ACEYUS REPORTING

High Availability Reporting Architecture

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January 2015

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HIGH AVAILABILITY SOLUTIONS ARCHITECTURE

The Aceyus Reporting platform may be designed to address high availability (HA) architecture requirements by deploying redundant components within data centers and across data centers. The reporting HA design can provide for uninterrupted platform availability in the event of a failure of one or more platform components or the loss of a data center.

Aceyus Reporting solutions architecture is somewhat flexible in order to accommodate various customer environments and application platform requirements. This flexible architecture approach relies on customer resources to support aspects of the redundancy models that are available. Proper discovery and planning for the reporting platform allows Aceyus to design and implement a system that provides optimum resiliency that aligns with those customer resources.

REPORTING PLATFORM COMPONENTS

The Aceyus Reporting platform has two primary components: Vault Database Servers and Applications Web Servers:

- Vault Core Database – Aceyus Vault database server(s) houses core application components such as dashboards, reports, alerts, permissions, etc. The Vault databases are also the repository for the Aceyus Reporting data that is included in reports and dashboards. In addition, the Vault database is home to all the processes necessary to extract data from external data sources and make it available for reporting.
- Application Web Servers – The Aceyus Web Server(s) hosts the application that provides access to the Aceyus Reports and Dashboards. In addition, they may be configured as an FTP server (or other file transfer facility) when integrating data delivered via file drop, such as Avaya ECH or Cisco Unified Communications Manager (CUCM) call detail records.

The reporting environment may have other components that collect or supply data depending on the customer environment. These components will align with the core components and associated data sources for integrations to the redundant Vault installation.

GEOGRAPHIC DIVERSITY AND REDUNDANCY

The primary facility for Aceyus HA design is geographic separation of redundant components. The following diagram depicts a common Aceyus solutions architecture with geographic diversity of core components.
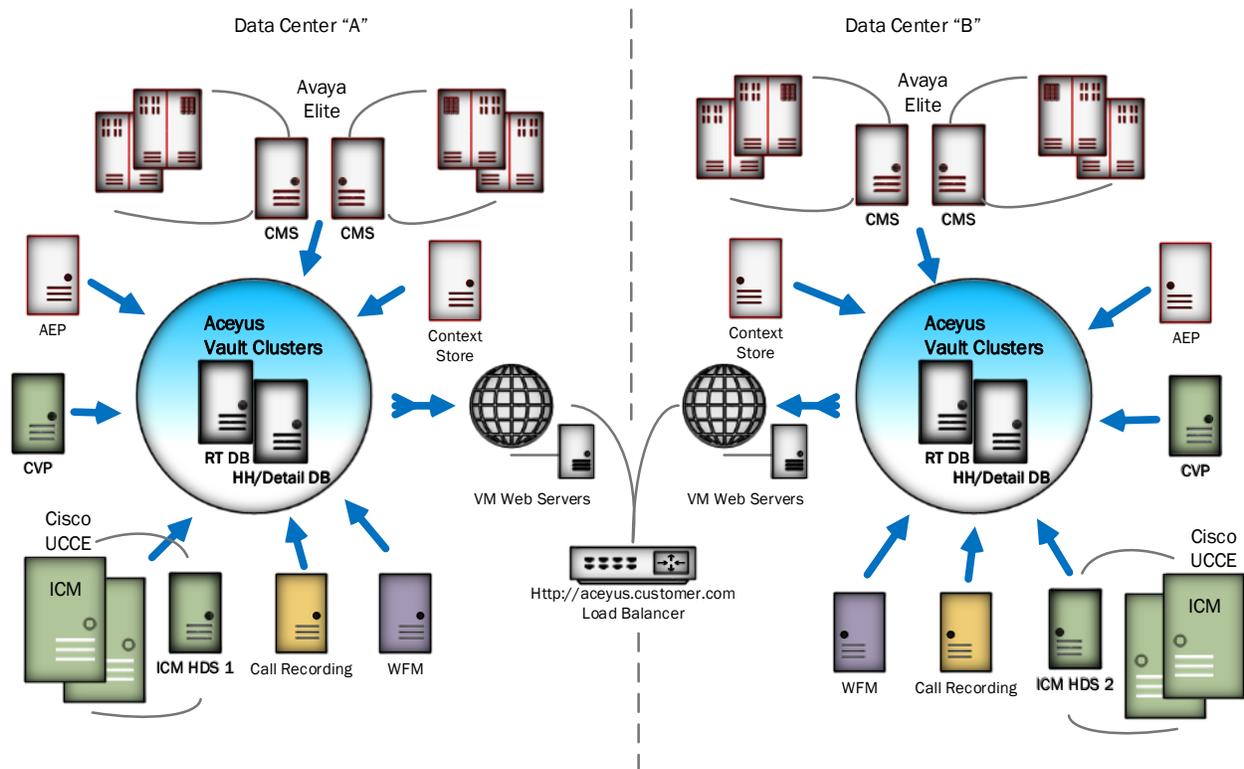

The diagram shows data flowing to each side of a redundant Aceyus Vault installation. Real-time and Historical data is not replicated within the Aceyus application. Each side of the geographically diverse solution has a separate data feed for the relevant data sources. This creates a separate and independent data model for each location. As long as the data sources are operating correctly, the Aceyus data feeds, and subsequently, the Vault data stores will be in sync with each other.

REDUNDANT DATA FEEDS

Connections between data sources and redundant Vault servers may take many different forms. The data sources may have built-in redundancy (like most ACD data sources) or may have a single data source (like many IVRs) to feed data to both sides of the redundant Vault. For these various scenarios, the Vault data feeds may take full advantage of the data sources'

architecture to obtain data, but will be subject to data source architecture constraints as well in terms of providing data.

Consider the following diagram that shows possible connections for an Avaya CMS connection. This diagram shows the most common HA CMS integration on the left, but an even more resilient option on the right.
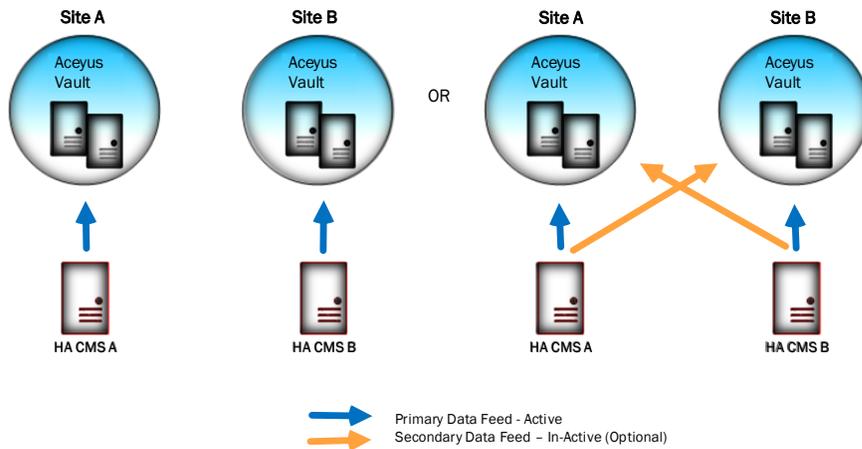

In contrast, a redundant connection to a Cisco UCCE environment may be represented as follows:
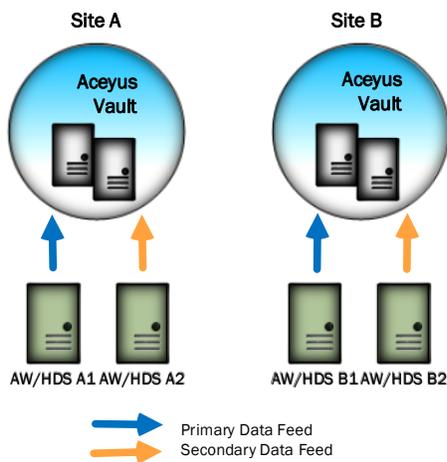
The following diagram shows a common integration model for IVRs or other data sources. In this diagram, if data sources A and B contain the same data, the yellow arrows represent optional links that increase the resilience of a redundant implementation. If data sources A and B contain different data, the yellow arrows represent connections from each of those data sources to a remote and redundant Vault database.

Generic Data Source Redundancy

Active link
Active or Stand-by link (Optional)
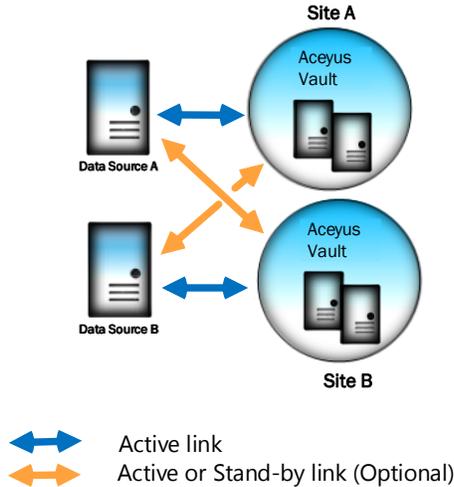
COMPONENT REDUNDANCY

The individual components of the reporting platform may also be redundant within each data center or contact center site. The methods for implementing this layer of redundancy depends on the component, the customer network resources and data management policies.

Resilient architecture of the Aceyus Reporting platform assures availability of reporting services within the data center.

The Aceyus Vault servers may be deployed as part of a Microsoft SQL Server Cluster to ensure that no server failure renders the Vault inoperable. If a clustered database server fails, all processes and networked connections will become active and operational on the 2nd server in the failover pair. If a Vault database cluster or a data center becomes unavailable, Aceyus application web servers (located outside the data center) that point to the failed cluster can be configured to automatically redirect requests to the alternate site Vault cluster.

The Aceyus application web servers are typically deployed behind a state-aware load balancer (such as F5, or Cisco ACE) for directing requests to an available web server. The loadbalancer facility ensures browser requests for the Aceyus application are directed to an active web server.