

# Exercise 7: Backup and Archive

## Scenario:

- A major multinational bank runs business-critical applications in a virtualized data center
  - Has multiple remote/branch offices (ROBO) across different geographic locations
  - Currently uses tape as its primary backup storage media for backing up virtual machines (VMs) and application data
  - Uses an agent-based backup solution for backing up data
  - Has a file-sharing environment in which multiple NAS systems serve all the users
    - The data is backed up from application servers to backup device
  - Approximately 25% of data in the production environment is inactive data (fixed content)

## Exercise 7: Backup and Archive (Cont'd)

### Organization's Challenges:

- Backup operations consume resources on the compute systems that are running multiple VMs
  - Significantly impacting the applications deployed on the VMs
- During NAS backup, the application servers are impacted
  - Data is backed up from these servers to the backup device
- Backup environment has a huge amount of redundant data
  - Increases the infrastructure cost and impacts the backup window

## Exercise 7: Backup and Archive (Cont'd)

### Organization's Challenges:

- Recovering data or VMs also takes more time
- Branch offices also have limited IT resources for managing backup
  - Backing up data from branch offices to a centralized data center was restricted due to the time and cost involved in sending huge volumes of data over the WAN
- Organization incurs a huge investment and operational expense in managing an offsite backup infrastructure at remote site

## Exercise 7: Backup and Archive (Cont'd)

### **Organization's Requirements:**

1. Need faster backup and restore to meet the SLAs
2. Need to eliminate redundant copies of data
3. Need an effective solution to address the backup and recovery challenges of remote and branch offices
4. Need to offload the backup workload from the compute system to avoid performance impact to applications

## Exercise 7: Backup and Archive (Cont'd)

### **Organization's Requirements:**

5. Requires a solution to overcome the backup challenges in NAS environment
6. Requires a strategy to eliminate backing up fixed content from the production environment
7. Requires a solution to reduce the management overhead and the investment cost in managing the offsite backup copy

# Exercise 7: Backup and Archive (Cont'd)

## **Deliverables:**

- Recommend solutions that will meet the organization's requirements