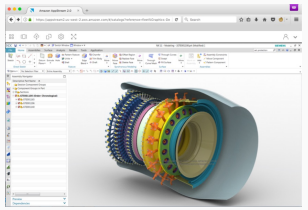
Siemens NX on Amazon AppStream 2.0

An architectural blueprint for providing secure access to Siemens NX hosted in the AWS Cloud using an Amazon EBS volume for shared folders



4

Users

Internet gateway

AWS Cloud

VPC

Availability Zone 1

Public subnet

3

Windows RDP

NAT gateway

Private subnet

AppStream 2.0

Fleet

G4

Image Builders

G4

G4

1

Amazon S3
(Users' home folders)

2

Amazon EC2

Amazon EBS
(Users' commonly shared folder)

Availability Zone 2

Private subnet

Fleet

G4

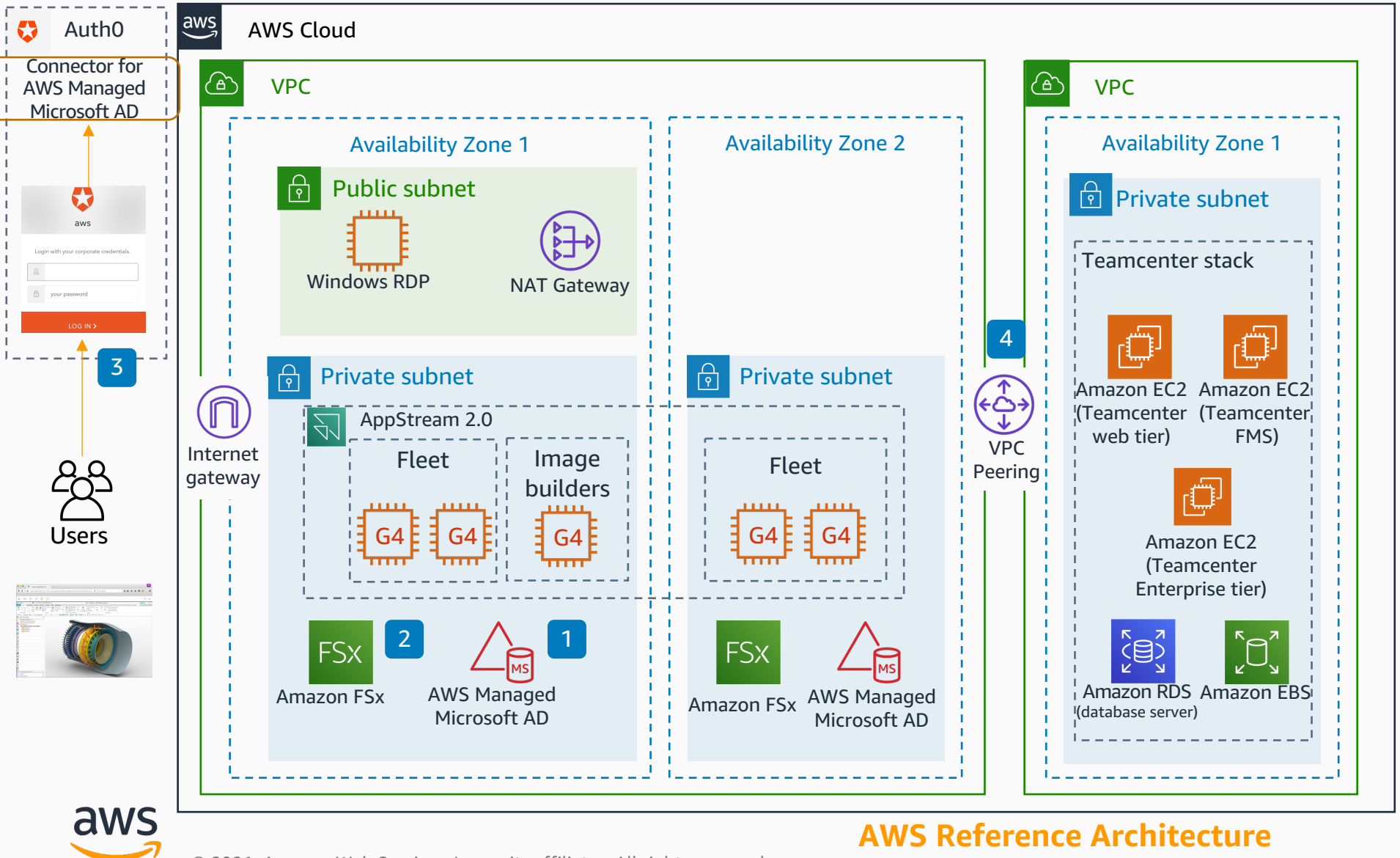
G4

AWS Reference Architecture

1. In the process of setting up **Amazon AppStream 2.0** image builder, the user can select the **Amazon Simple Storage Service (Amazon S3)** folder as the user home folder to persist application settings, users' data, and files.
2. An **Amazon Elastic Compute Cloud (Amazon EC2)** instance is launched to host the **Amazon Elastic Block Store (Amazon EBS)** volume. The **Amazon EC2** instance is used as a server message block (SMB) share to serve its **Amazon Elastic Block Store (Amazon EBS)** volume as a shared folder for all users of **AppStream 2.0**.
3. The Windows Remote Desktop Protocol (RDP) instance acts as a jump server to connect to the **Amazon EC2** instance on a private subnet.
4. Users connect to their streaming instances over a web browser or the **AppStream 2.0** Windows client.

Siemens NX on Amazon AppStream 2.0 connected to Siemens Teamcenter

Use Amazon FSx as a storage option

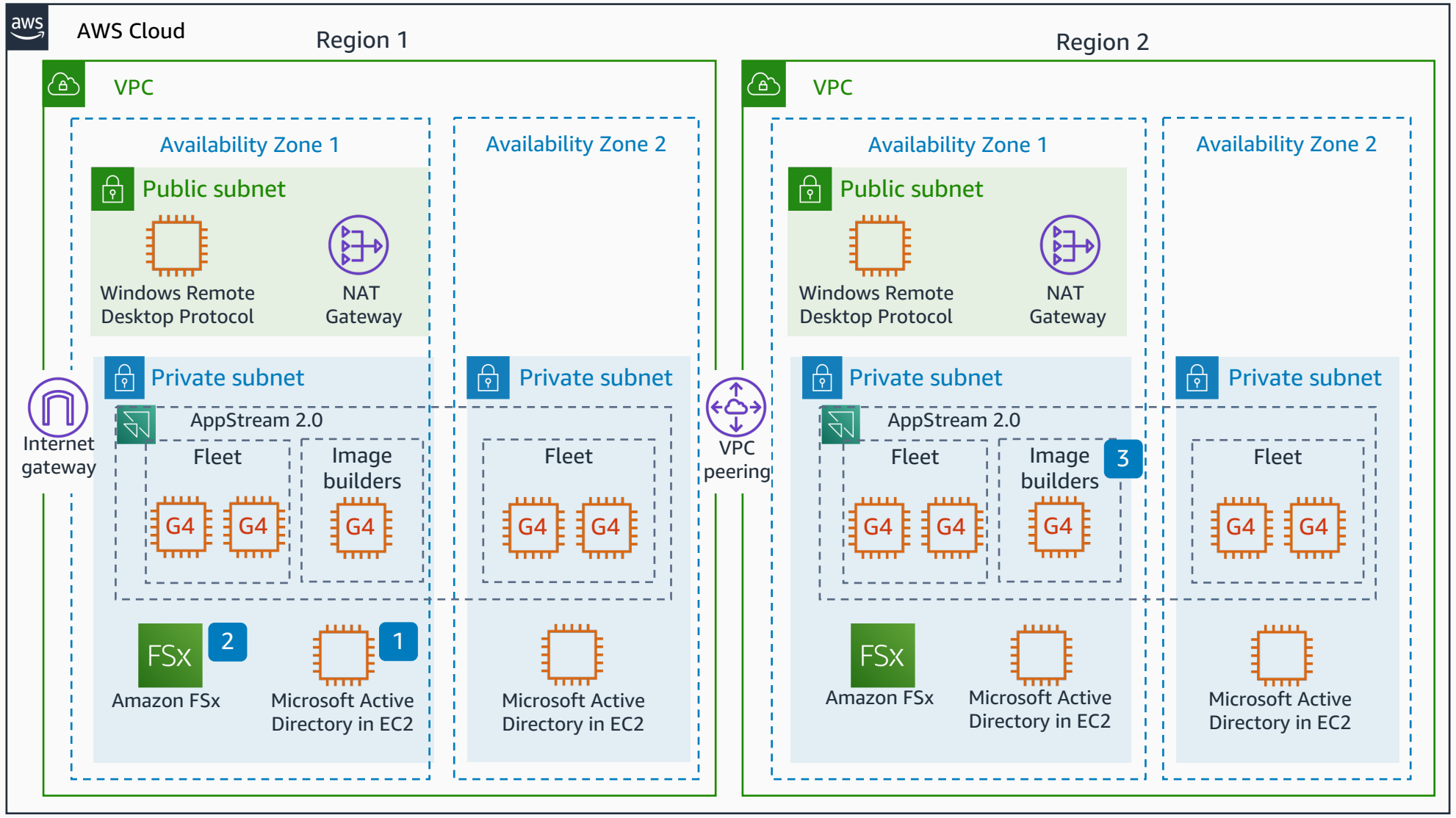


AWS Reference Architecture

1. **AWS Directory Service for Microsoft Active Directory** is used to manage user, computers, and storage as **Amazon FSx. Amazon AppStream 2.0** can then join the domain as configured in Active Directory. Authorized users in Active Directory are then able to access **AppStream 2.0** sessions.
2. **Amazon FSx** is replicated across multiple Availability Zones, and is accessible in an **AppStream 2.0** session. User folders and shared folders in **Amazon FSx** can be configured for users by using Active Directory Group Policy access.
3. Single sign-in is established through federation of Active Directory SAML2.0 with Auth0.
4. Siemens NX is streamed through **AppStream 2.0** and communicates though the VPC peer to Siemens Teamcenter running on another VPC.

Siemens NX on Amazon AppStream 2.0 Multi-Region Deployment

Minimize latency by cross replication of storage across Regions



1. Two pairs of Microsoft Active Directory instances on **Amazon Elastic Compute Cloud (Amazon EC2)** are spined in each Region. Each Active Directory instance runs in different Availability Zones. Active Directory instances are fully replicated across Availability Zones and Regions though Active Directory sites.

2. Two **Amazon FSx** file system single Availability Zones are created in each Region. Full bidirectional **Amazon FSx** data replication is established through Microsoft Distributed File System Replication.

3. **Amazon AppStream 2.0** image builders are shared across multiple Regions. Administrator tunes each image to access its closed Microsoft Active Directory and **Amazon FSx** instances.

AWS Reference Architecture