TECHNICAL SOLUTION BRIEF

SPECTRA ARCITECTA



BlackPearl[®] and Mediaflux[®] enable affordable data management and bridge data silos for rapid discovery and control

Mediaflux Data Management Platform

Organizations are confronted with processing, moving, storing and keeping track of ever increasing amounts of data. Arcitecta's Mediaflux is a robust, flexible data and metadata management platform that unifies disparate data silos into a secure, searchable collaboration environment across a single global namespace. Designed for extreme scale and performance, Mediaflux indexes content and metadata to automatically tier targeted data to more cost-effective Spectra Logic disk and tape storage.

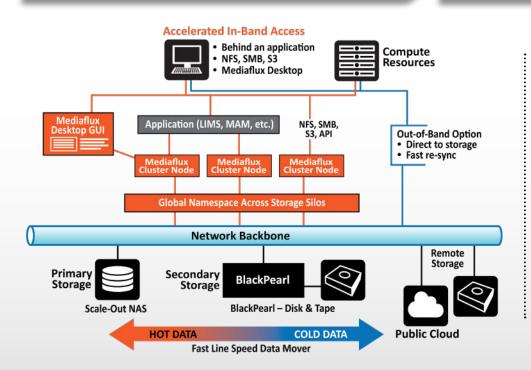
- Extreme scalability with a system that can support tens of billions of files and moves data at any scale
- Extracts rich metadata on ingest and tags data to enable more efficient searches
- Arctitecta Archive (AAR) can compress a large number of files into a small object to send to BlackPearl
- Protects valuable data with sophisticated access controls, traceability and data encryption
- Accelerates scale-out NAS I/O

Spectra BlackPearl Platform

The Spectra BlackPearl Platform solves the problem of costly and complex approaches to digital preservation by combining multiple standard interfaces and storage targets into a simple and affordable solution designed for diverse workflows. BlackPearl unlocks multiple storage targets including online disk, nearline disk, tape and even public cloud.

BlackPearl streamlines the approach to complex workflows by utilizing cloud architecture, object storage and LTFS tape.

- Deploys effortlessly as a full plug-and-play solution
- · Operates seamlessly with extreme scalability
- Delivers affordable storage that meets service-level requirements
- Ensures data security, reliability and integrity



Key Benefits

- Reduce storage costs and accelerate workflows
- Automatically tier and manage data
- Securely access data worldwide within a single global namespace
- Find data easily with metadata extraction and tagging
- Automate workflows
- Fully integrate storage from disk, tape and public cloud

Arcitecta Mediaflux with Spectra Logic BlackPearl Workflow Overview

Arcitecta's Mediaflux paired with Spectra's BlackPearl delivers a rich and diverse span of functionality providing a wide range of applications in multiple industries. Mediaflux can manage any type of data. Flexible workflow means that it can be readily configured to streamline the capture, storage, discovery, transformation, and consumption of data in any industry. BlackPearl delivers multi-tiered storage allowing for organizations to store data on a number of storage targets including disk, tape, and public cloud.

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Technical Details

System Compatibility

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A BlackPearl must be configured and available for network communications with Mediaflux. Spectra Logic BlackPearl v.5.0 or later is required. Mediaflux v.4.8.001 or later, configured with the BlackPearl plugin content store is required.

Mediaflux Hardware Requirements

Deployments for a few users can be supported by a laptop or desktop computer. Workgroup deployments typically require a small server with a few processing cores and at least 4GB of available RAM.

Systems can be deployed in multi-node clusters to scale performance and I/O. In addition, systems can be distributed geographically for global deployments in federated or replicated implementations.

Below is the Mediaflux desktop. The Asset Finder enables simple, powerful search and displays a lot of information about the data. The data itself is called content. All of the information shown here is stored in Mediaflux database (XODB).

	Asset Finder	
Collections	w Search 2 MAN View * Filters * Asset *	Content Icon or Image – i.e. a low-resolution version of image stored in XODB
Folders FAVOURITES: Stain	Identifier: 25652 ▲ Version: 1 ▲ Name: H7KCYCCXY_2_171115_FD00824709 sapiens_R_171114_XIATAN_NCIGDN Type: application/fastq Collection: /genomics/171115_FD00824709/inputF	File system level information (metadata) such as: Name, Location, Creation Date, etc.
	Created: 28-Feb-2019 16:36:03 Created By: system:manager = Content: Status: ONLINE Store: production (selected) Type: application/rastq Size: 2.73 MB Check Sum: 625EB0A9 Content Copies:	Specific information about the content. The data checksum, size. Whether the data is accessible: ONLINE – content is available on nearline storage OFFLINE – content is on deep storage (on BlackPearl Tape) ONLINE+OFFLINE – content is available on both nearline and deep storage
	Store: production ONLINE Store: bp5 ONLINE or OFFLINE Metadata: mf-revision-history user id 3 domain system	MISSING – content is missing
	name manager type create comment import arc.posix.attributes uid 502	metadata is changed or appended, Mediaflux keeps track of it.
	gid 20 ctime 1525906289000 mtime 1525906289000 mode 511 genomics:fastq sequence-count 25000	This section contains the richer descriptive metadata for the content. This metadata is extracted during the ingest process. Mediaflux has a specific custom-built scraper that extracts specific metadata based on the data type. These plug-in content analyzers extract information such as the geospatial coordinates or bounding boxes, image type and resolution, scanner instrument
	Instrument ST-E00118 run-number 376 flowcell-id H7KCYCCXY Iane 2	information, and so much more. This also shows user generated metadata such as: annotations, labels, tags, comments, and workflow-specific actions.

Arcitecta Mediaflux with Spectra Logic BlackPearl for Complete Data Management

Spectra Logic's data storage solutions paired with Arcitecta's data management platform creates the ideal integrated solution for long-term management of any data at any scale. Spectra provides extremely cost-effective solutions that accommodate growing demands on storage, while Mediaflux provides a user-friendly interface and sophisticated data management capabilities. Leveraging the power of metadata, Mediaflux enables policy-based virtualization of existing data silos with the efficiency and protection of Spectra BlackPearl's scalable storage. Learn more about Arcitecta Mediaflux at www.arcitecta.com

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