Backup and Restore to VMware Cloud on AWS
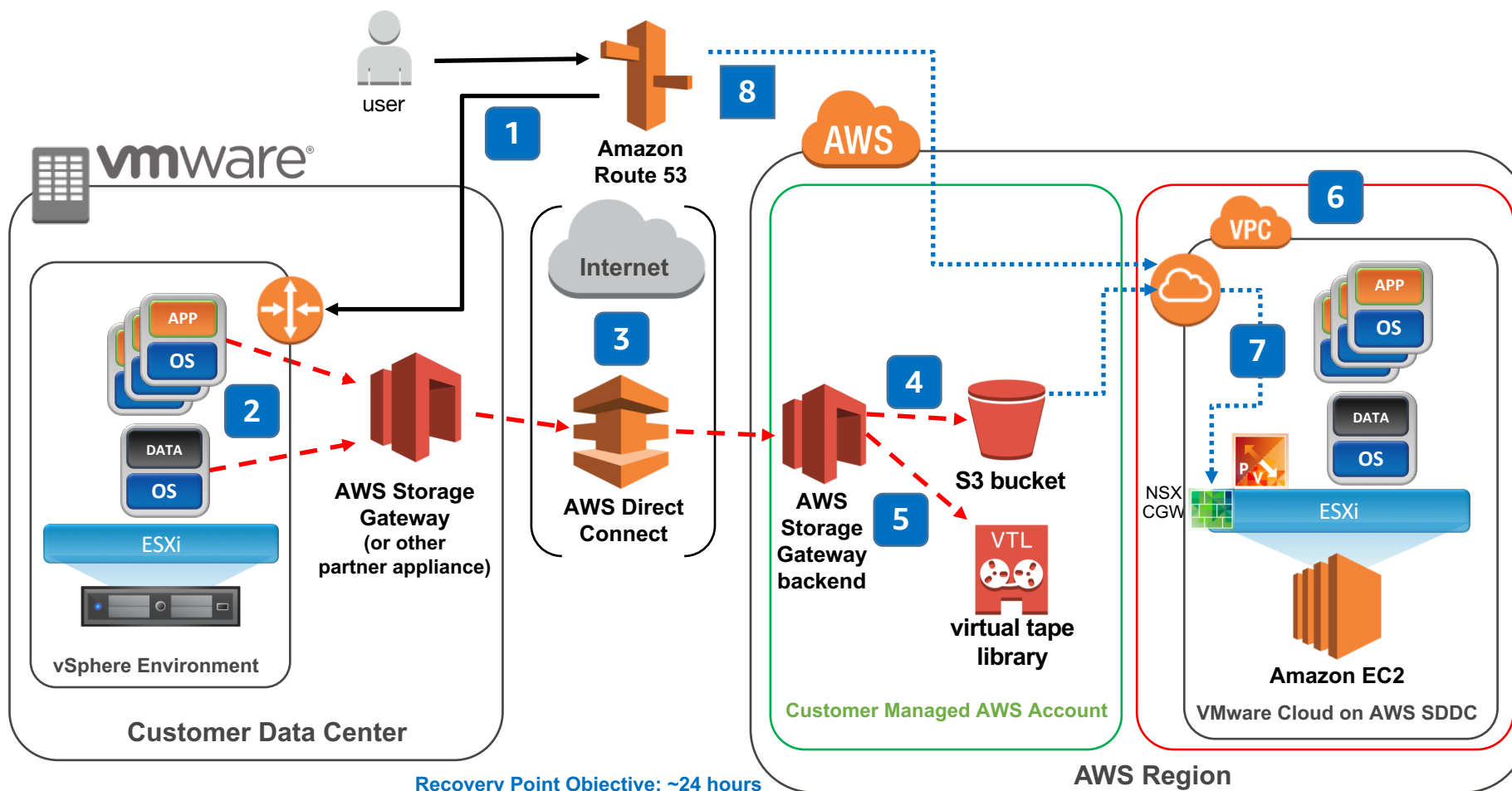## Native Services Integration: Storage Gateway, S3, Direct Connect, and Route53
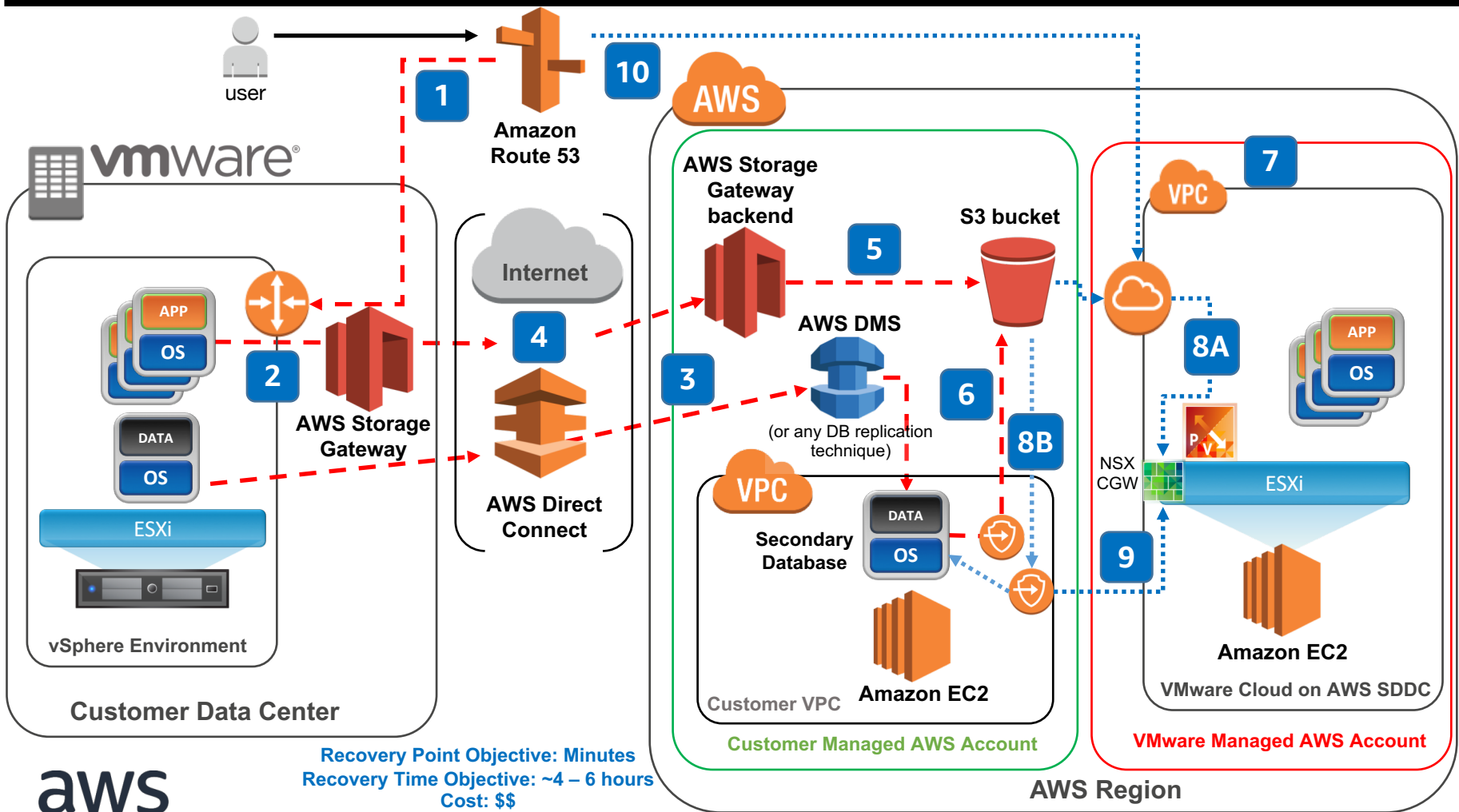

#	Description
1	Amazon Route 53 routes DNS requests to the primary domain controller on-premises.
2	VM and application backups are stored in Amazon S3 using an AWS Storage Gateway or other storage appliance using a partner-integrated solution or application-level backup software.
3	The on-premises Storage Gateway securely transfers the backup data to the Storage Gateway backend using Direct Connect or through an SSL Internet connection.
4	File gateway uses an AWS Identity and Access Management role to access the customer backup data and securely store it in Amazon S3.
5	Use the virtual tape library configuration in the Storage Gateway for long term data archiving to AWS Glacier or other archive service.
6	The recovery process starts by launching and configuring a VMware SDDC cluster in AWS with the web portal or through automation scripts using AWS CloudFormation, VMware vRA, or vCLI.
7	After VMware Cloud on AWS SDDC is ready, deploy the software to restore the backed up application and VM data from Amazon S3.
8	The final recovery step is updating the Route 53 DNS records to route new requests to secondary domain controller in AWS.

Recovery Point Objective: ~24 hours
Recovery Time Objective: ~4 - 6 hours
Cost: $

Backup flow
Recovery flow

AWS Reference Architecture

Pilot Light on VMware Cloud on AWS
Native Services Integration: Storage Gateway, EC2, S3, DMS, Direct Connect, and Route53

Recovery Point Objective: Minutes
Recovery Time Objective: ~4 – 6 hours
Cost: $$

Backup flow
Recovery flow

AWS Reference Architecture

#	Description
1	Amazon Route 53 routes DNS requests to the primary domain controller at the customer data center.
2	VM and application backups are stored in Amazon S3 using an AWS Storage Gateway or another storage appliance or software backup solution.
3	AWS Database Migration Service (DMS) replicates data from primary database to secondary database in AWS.
4	Storage Gateway and DMS connect to the backend AWS services endpoints over Direct Connect or the Internet.
5	File gateway uses an AWS Identity and Access Management role to access the customer backup data and securely store it in Amazon S3.
6	Single point-in-time backups can be created on the secondary database using EBS snapshots stored in S3.
7	The recovery process starts by launching and configuring a VMware SDDC cluster in AWS with the web portal or through automation scripts using AWS CloudFormation, VMware vRA, or vCLI.
8	After VMware Cloud on AWS SDDC is ready, retrieve backed up data using (**A**) public S3 endpoint or (**B**) VMware endpoint using S3 VPC endpoint.
9	Recovered applications in VMware SDDC directly connect to the secondary database through VMware endpoints.
10	The final recovery step is updating the DNS records to route new requests to the secondary domain controller in AWS.