3PAR VIRTUAL DOMAINS
SOFTWARE

3PAR® Virtual Domains is virtual machine software that delivers secure access and robust storage services for different applications and user groups, also known as *virtual private arrays*. By providing secure, administrative segregation of users and hosts within a consolidated, massively parallel 3PAR InServ® Storage Server, Virtual Domains allows individual user groups and applications to affordably achieve greater storage service levels (performance, availability, and functionality) than previously possible.

3PAR Virtual Domains is ideal for enterprises or service providers looking to leverage the benefits of consolidation and deploy a purpose-built infrastructure for their private or public cloud.

The Challenge: The Need for Secure Administrative Segregation

The benefits of storage consolidation are well understood: greater resource utilization, reduced administration, centralized backup, and reduced energy and floor space consumption. Too often, however, disparate user groups, departments, and customers choose not to share legacy storage resources due to concerns of privacy, control, administrative error, or even compliance. Unfortunately, this means that organizations must resort to the costly purchase and time-consuming management of separate physical resources—either within a monolithic storage system or with multiple, dedicated modular storage systems. In either case, the economic and administrative benefits of consolidation are lost. Effective storage consolidation requires high storage service levels combined with secure administrative segregation to protect against unauthorized access, monitoring, and control.

The Benefits

- Provides secure, isolated storage (virtual private arrays) to multiple applications, departments, and customers
- Delivers the robust service levels available from a wide-striped, massively parallel array without sacrificing security
- Retains the economic benefits of a virtualized storage infrastructure and storage consolidation
- Enables users or departments to securely and independently administer their own individual virtual private arrays
- Integrates fully with all InForm® software products and features including 3PAR Remote Copy, System Reporter, LDAP support, and Autonomic Groups
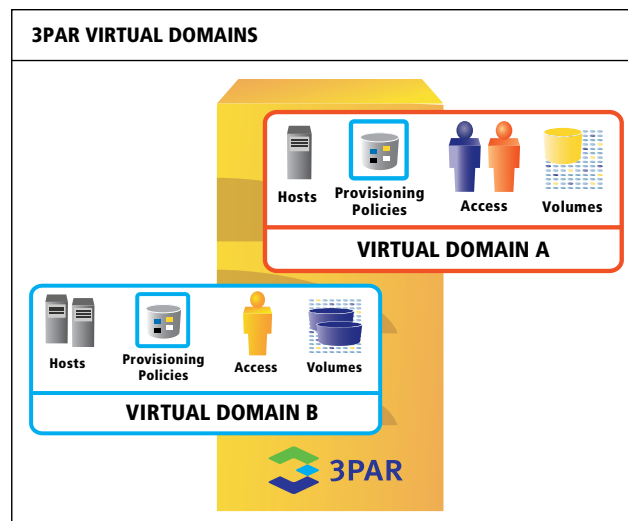

The Solution: Autonomous, Secure, Policy-Based Virtual Private Arrays

3PAR Virtual Domains is the answer for delivering multiple autonomous, secure, and policy-based virtual private arrays within a single, massively-scalable utility storage platform. Since users (or groups) have access to only those virtual domains to which they have been granted access, they can independently and confidently administer and monitor the system without concern for the actions or visibility of other users. Deliberate or inadvertent deletions and unauthorized or accidental access to volumes is prevented.

3PAR
Serving Information

Cloud service providers can use Virtual Domains to deliver secure, isolated virtual private array services to customers via a cost-effective, agile, virtualized infrastructure. IT organizations can use Virtual Domains to deliver customized, secure, and even "self-service" storage to multiple administrators, applications, departments, and customers while also enjoying the economic and administrative benefits of storage consolidation. In many environments, the simple but secure consolidation of production with test and development can represent huge savings. In others, simple storage administrative tasks or monitoring tools can be turned over to system and application administrators in a "self-service" model.

Unlike the use of multiple storage arrays or legacy array partitioning schemes that rely on the physical segregation of resources, Virtual Domains uses a policy-based, logical implementation that preserves the benefits of massively distributing and sharing each application workload across all system resources (ports, processors, cache, loops, and disk drives).
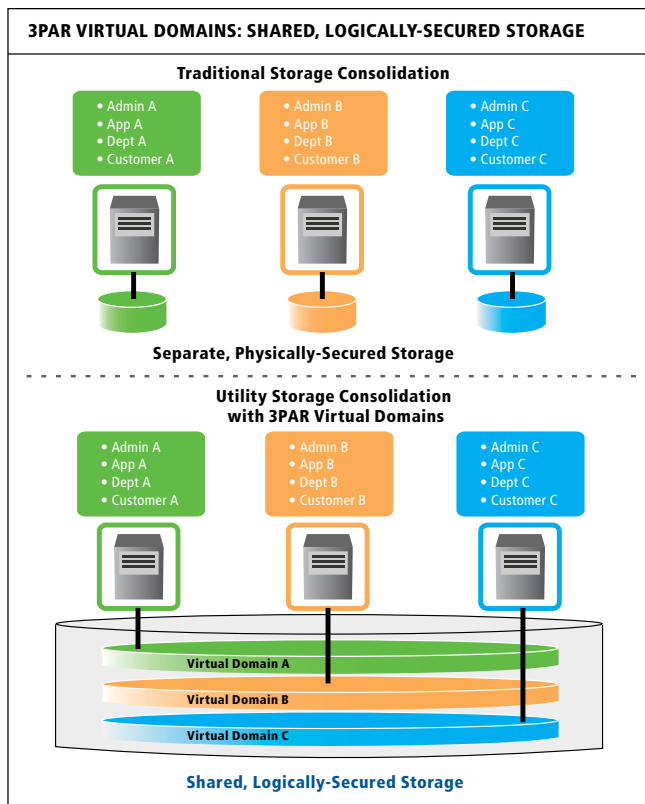
3PAR Virtual Domains is completely virtual and represents no physical reservation of resources. This makes using Virtual Domains as simple as using a couple of commands and following three simple steps.

THREE SIMPLE STEPS TO IMPLEMENT 3PAR VIRTUAL DOMAINS:

1. A master administrator creates a virtual domain.

2. The master administrator assigns logically-defined entities to the domain. These entities include one or more host definitions based on World Wide Name (WWN) groupings, one or more provisioning policies (for example, RAID level or disk type), and one or more sub-administrators (who are also granted role-based privileges by the master administrator).

3. Depending on the level of access granted, sub-administrators defined in step 2 can then create, export, and copy standard volumes or thin provisioned volumes safely and securely.

3PAR VIRTUAL DOMAINS IS FULLY INTEGRATED WITH INFORM SOFTWARE, INCLUDING:

▶ 3PAR Remote Copy—for secured access to replicated volumes.

▶ 3PAR System Reporter—for historical performance and capacity utilization reporting by virtual domain.

▶ 3PAR LDAP support—for centralized InServ, virtual domain, and overall IT user authentication and authorization via lightweight directory access protocol.

▶ 3PAR Autonomic Groups—for grouping of multiple independent virtual domains into a single logical entity to simplify storage administration. For example, with Autonomic Groups, a domain group can be backed up by a single backup server while still maintaining the security and isolation associated with each individual domain.

3PAR VIRTUAL DOMAINS: SHARED, LOGICALLY-SECURED STORAGE

Traditional Storage Consolidation

- Admin A
- App A
- Dept A
- Customer A

- Admin B
- App B
- Dept B
- Customer B

- Admin C
- App C
- Dept C
- Customer C

Separate, Physically-Secured Storage

Utility Storage Consolidation with 3PAR Virtual Domains

- Admin A
- App A
- Dept A
- Customer A

- Admin B
- App B
- Dept B
- Customer B

- Admin C
- App C
- Dept C
- Customer C

Virtual Domain A
Virtual Domain B
Virtual Domain C

Shared, Logically-Secured Storage

FOR MORE INFORMATION VISIT:
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Serving Information

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