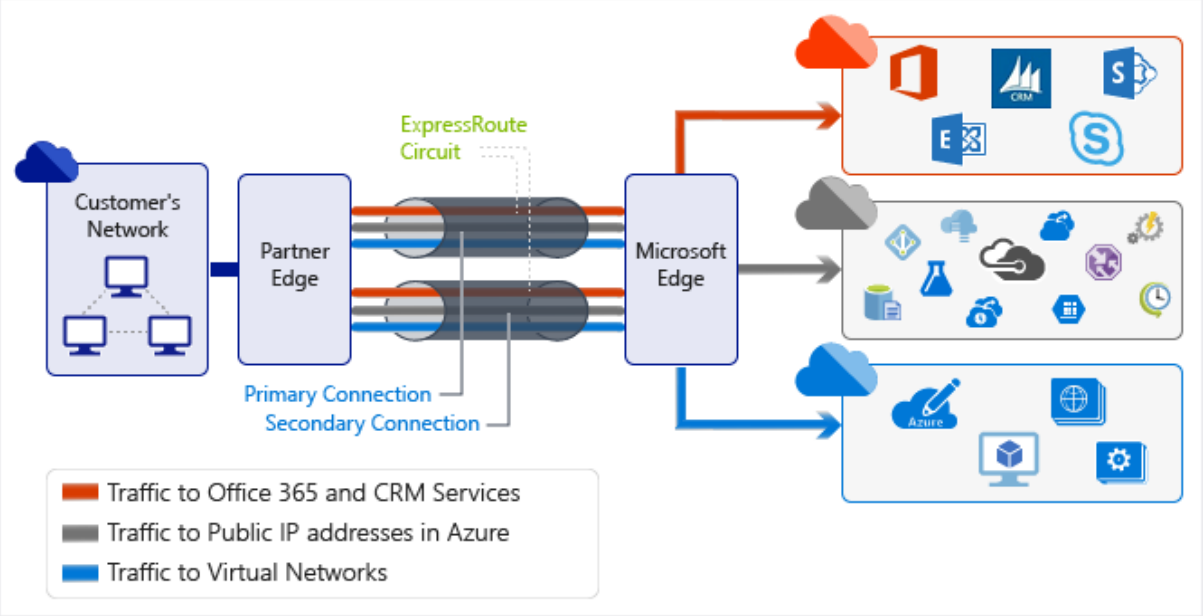
ExpressRoute

ExpressRoute lets you extend your on-premises networks into the Microsoft cloud over a dedicated private connection facilitated by a connectivity provider. Connectivity can be from an any-to-any (IP VPN) network, a point-to-point Ethernet network, or a virtual cross-connection through a connectivity provider at a co-location facility.



Features of ExpressRoute

- ExpressRoute connections do not go over the public Internet.
- More reliability, faster speeds, lower latencies, and higher security.
- Predictable performance
- Data privacy for your traffic
-

Layer 3 provides switching and routing technologies, creating logical paths, known as virtual circuits, for transmitting data from node to node. Routing and forwarding are functions of this layer, as well as addressing, internetworking, error handling, congestion control and packet sequencing.

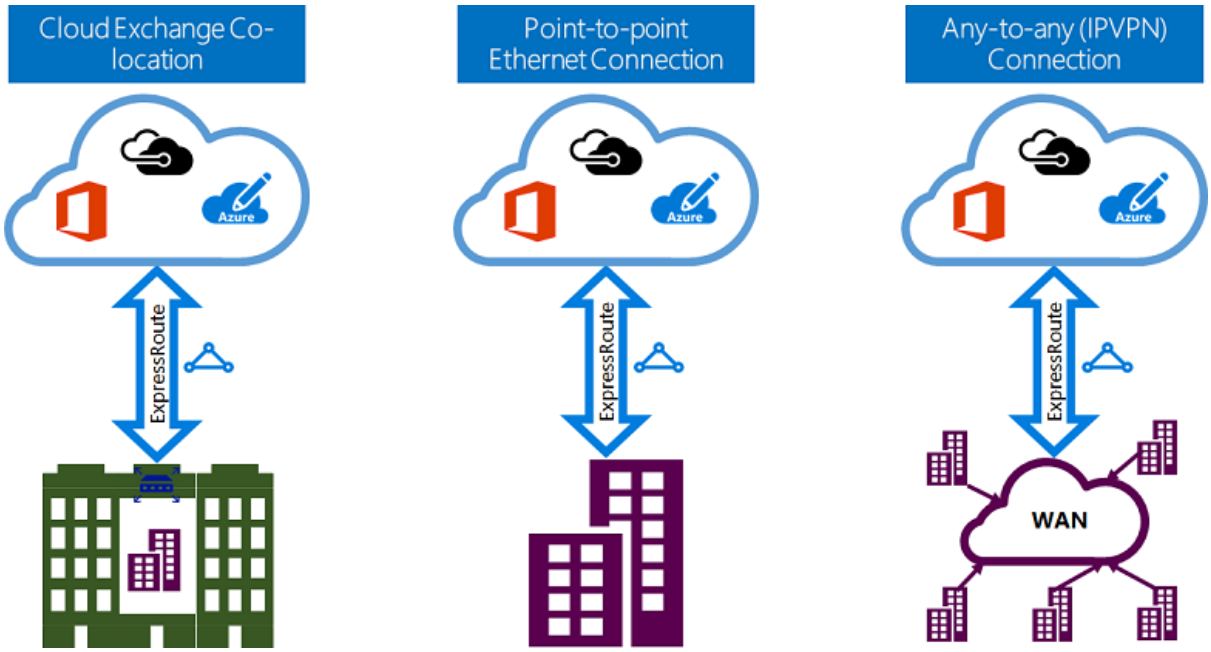
Key Benefits of ExpressRoute

1) Layer 3 connectivity between your on-premises network and the Microsoft Cloud through a connectivity provider. Connectivity can be from an any-to-any (IPVPN) network, a point-to-point Ethernet connection, or through a virtual cross-connection via an Ethernet exchange.
2) Connectivity to Microsoft cloud services across all regions in the geopolitical region.
3) Global connectivity to Microsoft services across all regions with ExpressRoute premium add-on. (eg: Office 365, CRM Online).
4) Dynamic routing between your network and Microsoft over industry standard protocols (BGP).
5) Built-in redundancy in every peering location for higher reliability.
6) Connection uptime SLA.

7) QoS support for Skype for Business.

ExpressRoute connectivity models

You can create a connection between your on-premises network and the Microsoft cloud in three different ways, CloudExchange Co-location, Point-to-point Ethernet Connection, and Any-to-any (IPVPN) Connection. Connectivity providers can offer one or more connectivity models.



Co-located at a cloud exchange

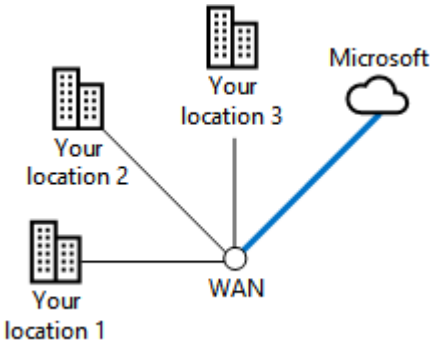
If you are co-located in a facility with a cloud exchange, you can order virtual cross-connections to the Microsoft cloud through the co-location provider's Ethernet exchange. Co-location providers can offer either Layer 2 cross-connections, or managed Layer 3 cross-connections between your infrastructure in the co-location facility and the Microsoft cloud.

Point-to-point Ethernet connections

You can connect your on-premises datacenters/offices to the Microsoft cloud through point-to-point Ethernet links. Point-to-point Ethernet providers can offer Layer 2 connections, or managed Layer 3 connections between your site and the Microsoft cloud.

Any-to-any (IPVPN) networks

You can integrate your WAN with the Microsoft cloud. IPVPN providers (typically MPLS VPN) offer any-to-any connectivity between your branch offices and datacenters. The Microsoft cloud can be interconnected to your WAN to make it look just like any other branch office. WAN providers typically offer managed Layer 3 connectivity. ExpressRoute capabilities and features are all identical across all of the above connectivity models.



FAQ

1) What are the benefits of using ExpressRoute and private network connections?

ExpressRoute connections do not go over the public Internet, and offer higher security, reliability, and speeds with lower and consistent latencies than typical connections over the Internet. In some cases, using ExpressRoute connections to transfer data between on-premises devices and Azure can yield significant cost benefits.

2) Where is the service available?

Geopolitical region	Azure regions	ExpressRoute locations
North America	East US, West US, East US 2, West US 2, Central US, South Central US, North Central US, West Central US, Canada Central, Canada East	Atlanta, Chicago, Dallas, Las Vegas, Los Angeles, New York, Seattle, Silicon Valley, Washington DC, Montreal, Quebec City, Toronto

Geopolitical region	Azure regions	ExpressRoute locations
South America	Brazil South	Sao Paulo
Europe	North Europe, West Europe, UK West, UK South	Amsterdam, Dublin, London, Newport(Wales), Paris
Asia	East Asia, Southeast Asia	Hong Kong, Singapore
Japan	Japan West, Japan East	Osaka, Tokyo
Australia	Australia Southeast, Australia East	Melbourne, Sydney
India	India West, India Central, India South	Chennai, Mumbai
South Korea	Korea Central, Korea South	Busan, Seoul

https://docs.microsoft.com/en-us/azure/expressroute/expressroute-locations

Service Providers for India: SIFY (Chennai), Airtel (coming soon in Mumbai, chennai), Vodafne (Azure only), Global Cloud eXchange (Chennai) , Tata telecommunications (Chennai and Mumbai)

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