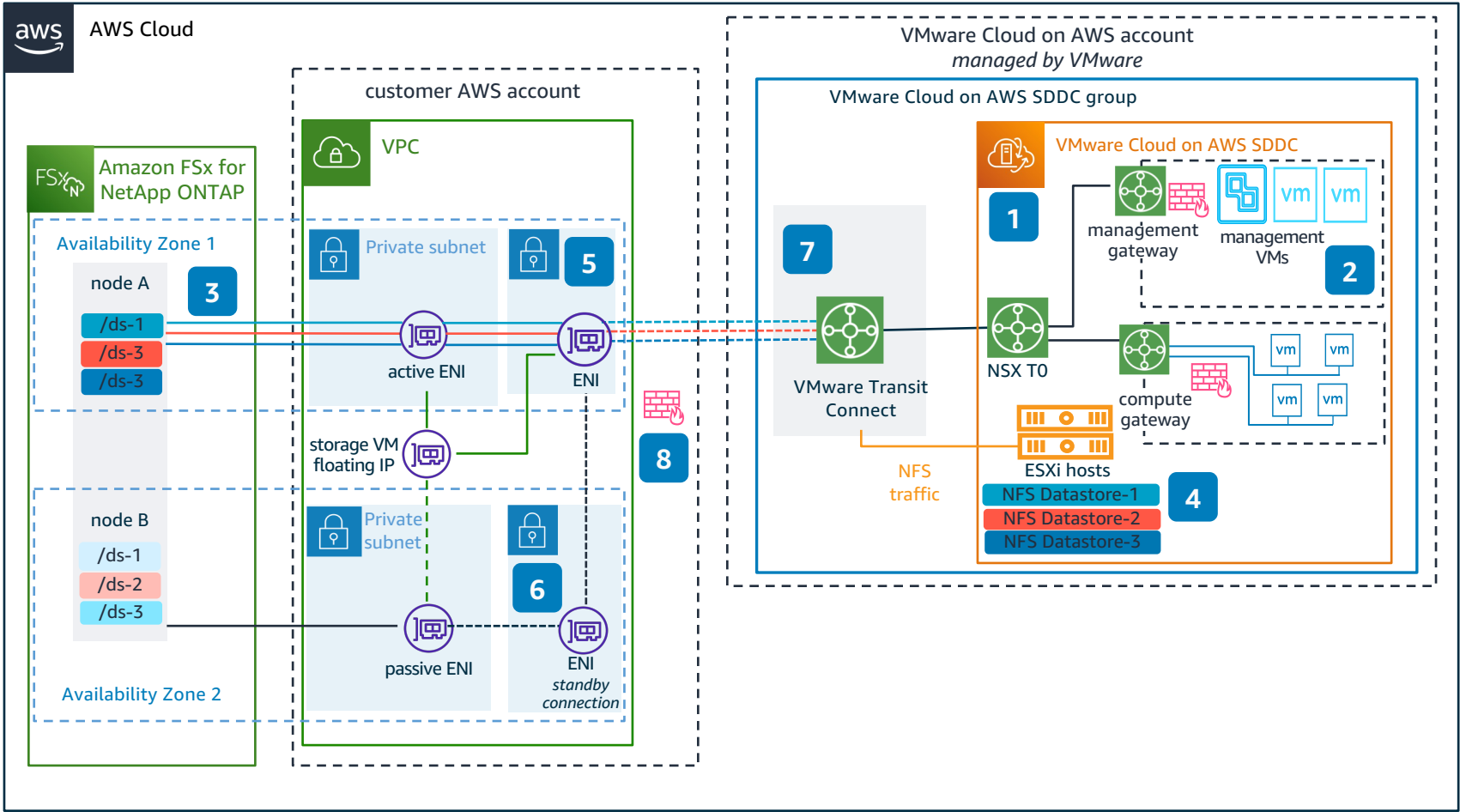


# Amazon FSx for NetApp ONTAP Datastores with VMware Cloud on AWS

This architecture details how to connect Amazon FSx for NetApp ONTAP file systems that are hosted on AWS to VMware Cloud on AWS as vSphere datastores on a single Software-Defined Datacenter (SDDC).

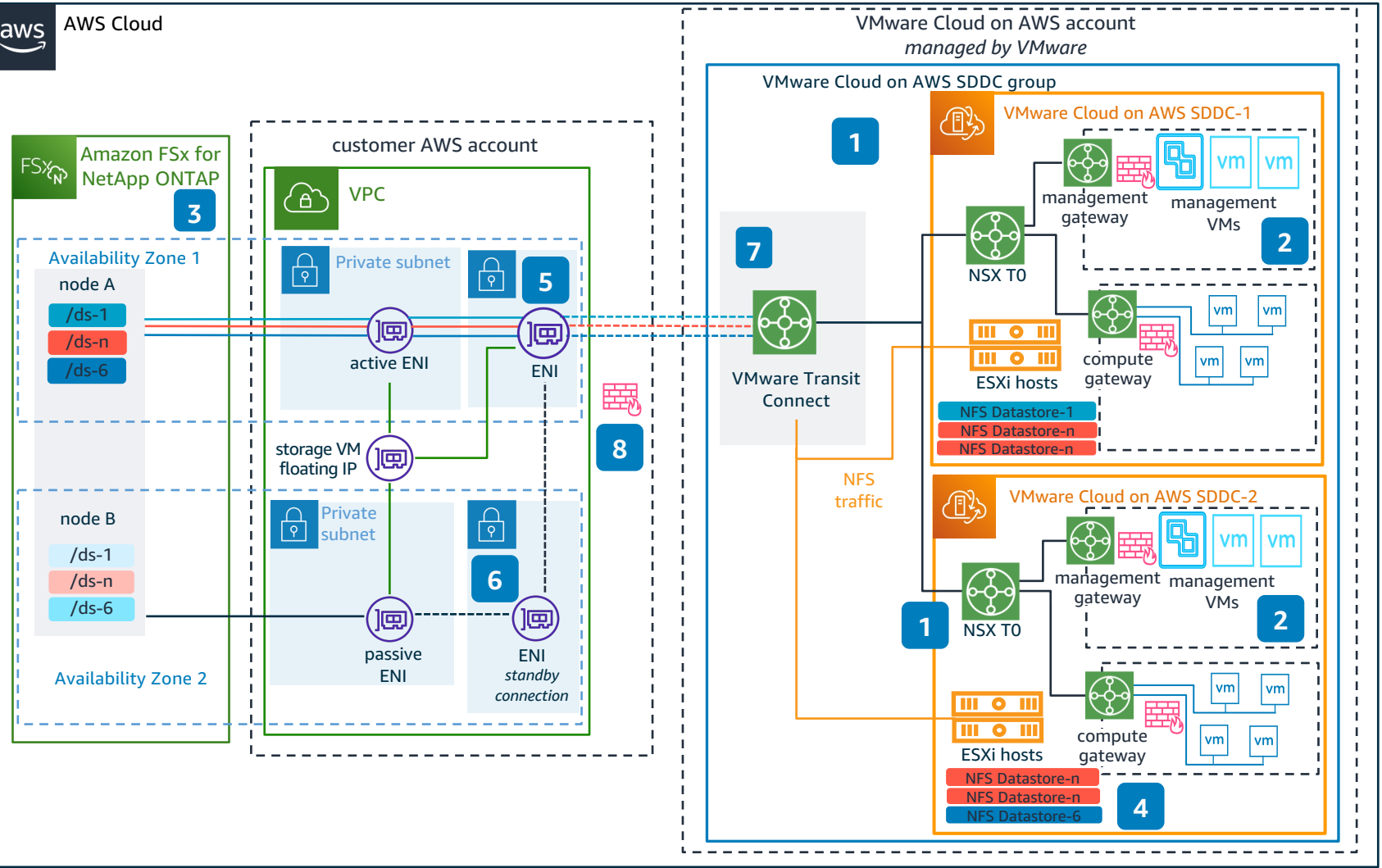


- 1 VMware Cloud on AWS Software-Defined Datacenter (SDDC) is deployed in the VMware-managed account in an SDDC group in a single Availability Zone (AZ) configuration. One or more SDDCs can be added in an SDDC group for network file system (NFS) supplemental storage access.
- 2 SDDC management components, including vCenter Server, NSX Manager and the HCX management appliances, run on a datastore powered by VMware vSAN, which aggregates the local storage from AWS bare-metal hosts.
- 3 A Multi-AZ file system powered by **Amazon FSx for NetApp ONTAP** (FSx for ONTAP) is deployed across two AWS Availability Zones. The SDDC and primary FSx node must be in the same AZ. VMware Transit Connect establishes a connection with the external virtual private cloud (VPC) that hosts the file system in the customer account.
- 4 NFS storage traffic flows from the datastore mounted on the ESXi host to VMware Transit Connect. From here, Transit Connect routes the storage traffic to the AWS Transit Connect attachment in the customer-managed VPC, where it is finally routed to the active **FSx for ONTAP** elastic network interface (ENI) to the **FSx for ONTAP** file system.
- 5 The **AWS Transit Gateway** ENI connects the customer VPC to VMware Transit Connect. This is different from the cross account ENI and can be deployed in a dedicated 28-bit subnet or within the **FSx for ONTAP** subnet.
- 6 When a failure impacts the **FSx for ONTAP** file system in the primary Availability Zone, **FSx for ONTAP** automatically fails over to the file system in the secondary Availability Zone. The standby connection with passive ENI becomes the active ENI to enable communication between the SDDC and the **FSx for ONTAP** file system.
- 7 VMware Transit Connect is a VMware-managed regional router powered by **AWS Transit Gateway**. It is automatically deployed when an SDDC group is created. The SDDC group provides connectivity between the **FSx for ONTAP** NFS volumes to ESXi hosts running in the SDDC.
- 8 Configure the security group in your AWS VPC to allow incoming NFS traffic from the ESXi host management subnet. SDDC NSX firewall configuration is not required.



# Amazon FSx for NetApp ONTAP Datastores with VMware Cloud on AWS

This architecture details how to connect Amazon FSx for NetApp ONTAP file systems hosted on AWS to VMware Cloud on AWS as vSphere datastores on multiple SDDCs.



- 1 **VMware Cloud on AWS SDDC** is deployed in the VMware-managed account in an SDDC group in a single Availability Zone configuration. One or more SDDCs can be added in an SDDC group for NFS supplemental storage access.
- 2 SDDC management components, including vCenter Server, NSX Manager and the HCX appliances, run on a datastore powered by VMware vSAN, which aggregates the local storage from AWS bare-metal hosts.
- 3 A Multi-AZ file system powered by **FSx for ONTAP** is deployed across two AWS Availability Zones. The SDDC and primary FSx node must be in the same AZ. VMware Transit Connect establishes a connection with the external virtual private cloud (VPC) that hosts the file system in the customer account.
- 4 NFS storage traffic flows from the datastore mounted on the ESXi to VMware Transit Connect. From here, Transit Connect routes the storage traffic to the AWS Transit Connect attachment in the customer-managed VPC, where it is finally routed to the active **FSx for ONTAP** ENI to the **FSx for ONTAP** file system.
- 5 The **AWS Transit Gateway** ENI connects the customer VPC to VMware Transit Connect. This is different from the cross account ENI and can be deployed in a dedicated 28-bit subnet or within the **FSx for ONTAP** subnet.
- 6 When a failure impacts the **FSx for ONTAP** file system in the primary Availability Zone, **FSx for ONTAP** automatically fails over to the file system in the secondary AZ. The standby connection with passive ENI becomes the active ENI to enable communication between the SDDC and the **FSx for ONTAP** file system.
- 7 VMware Transit Connect is a VMware-managed regional router powered by **AWS Transit Gateway**. It is automatically deployed when an SDDC group is created. The SDDC group provides connectivity between the **FSx for ONTAP** NFS volumes to ESXi hosts running in the SDDC.
- 8 Configure the security group in your AWS VPC to allow incoming NFS traffic from the ESXi host management subnet. SDDC NSX firewall configuration is not required.