PRODUCT DEEP DIVE:

RACKCONNECT GLOBAL

Connect to Rackspace and other off-premises data centers, including Microsoft® Azure™ and Amazon Web Services, for the ultimate in multi-cloud cloud flexibility.

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1-844-859-0862
www.rackspace.com/cloud/hybrid/
rackconnect**/global**

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INTRODUCTION TO RACKCONNECT GLOBAL

In today's hybrid cloud world, businesses face the challenge of managing IT infrastructure, applications and data across multiple environments, cloud providers and data center locations.

RackConnect Global provides highly available and secure network connectivity from your Rackspace managed dedicated environment to your private data centers, Microsoft® Azure™ and Amazon Web Services (AWS). This allows you to optimally distribute application workloads to best-fit your multi-cloud infrastructure, while backed by 24x7x365 Fanatical Support® from Rackspace.
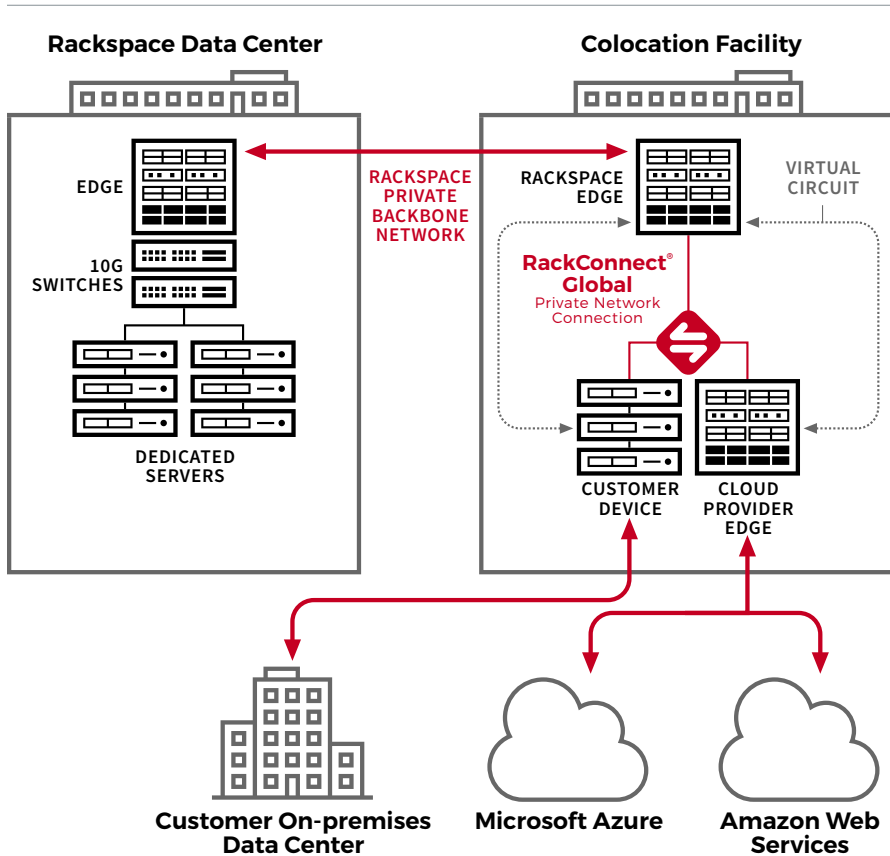
FIGURE A: RACKCONNECT GLOBAL USE CASE FOR MULTI-CLOUD CONNECTIVITY BACKED BY THE SECURITY AND RELIABILITY OF DEDICATED RACKSPACE MANAGED INFRASTRUCTURE

BENEFITS OF RACKCONNECT GLOBAL

HIGH PERFORMANCE

Achieve reliable, high-performance, low-latency connection speeds with a highly available direct network connection that bypasses your internet service provider to remove network congestion.

OPTIMUM SECURITY

Protect your business-critical data with private networking from Rackspace that bypasses the internet for the most secure connectivity to your other data centers and cloud environments.

FLEXIBILITY

Extend your application workloads and data from Rackspace to your other data centers and cloud environments, such as Microsoft Azure and Amazon Web Services, for the ultimate in multi-cloud cloud flexibility.

RACKCONNECT GLOBAL AT A GLANCE

This section highlights the technical details of RackConnect Global.

SUPPORTED CONNECTIVITY OPTIONS	MICROSOFT AZURE CLOUD EXCHANGE	AWS CLOUD EXCHANGE	AWS DEDICATED	THIRD-PARTY DEDICATED	THIRD-PARTY CLOUD EXCHANGE
Virtual circuit (VC) bandwidth	200 Mbps 500 Mbps 1 Gbps	200 Mbps 500 Mbps	1 Gbps	100 Mbps 200 Mbps 500 Mbps 1 Gbps	200 Mbps 500 Mbps 1 Gbps
Edge locations	ORD IAD DFW	IAD	IAD DFW	ORD IAD DFW	ORD IAD DFW
Data center locations	ORD IAD DFW	ORD IAD DFW	ORD IAD DFW	ORD IAD DFW	ORD IAD DFW

RACKCONNECT GLOBAL FOR AMAZON WEB SERVICES

RackConnect Global has been designed to help you directly connect to your AWS cloud environment leveraging the following use cases:

1. RackConnect Global for AWS (Dedicated)

2. RackConnect Global for AWS (Cloud Exchange)

SCENARIO 1: RACKCONNECT GLOBAL FOR AWS (DEDICATED)

In this scenario, a Rackspace-managed dedicated customer has deployed a new customer-facing web application on Fanatical AWS. The application requires a low-latency, high-bandwidth network connection to back-end databases that reside in a Rackspace data center. As a result, the customer selects a RackConnect Global connection to its AWS Cloud.

Several factors drove this decision, including:

· Application required a high-bandwidth connection to databases in Rackspace data center

· Customer required a connection that included an uptime SLA

· Customer did not have the IT ops resources necessary to build and maintain VPN connections between AWS and Rackspace

With RackConnect Global, our Fanatical Support team built a dedicated connection between the customer's managed dedicated and Fanatical AWS environments. Leveraging the customer's dedicated aggregation routers, a dedicated connection was established across the Rackspace private backbone to AWS.
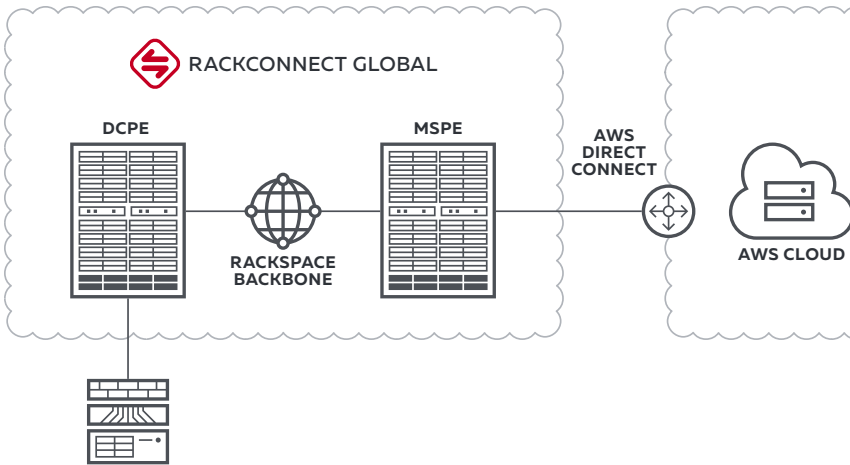
rackspace

FIGURE B: RACKCONNECT GLOBAL CONNECTS RACKSPACE DEDICATED TO AWS CLOUD

SCENARIO 2: RACKCONNECT GLOBAL FOR AWS (CLOUD EXCHANGE)

In this scenario, a managed dedicated customer has migrated all of its development environments on Fanatical AWS. The development environments require network connectivity to the customer's managed dedicated environment to synchronize configuration data and test results. As a result, the customer selects RackConnect Global for AWS with Cloud Exchange.

Several factors drove this decision, including:

· Development environment required private connectivity back to the dedicated environment

· Customer did not have the IT ops resources to build and maintain VPN connections between AWS and Rackspace

With RackConnect Global, our Fanatical Support team built a virtual connection between the customer's managed dedicated and Fanatical AWS environments using Cloud Exchange. Leveraging the customer's dedicated aggregation routers, a virtual connection was established across the Rackspace private backbone to Cloud Exchange.
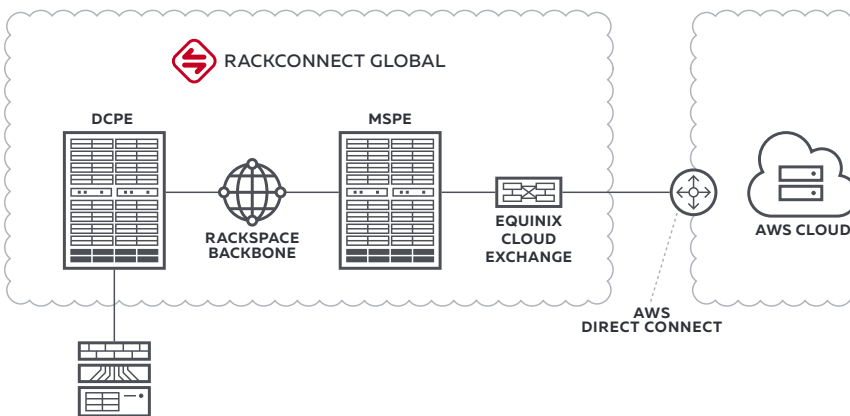

FIGURE C: RACKCONNECT GLOBAL CONNECTS RACKSPACE DEDICATED TO AWS CLOUD USING CLOUD EXCHANGE

RACKCONNECT GLOBAL FOR MICROSOFT AZURE

RackConnect Global has been designed to help companies directly connect to their Azure cloud environments leveraging the following use cases:

1. RackConnect Global for Azure (Cloud Exchange)

2. RackConnect Global for Azure and third party (Cloud Exchange)

SCENARIO 1: RACKCONNECT GLOBAL FOR AZURE (CLOUD EXCHANGE)

In this scenario, a managed dedicated customer is hosting its Exchange and Active Directory (AD) service on Azure. All of the servers in the customer's managed dedicated environment require connectivity to AD for authentication. Since Azure does not support direct connectivity, the customer selects RackConnect Global for Azure with Cloud Exchange.

Several factors drove this decision, including:

· Each server in the managed dedicated environment required a private connection to Active Directory

· Customer did not have the IT ops resources to build and maintain VPN connections between AWS and Rackspace

With RackConnect Global, our Fanatical Support team built a virtual connection between the customer's managed dedicated and Fanatical Azure environments using Cloud Exchange. Leveraging the customer's dedicated aggregation routers, a virtual connection was established across the Rackspace private backbone to Cloud Exchange.
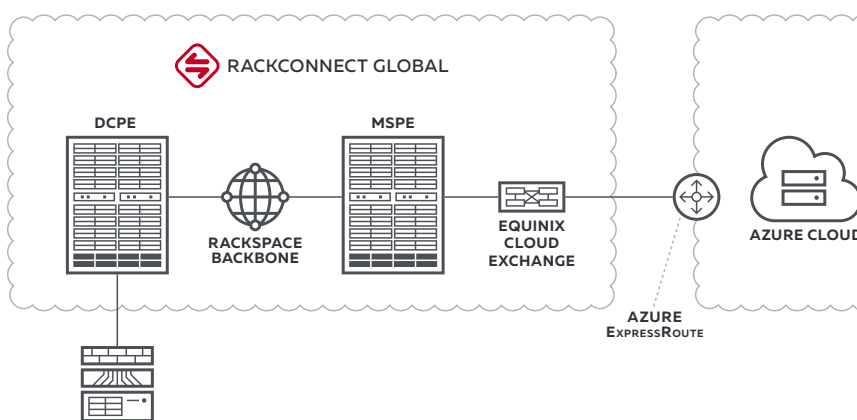

FIGURE D: RACKCONNECT GLOBAL AND CLOUD EXCHANGE CONNECT RACKSPACE DEDICATED TO AZURE CLOUD

SCENARIO 2: RACKCONNECT GLOBAL FOR AZURE AND CUSTOMER DATA CENTER CONNECTIVITY

The customer from Scenario 1 requires private connectivity from its network to both its managed dedicated and Azure cloud environments. The customer's employees require a private connection to their Microsoft Exchange servers hosted in the Fanatical Azure cloud. As a result, the customer selects RackConnect Global for Azure through Cloud Exchange and direct connectivity back to its network via Cloud Exchange.

Several factors drove this decision, including:

· Employees required a private connection to their Microsoft Exchange server

· Employees required connectivity to the managed dedicated environment from their corporate network.

· Customer did not have the IT ops resources to build and maintain VPN connections between Azure and Rackspace

With RackConnect Global, our Fanatical Support team built a virtual connection between the customer's managed dedicated, Fanatical Azure and customer network environments using Cloud Exchange. Leveraging the customer's dedicated aggregation routers, a virtual connection was established across the Rackspace private backbone to Cloud Exchange.
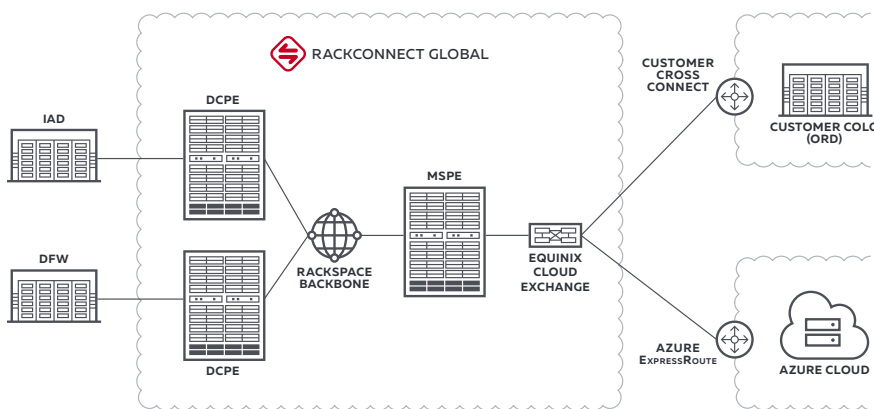

FIGURE E: RACKCONNECT GLOBAL AND CLOUD EXCHANGE CONNECT RACKSPACE DEDICATED TO AZURE CLOUD AND CUSTOMER'S NETWORK

RACKCONNECT GLOBAL FOR EXTERNAL ACCESS TO RACKSPACE

RackConnect Global also includes some advanced networking options that are described in the following use cases.

RackConnect Global has been designed to help companies solve a range of use cases:

1. External dedicated connectivity

2. External Cloud Exchange connectivity

3. Geographically redundant dedicated connectivity

4. Public connection peering

SCENARIO 1: EXTERNAL DEDICATED CONNECTIVITY

In this scenario, a Rackspace managed dedicated customer has a large user base that requires access to several large applications hosted at a Rackspace data center. Access to these applications at all times is critical for the operation of its business. The customer also indicates that VPN over the internet is not reliable enough to meet its needs. As a result, the customer selects RackConnect Global to establish a private dedicated network connection between its corporate data center and its managed dedicated environment in a Rackspace data center.

Several factors drove this decision, including:

· The customer required a highly available connection to its Rackspace environment

· VPN over the internet was not reliable enough to meet the customer's needs

With RackConnect Global, our Fanatical Support team built a dedicated virtual circuit between the customer's Rackspace dedicated environment and its network device in the colocation facility. Leveraging the data center provider edge (DCPE) router, a private network connection was established across the Rackspace private backbone to the

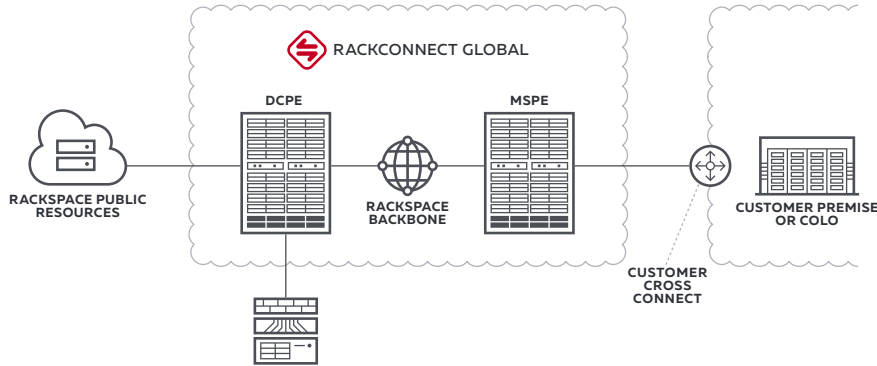multi-service provider edge (MSPE) router in the Equinix colocation facility and on to the customer's network.

FIGURE F: RACKCONNECT GLOBAL CONNECTS RACKSPACE DEDICATED TO CUSTOMER'S CORPORATE NETWORK

SCENARIO 2: EXTERNAL CLOUD EXCHANGE CONNECTION TO RACKSPACE

In the previous scenario, a customer leveraged RackConnect Global to directly connect to the Rackspace network. The only difference in this scenario is that the customer connects to Cloud Exchange, which brokers a connection to Rackspace.

Several factors drove this decision, including:

· The customer required a highly available connection to its Rackspace environment

· The customer was interested in connecting to other cloud providers, so it chose Cloud Exchange

· VPN over the internet was not reliable enough to meet the customer's needs

With RackConnect Global, our Fanatical Support team built a dedicated virtual connection between the customer's managed dedicated environment and the Cloud Exchange router in the colocation facility. Leveraging the DCPE router, a private network connection was established across the Rackspace private backbone to the MSPE router in the Equinix colocation facility and on to Cloud Exchange.
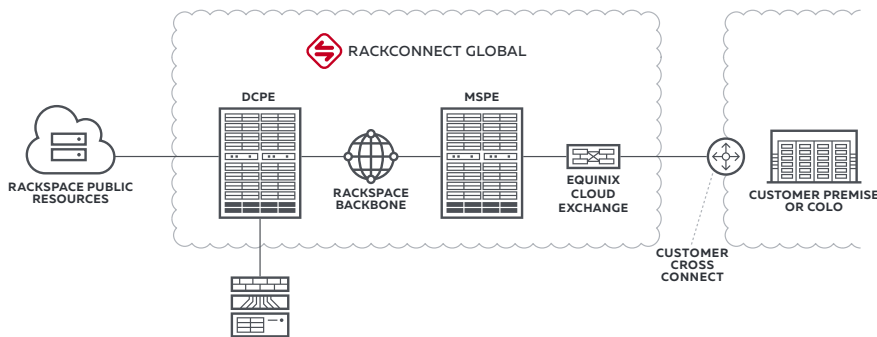

FIGURE G: RACKCONNECT GLOBAL AND CLOUD EXCHANGE CONNECT RACKSPACE DEDICATED TO CUSTOMER'S CORPORATE NETWORK

SCENARIO 3: GEO-REDUNDANT CLOUD EXCHANGE CONNECTION TO RACKSPACE

n the previous scenario, a customer leveraged RackConnect Global and Cloud Exchange to connect to the Rackspace network. The only difference in this scenario is that the customer connects to Cloud Exchange in two geographically redundant locations to create a highly available private mesh network between its data centers and its Rackspace environment.

Several factors drove this decision, including:

· The customer required highly available, redundant connectivity to its Rackspace environment

· The customer was interested in connecting to other cloud providers, so it chose Cloud Exchange

· VPN over the internet was not reliable enough to meet the customer's needs

With RackConnect Global, our Fanatical Support team built two dedicated virtual circuits between the customer's Rackspace dedicated environment and the Cloud Exchange routers in the colocation facilities. Leveraging the DCPE routers, private network connections were established across the Rackspace private backbone to the MSPE routers in the Equinix colocation facilities and on to Cloud Exchange.
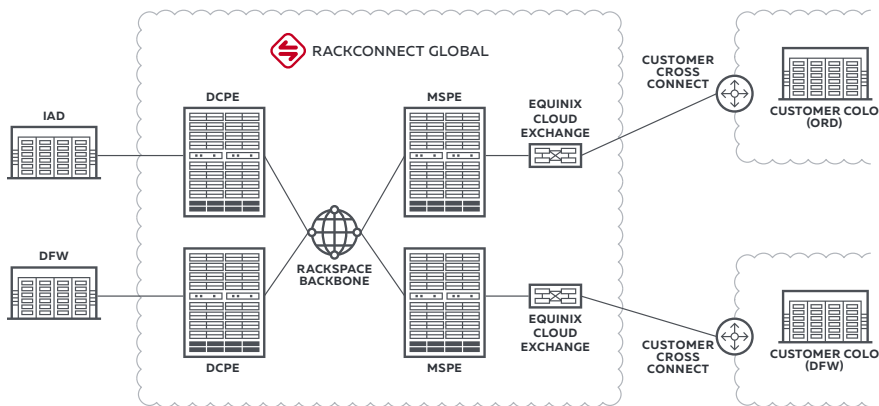

FIGURE H: RACKCONNECT GLOBAL AND CLOUD EXCHANGE CONNECT RACKSPACE DEDICATED TO CUSTOMER'S CORPORATE NETWORK IN TWO GEOGRAPHICALLY REDUNDANT LOCATIONS

SCENARIO 4: PUBLIC CONNECTION (PEERING)

In all of the previous scenarios, customers required private connectivity from their managed dedicated Rackspace environments to their corporate data centers. In this scenario, a customer wishes to privately connect (peer) with Rackspace in order to directly access public-facing services. The primary objective is to have a lower-latency network path to Rackspace's public-facing services and customer environments, as opposed to traversing the internet or a transit provider.

There are a few items of note for this product, including:

· It is available for both Direct Connect and Cloud Exchange

· Geographic redundancy is available and highly recommended

· Only public routes/prefixes are available for this connection

With RackConnect Global, our Fanatical Support team built a dedicated virtual connection between the MSPE router in the Equinix colocation facilities and Cloud Exchange.
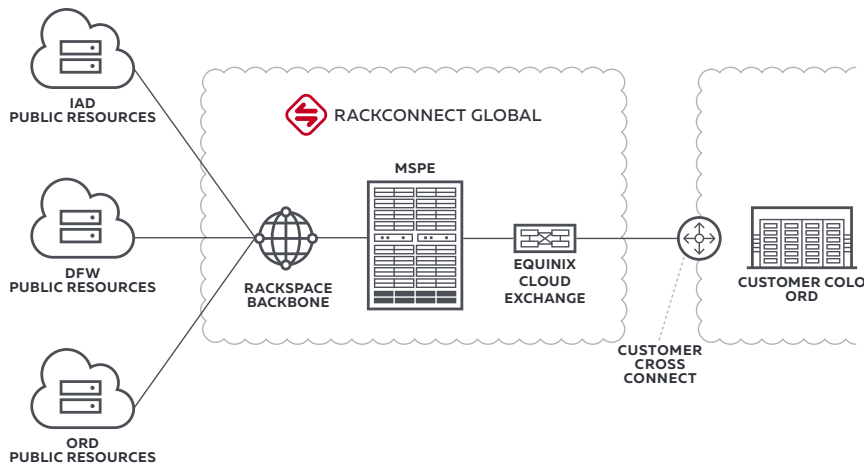
FIGURE I: CUSTOMER GAINS DIRECT ACCESS TO PUBLIC-FACING RACKSPACE SERVICES VIA RACKCONNECT GLOBAL CONNECTION TO RACKSPACE BACKBONE FROM CLOUD EXCHANGE

RACKCONNECT GLOBAL VS. VPN OVER INTERNET

The following chart highlights the differences between using a VPN over the internet and using RackConnect Global.

ITEM	VPN OVER INTERNET	RACKCONNECT GLOBAL
SECURITY	Encryption over internethigher latency and jitter	Direct, private virtual circuit
PERFORMANCE	· Additional overhead from encryption · Potential for higher latency and jitter	· No encryption overhead · Low-latency connection speeds
FANATICAL SUPPORT	· Support on Rackspace side only · Cloud provider side of tunnel is not supported	End-to-end Fanatical Support when using Fanatical AWS or Fanatical Azure
COMPLEXITY	Highly complex (configuration on cloud provider side)	Zero complexity (fully managed by Rackspace)
SLA	No guarantee	99.9% connectivity guarantee*

CONCLUSION

For application workloads that can benefit from a secure, high-performance connection between multiple data centers and third-party cloud providers, RackConnect Global is the ideal choice. With a range of deployment options available, you are empowered to interconnect your applications and services with your end users through a multi-cloud strategy that best fits the needs of your business. By combining RackConnect Global with Rackspace Fanatical Support for AWS and Microsoft Azure, you'll have the ultimate flexibility, reliability and service for your mission-critical, multi-cloud applications.

*Provided that there are two or more virtual circuit termination end points at the Rackspace data center location and subject to the RackConnect Global SLA limitations.

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ABOUT RACKSPACE

Rackspace® (NYSE: RAX) is the global leader in hybrid cloud and founder of OpenStack®, the open-source operating system for the cloud.

Hundreds of thousands of customers look to Rackspace to deliver the best-fit infrastructure for their IT needs, leveraging a product portfolio that allows workloads to run where they perform best—whether on the public cloud, private cloud, dedicated servers, or a combination of platforms. The company's award-winning Fanatical Support® helps customers successfully architect, deploy and run their most critical applications.

Headquartered in San Antonio, TX, Rackspace operates data centers on four continents. Rackspace is featured on Fortune's list of 100 Best Companies to Work For.

For more information, visit **www.rackspace.com/cloud/hybrid/rackconnect/global** or call **1-844-859-0862.**