

CAS Virtualization

ARRIS Global Services

WHY VIRTUALIZE?

Virtualization enables these essential features for assuring CAS System business continuity and data integrity:

- **Hardware Independence**

Enables running CAS applications on ARRIS qualified hardware or VMware-supported hardware with comparable performance.

- **High Availability / Redundancy**

Provides CAS redundancy/failover, optimizes uptime and data integrity with automated restore and recovery.

- **Disaster Recovery**

Supports business-specified recovery time objectives (RTO), recovery point objective (RPO), automated failover testing, and planned migrations. Automated and manual failover is supported.



SERVICE OVERVIEW:

ARRIS Conditional Access System (CAS) is introducing support for operation of DAC, CASMR, CAST, Advisor and other CAS applications in a Virtual Machine (VM) environment to support hardware/operating system independence, high availability/redundancy, and disaster recovery.

ARRIS Global Services is prepared to help you make this transition to Virtualization by offering these services:

- Network Discovery and Readiness Planning
 - Software/ Hardware Procurement
 - Readiness Plan Implementation
 - Migration Process
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ARRIS Global Services ensures your transition to virtualized CAS environment is done with minimal impact to your operations and customer population, allowing you to enjoy the advantages of hardware independence, high availability, hardware consolidation and disaster recovery. Our expert assistance allows you to work through the migration to a virtualized environment more quickly while allowing your own staff to focus on day to day operations.

SERVICE DESCRIPTION

Network Discovery and Readiness Plan Creation

- Collect critical data points on network
- Review data collected
- Assess existing architecture, backup/recovery process
- Develop Network Plan and architecture
- Create BOM, Services List, Action list
- Develop proposal for High Availability, Disaster Recovery
- Deliver Proposal and Readiness Plan

Software/ Hardware Procurement

- ARRIS procures hardware and software through industry leading 3rd party vendor partners (VMware®, HP®) to support end-to-end virtualization requirements.

Virtualization Readiness Implementation

- Basic Service
 - Validate network is ready for virtualization
 - Install new equipment (server/SAN) and software
 - Create Virtual Machine for CAS installation
- Custom Service
 - Implement network changes
 - Implement other changes from the action list
 - Collect critical data points on network

Migration Process

- Load DAC software on previously created Virtual Machine
- Execute the migration process
- Validate the installation and system functionality
- Release to production

IMPLEMENTATION EXAMPLE

DAC6000 High Availability with Disaster Recovery

Phase 1 - Site Preparation

- Upgrade CAS hardware to support current software
- Replace KLS and other HE components as needed
- Upgrade DAC software to current release in native mode
- Upgrade software from native to VM with HA
- Upgrade to Disaster Recovery
- Upgrade CSS/RADD software to current release – native

Phase 2- CAS Application – Native Mode

- Upgrade CAS and install SAN servers
- Install HP®StoreVirtual® on SAN servers
- Upgrade PC to run VMware® vSphere®
- Upgrade DAC software to current release – native

Phase 3 - High Availability

- Implement N+1 backup DACs per site
- Match the current configuration
- Install VMware® vCenter® on the CAS hardware
- Upgrade DAC apps from native mode to VM mode
- Set up VMs so that all fail over to the backup CAS server

Phase 4 – Disaster Recovery

- Implement/configure cold backup CAS/KLSs
 - Uses HP® StoreVirtual® snapshot feature
 - Uses SANs installed for backup DACs
- Confirm remote cold KLS3000 is online/in sync with DAC
- Implement failover mechanism

ORDERING INFORMATION

Part Number	Description
596226-001-00	CAS Virtualization Network Discovery and Readiness Plan Creation
596227-001-00	CAS Virtualization Readiness Implementation
476666-043-00	CAS Virtualization Migration Process

Note: Specifications are subject to change without notice.