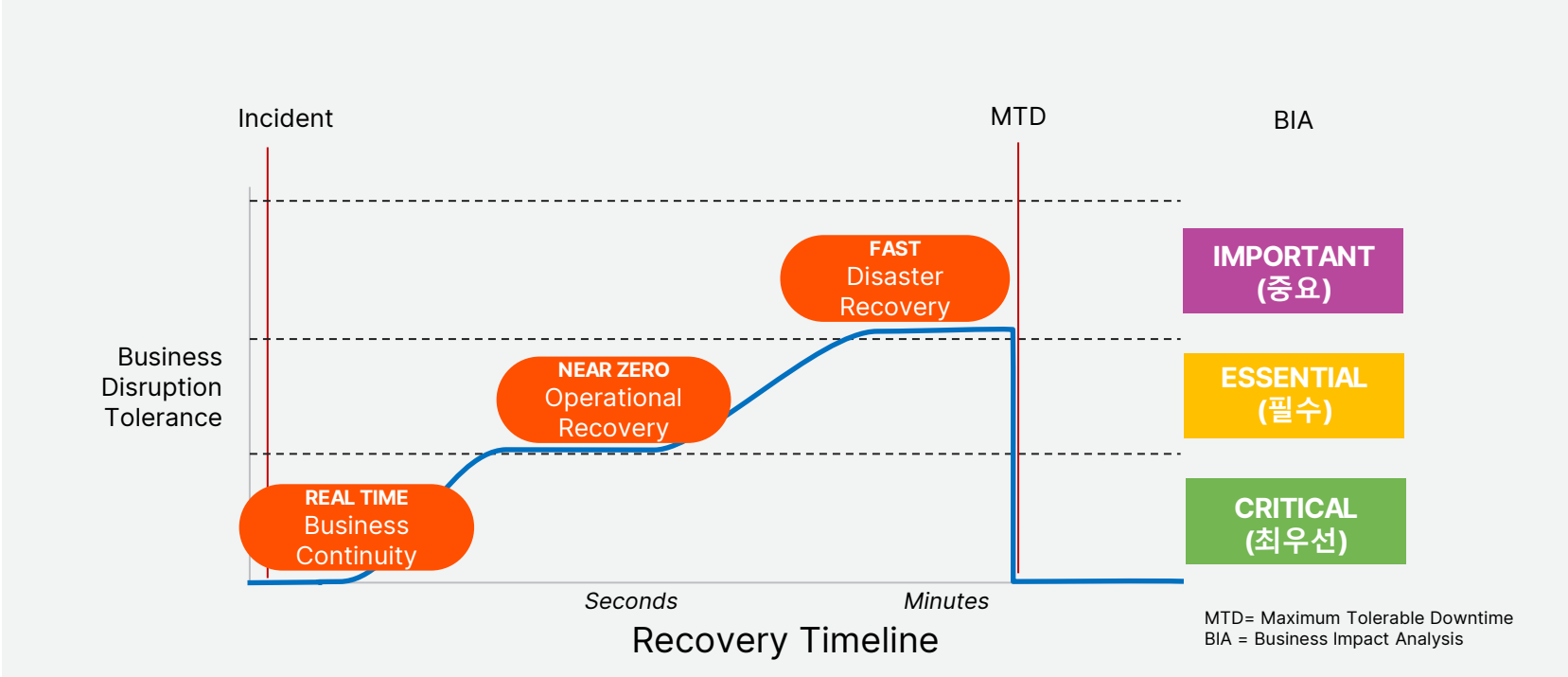
업무 연속성과 재해복구계획의 목적은 Risk를 제한하고
조직이 예기치 못한 업무 중단 이후에 최대한 정상 상황과 가깝게 운영될 수 있도록 함이다.

재해복구 계획은 반드시 새로운 위협을 대비해야 함

- 매 11초마다 랜섬웨어 공격이 발생함
- 평균 요구 비용은 \$377,000 (약 4억원)
- 한 정유&가스 회사의 공격의 경우 \$30 million (330억원)
- 업무중단에 대한 비용은 매년 200% 상승

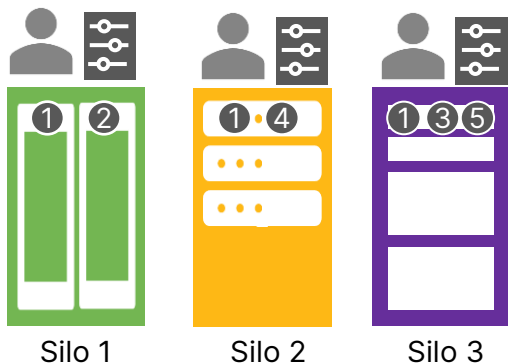


Business Continuity Planning



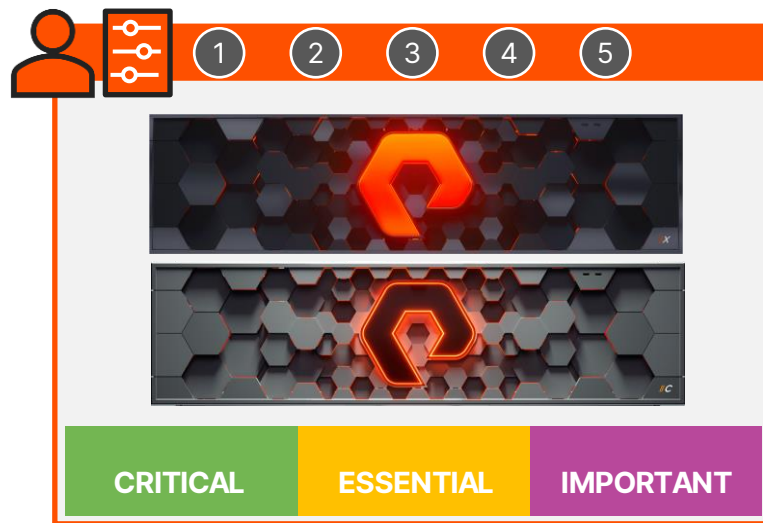
통합된 데이터 보호 솔루션

업무 영향도에 따라 보호수준을 다르게 적용한 다양한 복제 제품



- ① Snapshots
- ② Synchronous Replication
- ③ Asynchronous Replication
- ④ Nearly - Synchronous
- ⑤ Multi-site Protection

어떠한 보호 수준도 지원하는 하나의 플랫폼



How Pure Does It

포괄적인 보호, 관리 및 가용성 기능 Built-in

REAL TIME
Business Continuity

ActiveCluster™
Synchronous Replication

Automatic and
Transparent Failover

Campus or Metro Region

NEAR ZERO
Operational Recovery

ActiveDR™
Continuous Replication

Simple,
Built-in Workflows

Virtually Any Distance

FAST
Disaster Recovery

Async Replication
Periodic Snapshot Copy

Flexible deployment,
lightweight snapshots

Any Distance or Cloud

Pure1 Management / Predictive Support / Purity REST APIs for Automation

Simplified BC/DR

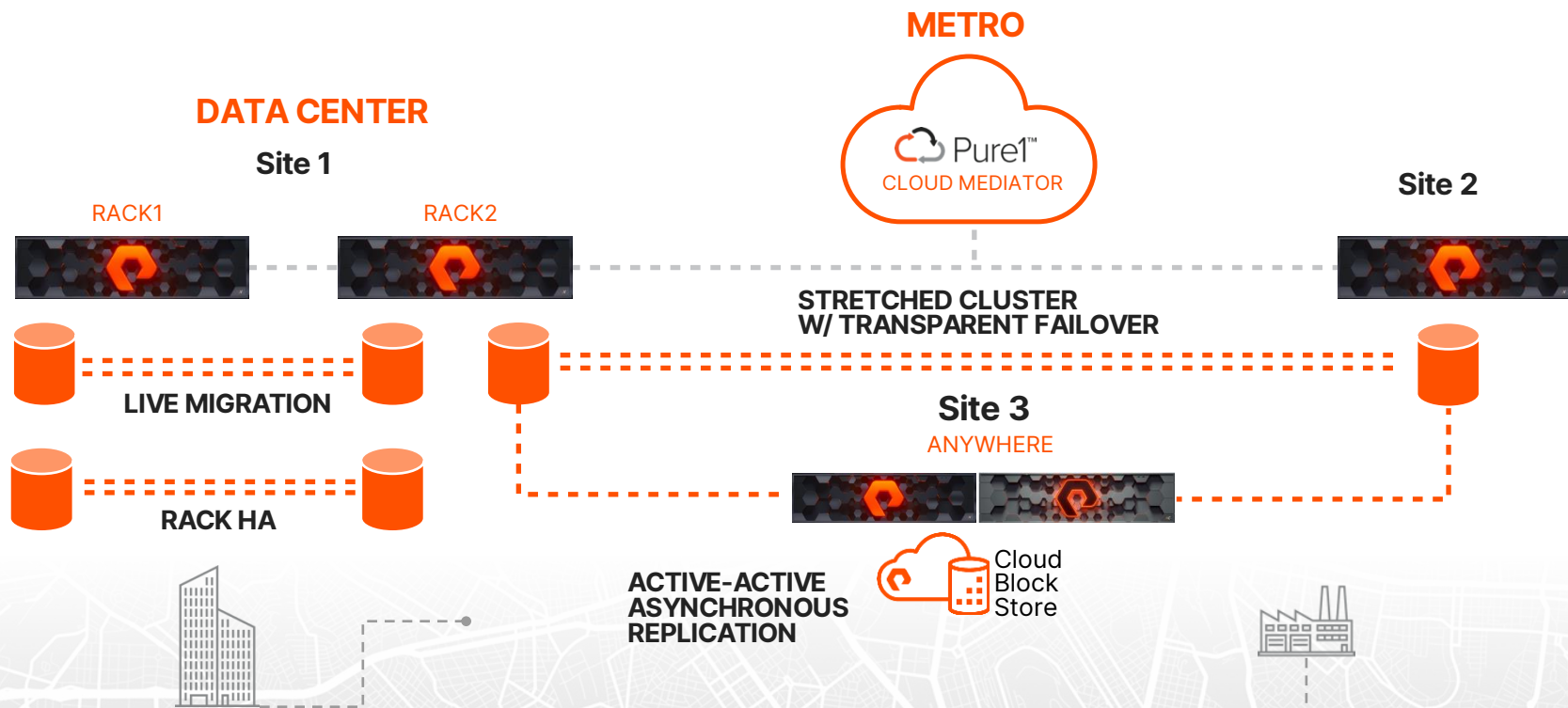
Purity **FA** ActiveCluster™



Multi-Site Active / Active
Zero RPO, Zero RTO, Zero \$€ ¥ £, Zero Additional HW



Purity **FA** ActiveCluster



Purity **FA** Async Replication

Asynchronous Replication of FlashArray™ Snapshots



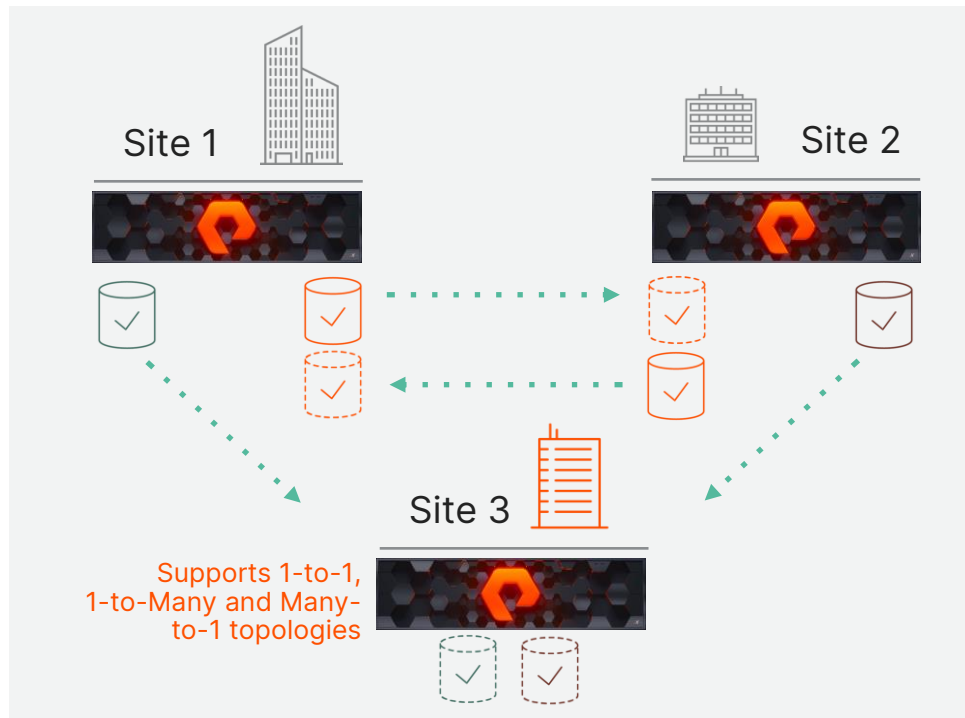
SIMPLE BY DESIGN

- 별도의 professional services 필요 없는 손쉬운 구성
- Works with //X and //C models



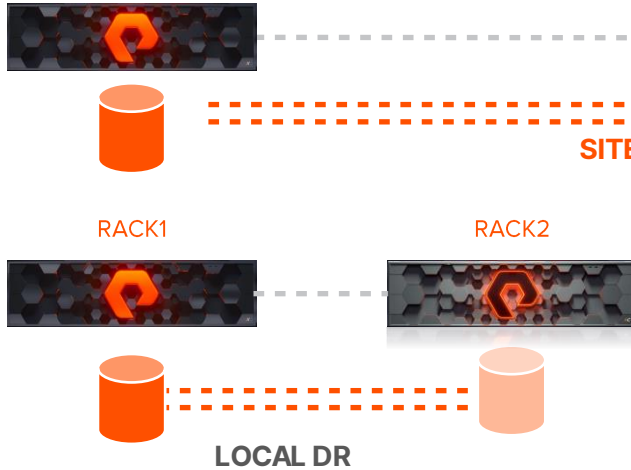
SUPERIOR PROTECTION

- 시점 기반의 일관된 snapshots 복제본
- 모든 사본에서 신속한 복구
- 데이터 절감 유지



Purity **FA** Async Replication

DATA CENTER 1



SITE TO SITE DISASTER RECOVERY

DATA CENTER 2



GLOBAL

ANYWHERE



Purity **FA** ActiveDR

Near Zero RPO with Simplified Management

거리 제한 없는 단순하고 연속적인 Replication



- Near Zero RPO
- 빠른 복구/Failover 시간
- RPO 영향 없는 Test Failover
- Hosts 사전 연결
- 불필요한 Journals 관리
- 간단한 DR workflows



ActiveDR Use Cases

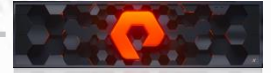
DATA CENTER

RACK1



GLOBAL

ANYWHERE



1 SITE TO SITE OPERATIONAL RECOVERY
MULTI-DIRECTIONAL AND REVERSIBLE PROTECTION

RACK1



RACK2



2 MIGRATION



3 LOCAL DR



What's New!

FlashArray SafeMode

제거 할 수 없는 변경 불가능한 스냅 샷을 통해
랜섬웨어 공격으로부터 빠른 데이터 복구



관리자의 실수 혹은 악의적인 공격으로 인한 영구적 데이터 손실 방지



관리자 권한이 있어도 최대 30일 동안 변경할 수 없는 삭제된 데이터의 Secure snapshots



All Flash 기반의 빠른 복구



Flash Array replication을 통한 추가 보호

ActiveDR What's New

PLATFORM SUPPORT

- FlashArray//C
- Between FlashArray//X and FlashArray//C

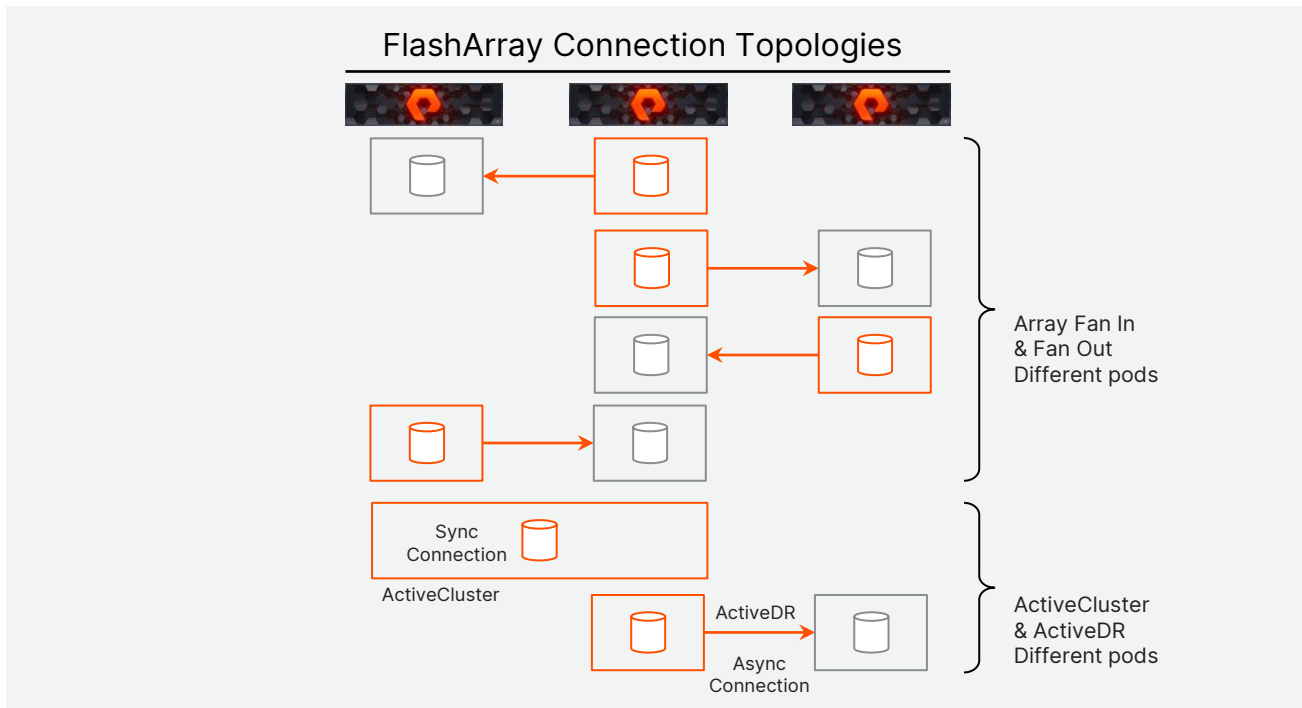
INTEROPERABILITY

- Switching configuration between ActiveCluster and ActiveDR
- FlashArray File services are supported on the same FlashArray running ActiveDR and ActiveCluster
- ActiveDR and SafeMode

REPLICATION TOPOLOGIES

- ActiveDR and ActiveCluster are supported on the same FlashArray (different volumes)
- ActiveDR supports fan-in and fan-out for different ActiveDR pods

ActiveDR Supported Configurations



Purity ActiveCluster - Update

- **FIBRE CHANNEL REPLICATION**
Future proof, interconnect uses NVME protocol
- **SINGLE, DUAL FABRIC, DWDM, DARK FIBRE**
WAN Agnostic – use what you have
- **AUTO-DISCOVER ARRAY WWNs**
FConnection persistence and auto-healing
- **DISPLAY CONNECTION TOPOLOGY**
Redundancy, path status, health at a glance
- **DISPLAY PORT STATISTICS**
Easily identify, sort, and export port statistics

Fibre Channel Replication Network

FLEXIBLE ZONING

- Single Fabric - Put all WWNs into a single zone
- Dual Fabrics - Put all WWNs into a single zone on both fabrics

SINGLE, DUAL FABRIC, DWDM, DARK FIBRE

- Compatible with most switches
- Several deployment options

BUILT-IN TOOLS

- Array Connections provides Connection Topology status, verify path status
- Port Statistics allows for sorting, and reporting on port stats

PLATFORM

- Compatible with FlashArray //XR2 or higher
- Two dedicated fibre channel replication ports per controller

Architectural Considerations

Failover Considerations

Automatic Versus Automatable – RPO is Key

Business Continuity

ActiveCluster

Symmetric Active-Active

RPO = Zero
데이터 손실 없음

RTO = Zero
사용자 개입없이 자동 Failover

주로 근거리 구성 —
거리에 따라 어플리케이션 성능, 응답속도 영향

Operational Recovery

ActiveDR

Active Production Site - Standby DR site

RPO > Zero
데이터 손실 최소화

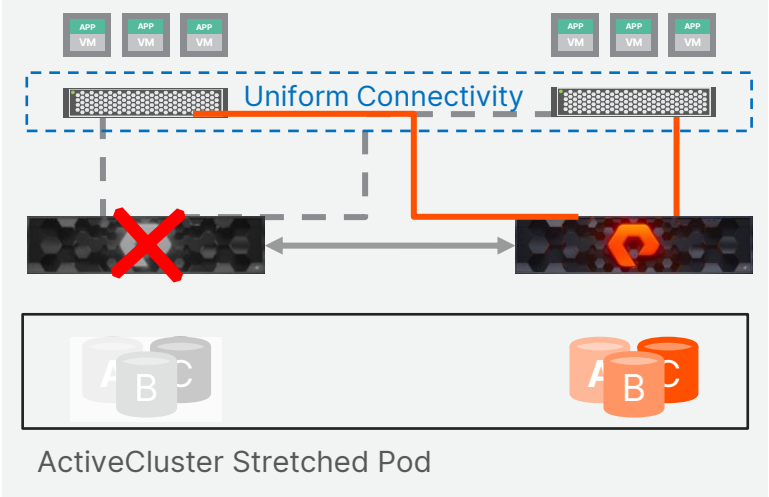
RTO > Zero
Failover 의사결정과 수동 개입 필요
자동화는 가능하나 자동 수행되지 않음

거리 제약 없음 —
어플리케이션 성능, 응답속도에 영향을 주지 않음

Failover Considerations

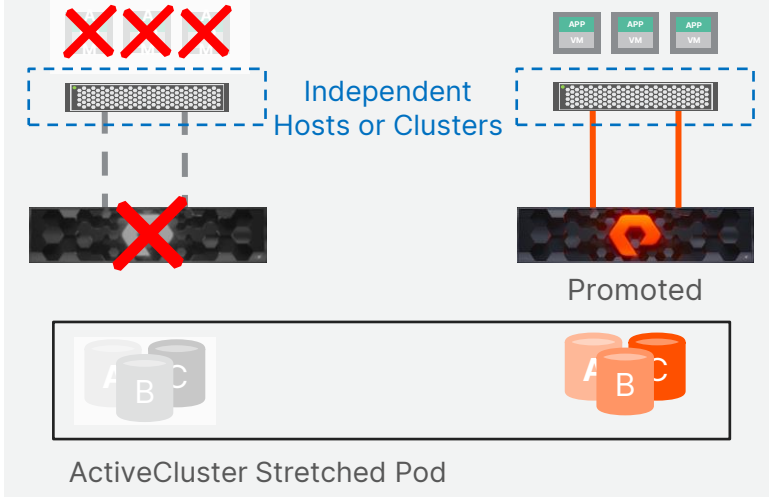
ActiveCluster

Automatic Failover



ActiveCluster

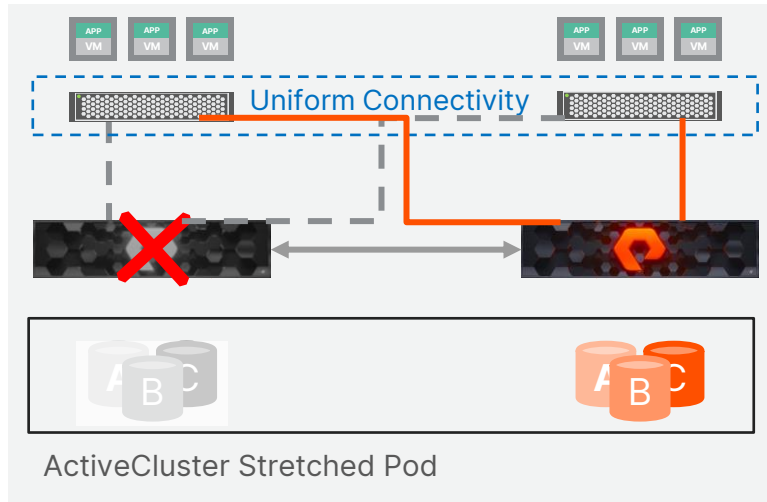
Automated or Cluster-Driven Failover



Failover Considerations

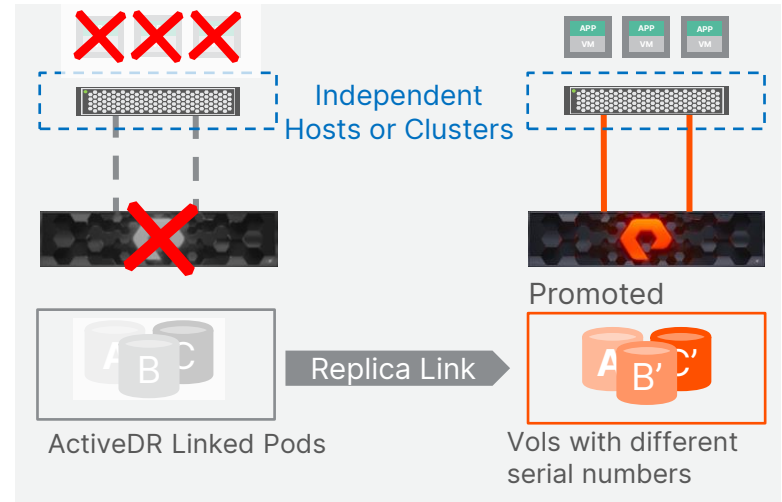
ActiveCluster

Automatic Failover



ActiveDR

Administrative-driven Failover Process



Learn more here...

Go Here to Learn More

www.PureStorage.com



Products > Storage Software > Purity > Safeguard

The screenshot shows the Safeguard product page. At the top, there is a breadcrumb trail: "Products > Storage Software > Purity > Safeguard". Below this, the text "PURITY SAFEGUARD" is displayed. The main heading reads "Proactive Data Protection, Disaster Recovery, Backup". To the right of the heading is an orange cloud icon with a white padlock and a checkmark. Below the heading, a paragraph states: "Safeguard your data and keep your business running without disruption. Rely on Purity's unparalleled data-protection and business-continuity capabilities for disaster recovery and backup." On the right side of the page, there is a "Related Li" section with two links: "Manage ->" and "Access ->".

ActiveCluster

[ActiveCluster Demo](#)

[ActiveCluster over Fibre Channel Demo](#)

[ActiveCluster Whiteboard](#)
[Active-Active Async Whiteboard](#)

ActiveDR

[ActiveDR Demo](#)

[ActiveDR White Board](#)

[ActiveDR and VMWare Site Recovery Manager](#)

Async Replication

[Async Replication Demo](#)

[Async Replication Whiteboard](#)

Thank You!

Contact us to continue the conversation

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