Object-based Storage System

• Stores file data in the form of objects based on data contents and attributes Uses a flat, non-hierarchical address space

• Object contains user data, related metadata, and user-defined attributes Objects are uniquely identified using object ID Any changes in the object, like user-based edits to the file, results in a new object ID

Object-based storage a preferred option for long term data archiving to meet regulatory or compliance requirements Cloud service providers leverage object-based storage systems to offer Storage as a Service

because of its inherent security, scalability, and automated data management capabilities.

Object-based storage systems support web service access via REST and SOAP.

**Block-level and File-level Virtualization – Overview**

• Network-based virtualization embeds storage virtualization intelligence at the network layer and provides an abstract view of physical storage resources

• Provides ability to Pool heterogeneous storage resources Perform non-disruptive data migration

Manage a pool of storage resources from a single management interface

• Network-based storage virtualization is applied at

-Block-level (SAN)

-File-level (NAS)

-Object-level

**Automated Storage Tiering – Intra Array**

• Automates the storage tiering process within array

• Enables efficient use of Solid-state drives (SSDs) and SATA drive technologies

Moving active data to high performance SSD tier and inactive data to higher capacity lower

performance SATA drives tier

• Performs data movements between tiers at sub-LUN level

• Employs cache tiering to improve application performance further