Fly Across Clouds **Using Interconnection Ecosystems**
Link Multiple Cloud Service Providers Reliably and Securely
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Reach Many Clouds Over a New Path to Interconnection Providers

Do you already tap in to a cloud interconnection ecosystem – isolated from the public Internet – to link to cloud providers? A new offering from SAP can help you expand that ecosystem. The SAP® Cloud Peering service can build a direct link between one of the attached providers and your SAP solutions while minimizing latency among solutions and protecting the security of your data.

INTERCONNECT SAP SOLUTIONS WITH A LEADING INTERCONNECTION PROVIDER
The SAP Cloud Peering service can readily build a link between your cloud solutions from SAP and any one of several interconnection ecosystems. The service can establish an interconnection to:
- Equinix Cloud Exchange from Equinix Inc.
- Virtual Cross-Connect from Megaport Pty Ltd.
- Secure Cloud Interconnect from Verizon Enterprise

For a full list of additional providers, visit us online.
To further increase your ability to “cloud hop,” SAP Cloud Peering can connect your selected interconnection ecosystem to the following cloud solutions from SAP:

- SAP Ariba® solutions
- SAP Cloud Platform
- SAP HANA® Enterprise Cloud
- SAP Customer Experience solutions
- Digital interconnect services from SAP
- SAP SuccessFactors® solutions

Once your interconnection is set up, you can use your chosen ecosystem to reach additional cloud providers, including Amazon Web Services, Microsoft Azure, Google Cloud Platform, and others. Figure 1 summarizes the interconnection structure.

The SAP Cloud Peering service can readily build a link to your cloud solutions from SAP through any one of several interconnection ecosystems.
Figure 1: Overview of the SAP Cloud Peering Service
A flexible interconnection model helps you combine advantages from many cloud providers, minimize latency among solutions, and **protect the security of your data**.
Figure 2: A Technical Approach to Interconnectivity

<table>
<thead>
<tr>
<th>Responsibility of SAP</th>
<th>Demarcation point*</th>
<th>Responsibility of provider</th>
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<tbody>
<tr>
<td>Backbone network for SAP HANA® Enterprise Cloud</td>
<td>Cross-connect</td>
<td>Customer equipment</td>
</tr>
<tr>
<td>10-Gbit links</td>
<td>Access circuit</td>
<td>Customer backbone</td>
</tr>
</tbody>
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*This line shows where the responsibility of SAP ends and the provider’s responsibility begins.
Set Up Your Interconnectivity

To set up the SAP Cloud Peering service, you must complete the following steps:

• Define your connectivity requirements
• Plan the implementation with your network service provider
• Equip the interconnection site with the necessary hardware
• Create a link to your cloud solutions from SAP using SAP Cloud Peering

You must also choose a location for your SAP Cloud Peering service from available locations. Possible connections for you include:

• Amsterdam, Netherlands: Verizon and Equinix
• St. Leon-Rot, Germany: Verizon and Equinix (Frankfurt)
• Osaka, Japan: Verizon
• Santa Clara, California: Equinix (Silicon Valley)
• São Paulo, Brazil: Equinix
• Sterling, Virginia: Verizon and Equinix (Ashburn)
• Sydney, Australia: Verizon and Equinix
• Tokyo, Japan: Verizon
• Chandler, California: Equinix (Los Angeles)

For the most up-to-date list of peering locations, visit us online.
More connections with Level3, DE-CIX, Equinix, Megaport, and other providers are planned or under way, some in the cities listed above. Other data centers are located in Ashburn, Virginia; Moscow, Russia; San Jose, California; Shanghai, China; Singapore; Colorado Springs, Colorado; and Waltham, Massachusetts. You can discuss your preferences and get exact information on availability from your cloud advisory architect.

You can use your chosen ecosystem to reach additional clouds, including Amazon Web Services, Microsoft Azure, Google Cloud Platform, and others.
To complete the setup, you will:
- Place the necessary routing and firewall equipment at your chosen SAP Cloud Peering service location, or ask your data center or interconnection provider to do so
- Establish access to SAP HANA Enterprise Cloud from a private IP space
- Establish access to software-as-a-service solutions from SAP from public IP addresses
- Connect your own network to the interconnection hub, keeping in mind that SAP Cloud Peering handles bandwidths up to 10 Gbits

To prepare for your SAP Cloud Peering link, **define connectivity requirements** and plan implementation and equipment placement with your network service provider.
When using Verizon Secure Cloud Interconnect, ask the provider for managed or shared add-on services to translate network addresses, cover long distances, maintain firewalls, and perform load balancing. When using carrier-independent solutions, including Equinix Cloud Exchange and Megaport Virtual Cross Connect, you will be managing those connections yourself, including network address translation. When connecting to SAP HANA Enterprise Cloud in a disaster recovery setup, make sure to establish connections to both your primary location and your disaster recovery location. Please note that SAP Cloud Peering cannot establish connections between multiple locations for SAP HANA Enterprise Cloud.

The simple pricing model for SAP Cloud Peering is based on 100-Mbit packages, and connectivity to SAP HANA Enterprise Cloud and software-as-a-service solutions from SAP is included.
EXPLORE AN INTERCONNECTIVITY EXAMPLE
Here’s a simple example of the kind of interconnectivity made possible by the SAP Cloud Peering service:
1. Connect your network to Equinix Cloud Exchange
2. Run the SAP HANA database in SAP HANA Enterprise Cloud
3. Use archive storage from Amazon Glacier in Amazon Web Services
4. Run your back-office systems at Microsoft Azure

Avoiding router latencies, you combine the short deployment time of an Internet VPN and the safety and dependability of a multiprotocol label switching system.

Figure 3 illustrates a complex global example, with SAP solutions running at a data center in Sydney and Waltham. The solutions are connected through the interconnection ecosystem to customer hubs in Sydney and New York.
Figure 3: Connecting Your Cloud Systems Globally
PURCHASE YOUR SOLUTION
The pricing model for SAP Cloud Peering is based on 100-Mbit packages. The following infrastructure and operational costs are factored in to the purchase price:
• Circuits from SAP facilities to the next interconnection ecosystem or point of presence
• Networking equipment, including switches, ports, and routers that support the SAP solutions
• Flat traffic rate and the associated data transfer
• Incident handling
• Bandwidth and traffic changes
• Capacity management and solution scaling
• Monitoring of all components

The following potential setup costs are not factored in to the purchase price:
• Connectivity and traffic charges from your systems to public clouds provided by Google or others
• Connectivity charges from your facilities to Amazon Web Services, Microsoft Azure, Google Cloud Platform, or others
• Ticket handling for the network service provider you use to connect to the ecosystem
• Any physical cross-connect within a data center that you may order
Review the Benefits

SAP Cloud Peering is a reliable and secure connectivity option that capitalizes on a global ecosystem of interconnection providers. The connection it builds and maintains to cloud solutions from SAP never touches the public Internet. This means the service can offer both the short deployment time of an Internet virtual private network (VPN) and the safety and dependability of an MPLS. You enjoy all the benefits of a private line with no need for carrier routers, which can introduce vulnerabilities and latencies. And you can leverage your link to your chosen provider to connect to many clouds, enabling you to combine their advantages.

The simple pricing model is based on 100-Mbit packages. There are no costs for traffic, and there is no overprovisioning by SAP, enabling SAP to help ensure that you get the ordered bandwidth, even when all customers fully utilize their links. Connectivity to SAP HANA Enterprise Cloud and software-as-a-service solutions from SAP is included. You can opt for the supplier that offers the features, service-level agreements, and certifications you prefer – and rest assured that all your systems can connect.

The SAP Cloud Peering service helps you garner maximum value from today’s revolutionary trends for cloud computing and connectivity.

To take the first step in linking your cloud solutions from SAP and your interconnection ecosystem, visit us online.