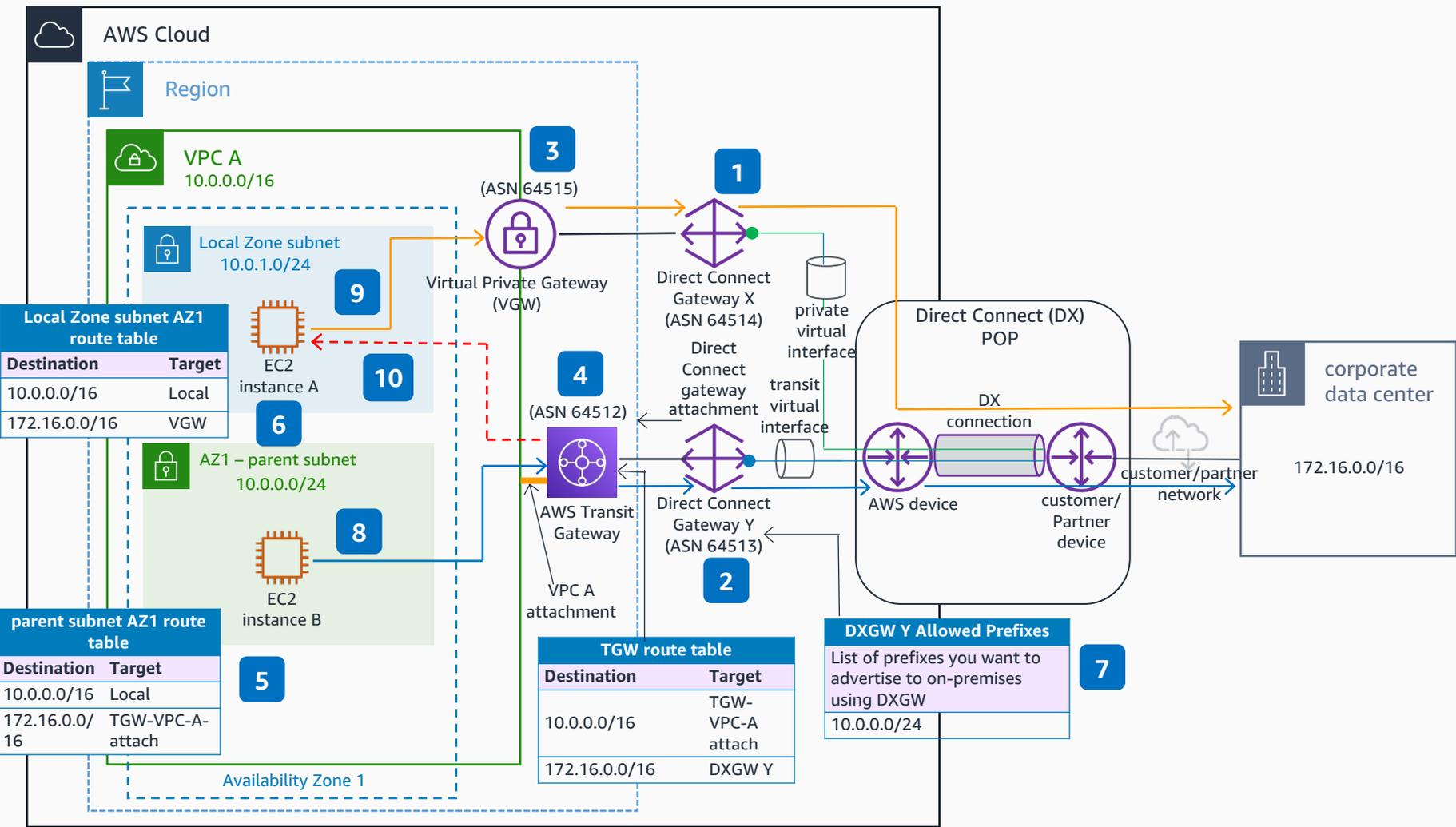


AWS Direct Connect Traffic Flow with AWS Local Zone

This reference architecture shows traffic flows from an on-premises data center to an AWS Local Zone using Direct Connect for latency applications.



- 1 Create **AWS Direct Connect** gateway (DXGW "X" and assign a unique autonomous system number (ASN). Attach the Private Virtual Interface (VIF) to DXGW X.
- 2 Create DXGW "Y" and assign a unique ASN. Attach the Transit VIF to DXGW Y.
- 3 Create a Virtual Private Gateway (VGW) and attach to DXGW X. Assign a unique ASN to VGW. Attach the VGW to VPC A.
- 4 Create a AWS Transit Gateway (TGW) and attach to DXGW Y using DXGW attachment, and to VPC A using VPC A attachment, respectively.
- 5 Create a parent subnet (10.0.0.0/24) with **Amazon Elastic Compute Cloud** (Amazon EC2) instance B in an Availability Zone (AZ1) and associate it with a route table.
- 6 Create another subnet (10.0.1.0/24) in the AWS Local Zone (LZ) where the latency sensitive app will be running (EC2 instance A). Associate this to a separate LZ route table.
- 7 Add the the AZ1 parent subnet (10.0.0.0/24) in in the DXGW Y "[Allowed Prefixes](#)" list.
- 8 The AZ1 parent subnet (10.0.0.0/24) is advertised using TGW and DXGW Y back to on-premises. Traffic destined to the parent subnet (routes that fall inside /24) follow the TGW path.
- 9 Any traffic destined to the Local Zone subnet (10.0.1.0/24) follow a shorter VGW path, without hairpinning through the Local Zone's parent Region (routes that fall outside /24).
- 10 We don't recommend any resource accessing the local zone subnet from on-premises through **Transit Gateway**, as traffic using this path would hairpin through the parent Region.