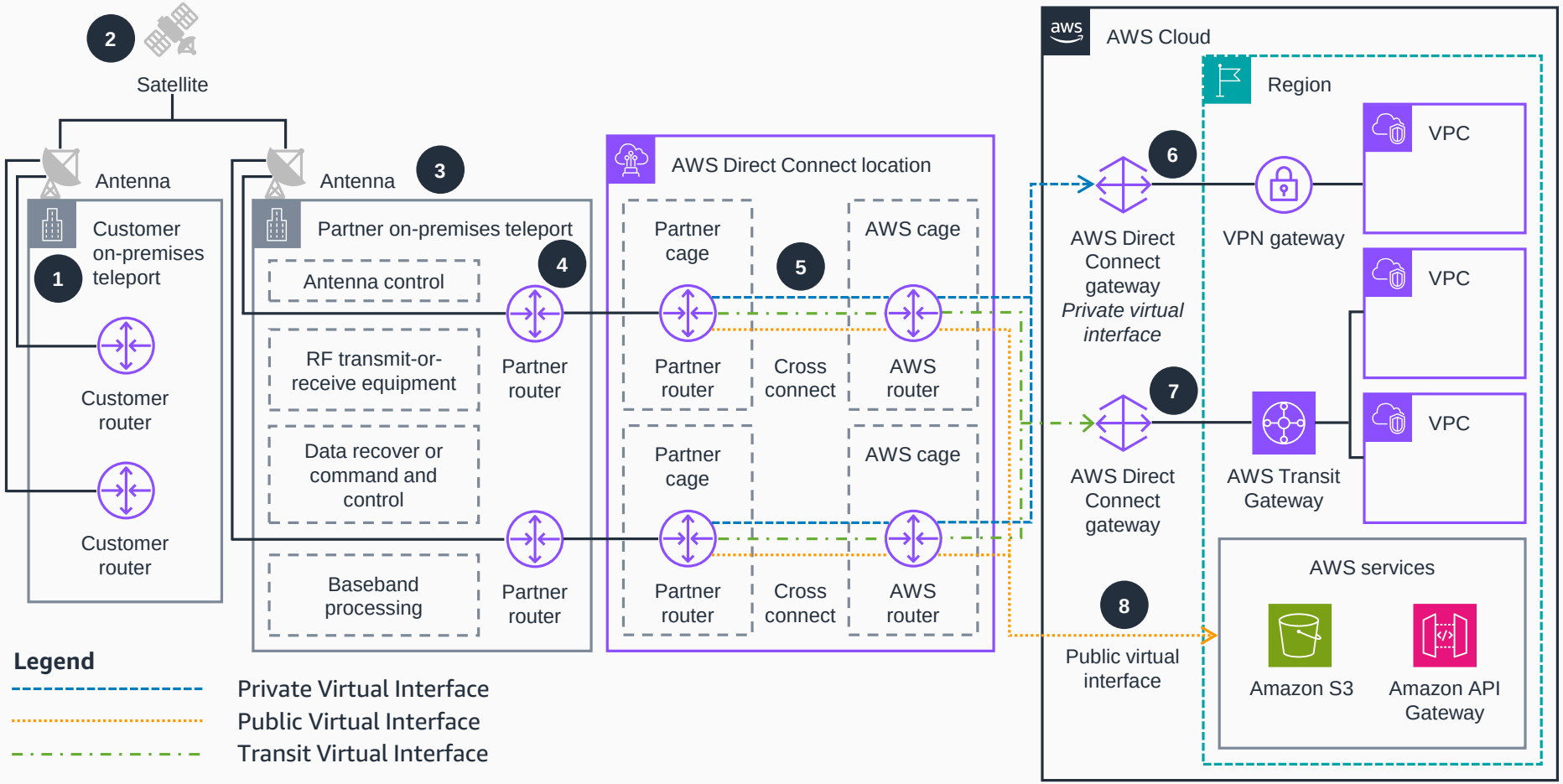
Guidance for Using a Satellite Infrastructure for Resilient AWS Direct Connect Networking: Development and Test

These architecture diagrams demonstrate how satellite operators can achieve resiliency with various configurations of connections and termination points. The steps in this diagram show how to achieve development and test resiliency for noncritical workloads by using separate connections that terminate on separate devices in one location.



1. Use satellite communications to communicate from your on-premises environment to your AWS environment. In this configuration, use two routers and one satellite antenna.
2. The single-satellite infrastructure is provided and managed by an **AWS Direct Connect Delivery Partner**.
3. Your **Direct Connect Delivery Partner** provides and manages teleport connectivity with one physical connection on two different devices at a single location. Radio frequency (RF) transmit-or-receive equipment, antenna control, command or control, and baseband processing equipment handle any necessary demodulation of your data.
4. Your **Direct Connect Delivery Partner** sets up two physical connections on different devices at a single **Direct Connect** site of choice that will be used to offer dedicated or hosted connectivity.
5. Order dedicated connectivity or hosted connectivity from your **Direct Connect Delivery Partner**. Cross-connect connections are implemented. Optionally, you can use MAC Security.
6. **Optional:** You can provision private virtual interfaces (VIFs) to access your private AWS resources running in an **Amazon Virtual Private Cloud (Amazon VPC)** network through a **Direct Connect** gateway and a VPN Gateway.
7. **Optional:** You can provision transit VIFs to access your private AWS resources through a **Direct Connect** gateway and **AWS Transit Gateway**.
8. **Optional:** You can provision public VIFs to access your public AWS resources, such as **Amazon Simple Storage Service (Amazon S3)** and **Amazon API Gateway**.*

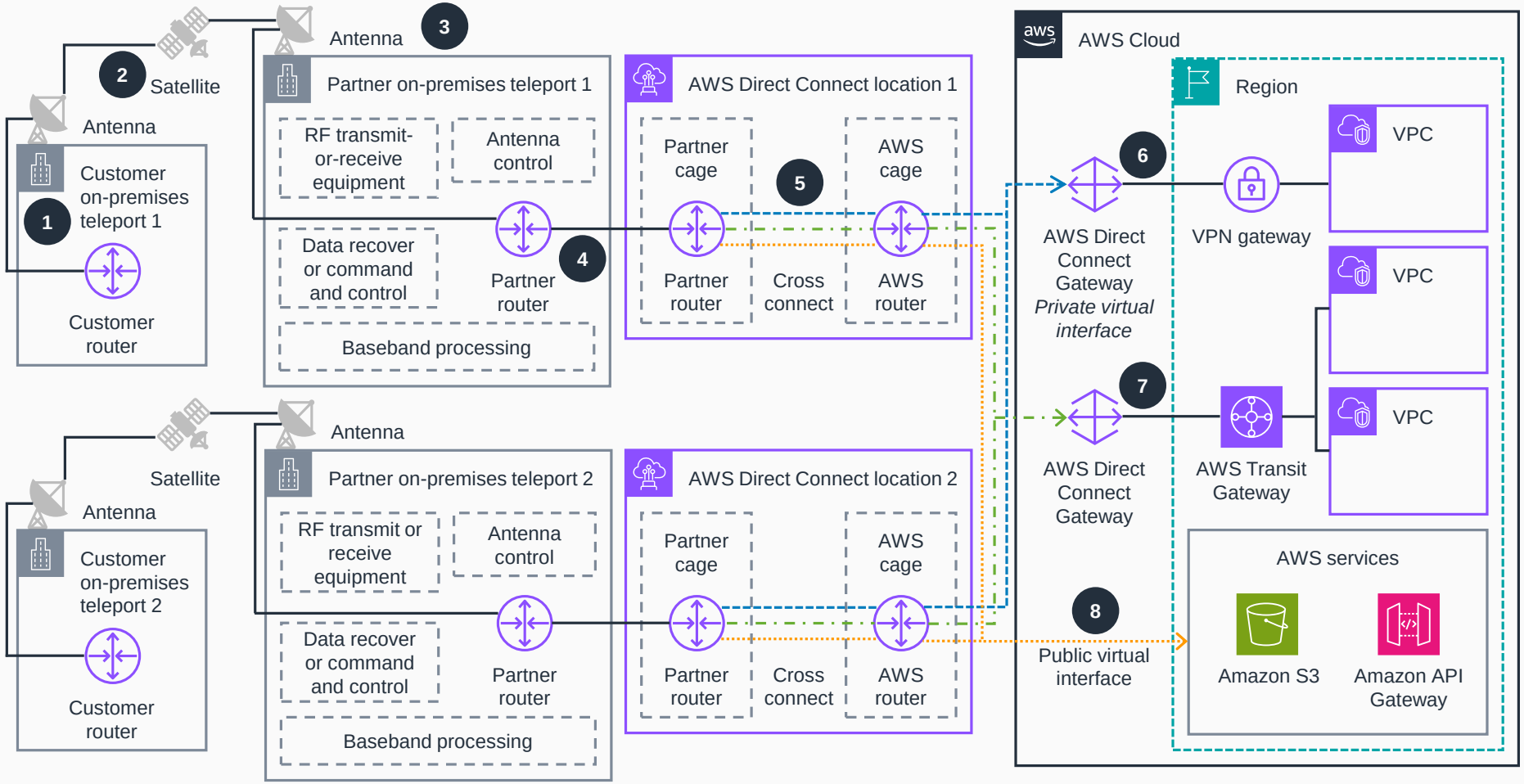
*Connectivity can be Regional or global.

Reviewed for technical accuracy December 8, 2023

AWS Reference Architecture

Guidance for Using a Satellite Infrastructure for Resilient AWS Direct Connect Networking: High Resiliency

The steps in this diagram show how to achieve high resiliency by having one connection terminating at multiple locations.



1. Use satellite communications to communicate from your on-premises environment to your AWS environment. In this configuration, use one router with one satellite antenna per location, and use multiple locations to maintain redundancy in the event of device or location failure.
2. Redundant satellite infrastructure is provided and managed by a **Direct Connect Delivery Partner**.
3. Your **Direct Connect Delivery Partner** provides and manages teleport connectivity with one physical connection on two different devices at multiple locations. RF transmit-or-receive equipment, antenna control, command or control, and baseband processing equipment handle any necessary demodulation of your data.
4. Your **Direct Connect Delivery Partner** sets up one physical connection on different devices at multiple **Direct Connect** sites of choice that will be used to offer dedicated or hosted connectivity. One connection at multiple locations is used.
5. Order dedicated connectivity or hosted connectivity from your **Direct Connect Delivery Partner**. Cross-connect connections are implemented. Optionally, you can use MAC Security.
6. **Optional:** You can provision private VIFs to access your private AWS resources running in an **Amazon VPC** network through a **Direct Connect** gateway and a VPN Gateway.
7. **Optional:** You can provision transit VIFs to access your private AWS resources through a **Direct Connect** gateway and **AWS Transit Gateway**.
8. **Optional:** You can provision public VIFs to access your public AWS resources, such as **Amazon S3** and **API Gateway**.*

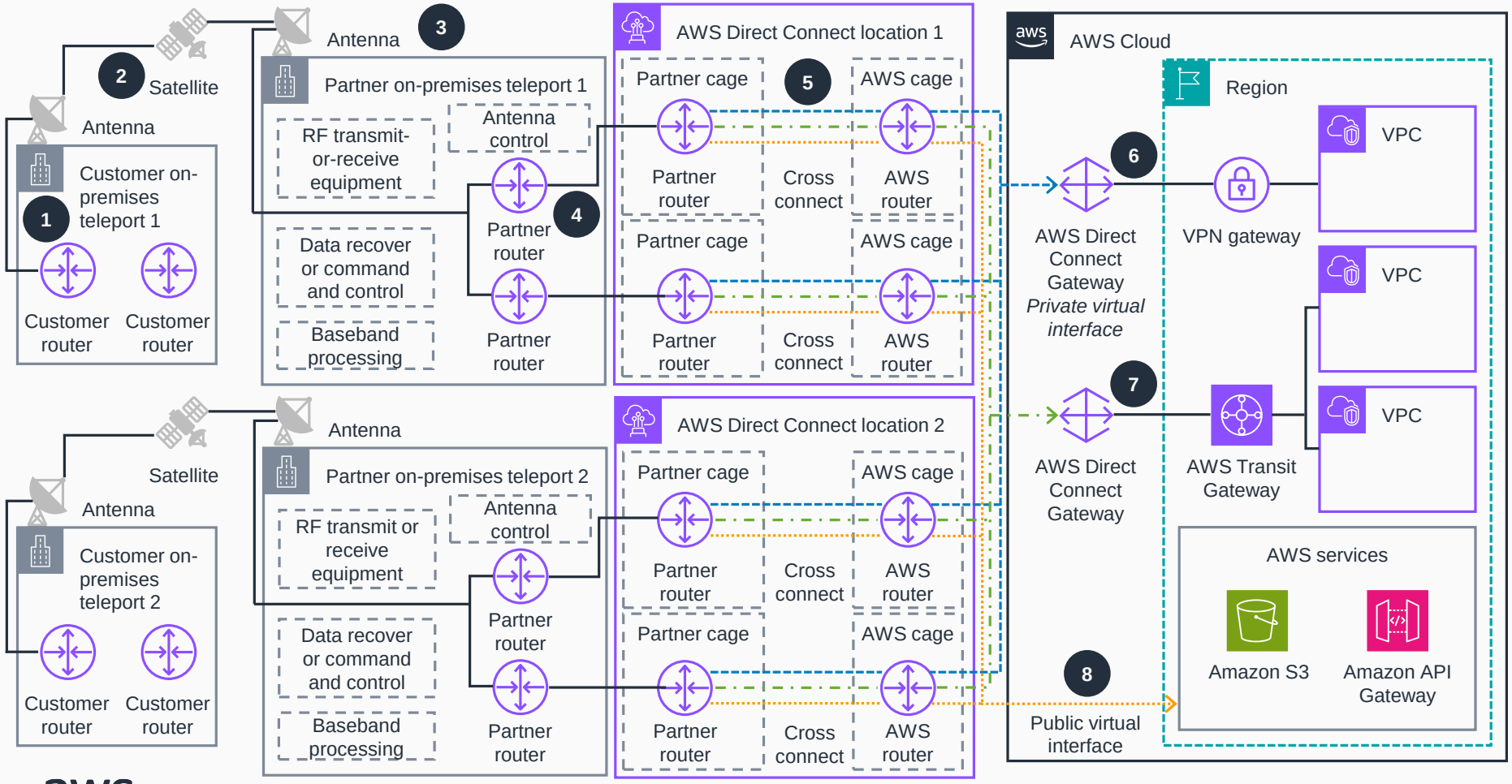
*Connectivity can be Regional or global.

Reviewed for technical accuracy December 8, 2023

AWS Reference Architecture

Guidance for Using a Satellite Infrastructure for Resilient AWS Direct Connect Networking: Maximum Resiliency

The steps in this diagram show how to achieve maximum resiliency by separating connections terminating on separate devices in more than one location.



1. Use satellite communications to communicate from your on-premises environment to your AWS environment. In this configuration, use two routers with one satellite antenna per location, and use multiple locations to maintain redundancy in the event of device or location failure.
2. Redundant satellite infrastructure is provided and managed by a **Direct Connect Delivery Partner**.
3. Your **Direct Connect Delivery Partner** provides and manages teleport connectivity with two physical connections on two different devices at multiple locations. RF transmit-or-receive equipment, antenna control, command or control, and baseband processing equipment handle any necessary demodulation of your data.
4. Your **Direct Connect Delivery Partner** sets up two physical connections on different devices at multiple **Direct Connect** sites of choice that will be used to offer dedicated or hosted connectivity. Separate connections terminating on separate devices in more than one location are used.
5. Order dedicated connectivity or hosted connectivity from your **Direct Connect Delivery Partner**. Cross-connect connections are implemented. Optionally, you can use MAC Security.
6. **Optional:** You can provision private VIFs to access your private AWS resources running in an **Amazon VPC** network through a **Direct Connect** gateway and a VPN Gateway.
7. **Optional:** You can provision transit VIFs to access your private AWS resources through a **Direct Connect** gateway and **AWS Transit Gateway**.
8. **Optional:** You can provision public VIFs to access your public AWS resources, such as **Amazon S3** and **API Gateway**.*

*Connectivity can be Regional or global.

Reviewed for technical accuracy December 8, 2023

AWS Reference Architecture