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Networking Infrastructure

Optimize Branch Office Connectivity to Applications Hosted on AWS

The Branch Office Dilemma

Delivering predictable, high-performing application access to your Branch Offices is not an easy task. Remote locations typically have less bandwidth, delivered through WAN connectivity such as MPLS and private link connections. Add backhaul congestion and latency generated by traditional hub and spoke networks that route all traffic through the corporate datacenter, and the result is unacceptable performance experienced by your end users.

The AWS Solution

Many organizations adopt a hybrid network architecture with AWS, in order to capitalize on scale, flexibility and performance benefits and in turn, optimize connectivity when and where it is needed. To achieve this, you can migrate applications to the AWS Cloud and confidently scale your network on AWS global infrastructure. Doing so extends your network to AWS Regions and Availability Zones (AZs), where you can design for fault tolerance and low latency.

Connect Your Network to AWS

Amazon Virtual Private Cloud (Amazon VPC) provides multiple network connectivity options you can leverage depending on your network designs and requirements. You have options to provision an AWS managed VPN to move workloads securely over the internet, to deploy private circuit connectivity with AWS Direct Connect, or the option to enable third-party networking software on your Amazon VPC for VPN connectivity. You may also choose a client-to-site VPN that allows users to directly access AWS from their desktop or mobile devices.

Amazon VPC

Amazon VPC lets you provision a private, isolated section of the AWS Cloud where you can launch AWS resources in a virtual private network and easily configure for the compliance, data residency, and identity and access management requirements of your organization.

AWS Direct Connect

AWS Direct Connect allows for private circuit connectivity directly to AWS VPCs. AWS Direct Connect can utilize existing branch WAN for AWS connectivity reducing latency and increasing privacy. See figure 1.

VPN

You can choose how VPN connectivity and routing will be delivered to your remote networks and Amazon VPC. Select an AWS managed VPN connection or deploy a user managed software VPN solution from AWS Marketplace running third-party networking software in an Amazon Machine Instance (AMI).
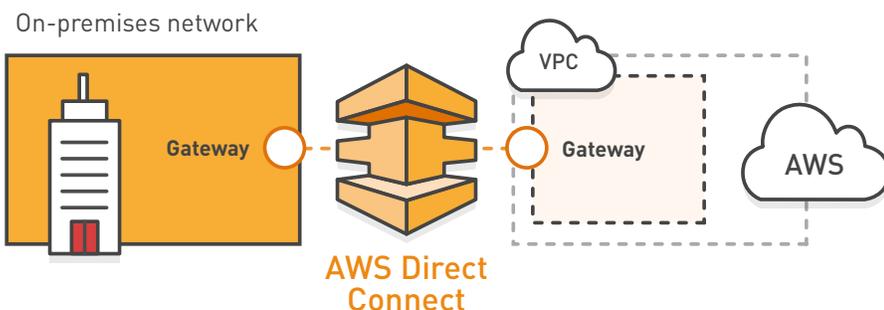

Figure 1: AWS Direct Connect connectivity.

Implement Your Branch Office Connectivity with AWS

Combine connectivity methods to match the needs of your business.

① Amazon VPC Connectivity

A variety of connectivity options exist for your Amazon VPC. You can connect your VPC to the Internet, to your datacenter, or other VPC's, based on the AWS resources that you want to expose publicly and those that you want to keep private.

- Easily configure public and private subnets to manage access to IT resources
- Peer VPCs together to share resources across multiple virtual networks
- Connect to Amazon S3 without using an internet gateway or Network Address Translation
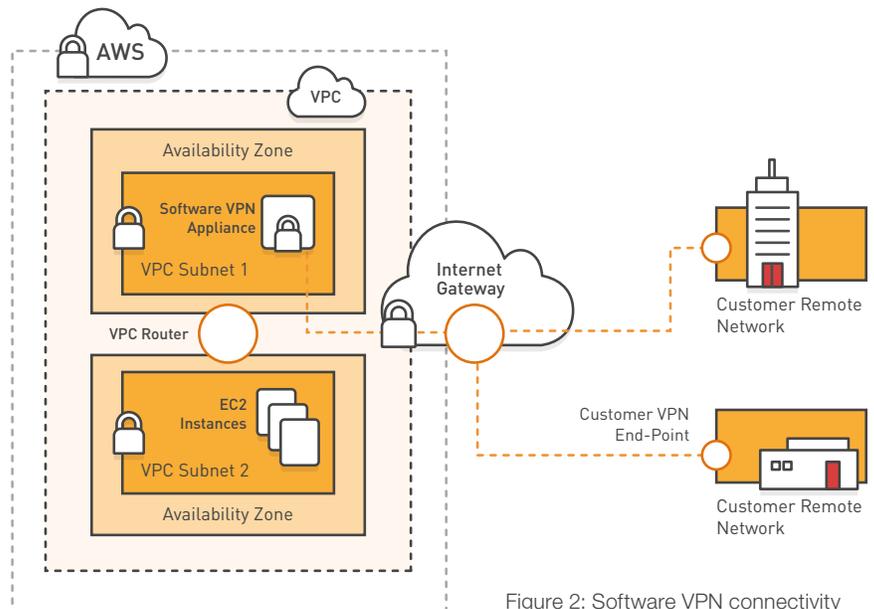

Figure 2: Software VPN connectivity

② Configure VPN Connectivity

Configure VPN connectivity and traffic routing between your remote network and Amazon VPC based on your requirements for protocol support, policy management, and monitoring.

AWS Managed VPN: Create a site-to-site, IPsec VPN connection over the internet. Consider this approach when you want the ease of an AWS managed VPN endpoint that includes automated multi-AZ redundancy and failover built into the AWS side of the VPN connection.

Software VPN: Create a VPN connection to your remote network by using an Amazon EC2 instance in your VPC that's running third-party networking software. You can easily extend your familiar on-premises VPN, router and gateway software with pre-configured and customizable AMIs from the AWS Marketplace. See figure 2. Consider this approach when you want to:

- Extend visibility and policy consistency to simplify AWS application on-boarding
- Manage both ends of the VPN connection, for example, when required for compliance purposes

Migrate applications to AWS and rapidly scale your network with the AWS Cloud to match your business' needs on-demand, without changing how your business works.

Get Started with WAN Software in AWS Marketplace

 Find and deploy the solution you need in minutes

 Save money with pay-as-you-go pricing

 Scale globally across all AWS Regions