Open Cloud Exchange®: Buyer’s Guide
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The CoreSite Open Cloud Exchange® provides enterprise-class connectivity services enabling modern, agile, multi-cloud and networking solutions. With rapid, automated service provisioning for cloud-adjacent and data center connectivity, the Open Cloud Exchange® takes complexity out of diverse hybrid cloud and site-to-site interconnection. The results are accelerated modernization, expanded market reach, increased agility and reduced total cost of operation (TCO).
The Open Cloud Exchange® is built for ease-of-use and real-time control. Customers can rapidly provision direct cloud interconnection and site-to-site connectivity services. Through the OCX in a CoreSite data center, enterprises, networks, IT services and cloud providers can do business “virtually” everywhere.
How it Works

The CoreSite Open Cloud Exchange® (OCX) works by providing a single port into our Layer 2 Ethernet switching platform, enabling private virtual connections (VLANs) to multiple service providers. Provisioning is done in real time through a private online service delivery platform.

Capabilities and Features of the Open Cloud Exchange®

CoreSite’s OCX platform offers a variety of services to bridge your environment to other users and Service Providers.

SERVICES OFFERED ON THE OCX PLATFORM

Point-to-Point EVCs

<table>
<thead>
<tr>
<th>Layer 2 Connectivity:</th>
<th>Provides ethernet based connectivity to any supported Cloud Service Provider.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layer 3 Connectivity:</td>
<td>Provides IP based connectivity to any supported Cloud Service Provider.</td>
</tr>
</tbody>
</table>

Virtual Router Services

A software-based Router enabling Layer 3 IP services.

Open Cloud Exchange® Service Ports

Physical network interfaces that allow for data exchange between two networks.

FEATURES OFFERED ON THE OCX PLATFORM

- Create private network connections to service providers, and other OCX participants.
- Manage your network connections:
  - Disconnect connections;
  - Modify connections.
- Monitoring information on network connections:
  - Currently only available for Layer 2 EVCs.
How it Works

Product Specifications

PHYSICAL UNIs (PORTS) SUPPORTED

- 1G LX 1310nm SMF
- 10G LR 1310 SMF
- 100G LR4 1310 SMF

PROTECTION SCHEME AT PORT (LAG / LACP)

- 2x1G LX or 2x10G LR
- Dynamic (LACP) supported, manual not supported
- Active / Active

MEF 10.2 COMPLIANT UNI TO UNI MODEL

500 EVCS SUPPORTED PER PORT

JUMBO FRAMES ON PORTS ARE SUPPORTED, MAX MTU IS 9100

EVPL / E-LINE SERVICE WITH VPLS TECHNOLOGY

- Point-to-point (Unicast) service only

SINGLE CLASS OF SERVICE (COS) – REAL-TIME, COMMITTED INFORMATION RATE (CIR) ONLY

FRAME FORMAT CONFORMS TO IEEE 802.1 AND 802.3 STANDARDS

- 802.1q supported, Q-in-Q not supported

EVC SERVICE TRANSPARENCY

- Layer 3 Transparent (MEG Level 5, 6, and 7 transparently)
- Eth-CFM Transparent (802.1ag / Y.1731 at customer MEG levels)

VLAN RANGE OF 400 – 899 SUPPORTED

PORT BANDWIDTHS

- 1 Gbps
- 10 Gbps
- 100 Gbps

EVC BANDWIDTHS

- 50 Mbps
How it Works

- 100 Mbps
- 500 Mbps
- 1 Gbps
- 5 Gbps
- 10 Gbps

VIRTUAL ROUTER (VR) BANDWIDTHS

- 50 Mbps
- 100 Mbps
- 500 Mbps
- 1 Gbps

Open Cloud Exchange® Partners

Today, the OCX supports API based connectivity the following partners:

Definitions and Terminology

ETHERNET VIRTUAL CONNECTION (EVC)

A Data link virtual connection bridging two network interfaces together to enable communication.
How it Works

LAYER 2

The data link layer in the 7-Layer Open Systems Interconnection (OSI) stack. Utilizes Ethernet based protocols and provides networks with the ability to send data packets via MAC addresses / Virtual Local Area Networks (VLANs).

LAYER 3

The network layer in the 7-Layer Open Systems Interconnection (OSI) stack. Utilizes IP based protocol and allows networks with the ability to route and forward data packets.

VIRTUAL ROUTER (VR)

Software replicating the functionality of a hardware-based Layer 3 Internet Protocol (IP) routing device.

PORT

These are physical interfaces in which traffic flows to and from the CoreSite infrastructure. In order to create an EVC, Customer’s must have an active OCX Port.

NRC

Non-recurring charge.

MRC

Monthly recurring charge.

ORDER STATUS

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active:</td>
<td>This status indicates that your service has been successfully provisioned and available to use.</td>
</tr>
<tr>
<td>Disconnected:</td>
<td>This status indicates that your service has been successfully terminated and the correlating service is not available to use.</td>
</tr>
<tr>
<td>Cancelled:</td>
<td>This status indicates that your service has encountered issues during the automated provisioning process and that auto-provisioning efforts have ceased. The corresponding order / service will no longer proceed through the automation process.</td>
</tr>
<tr>
<td>Provisioning:</td>
<td>This status indicates that your service has entered the automated provisioning process. No action is required by users when an order is in this status.</td>
</tr>
</tbody>
</table>
How it Works

Credential Failure

This status indicates that invalid cloud provider credentials were provided. As a result, the order request is cancelled and users will need to submit another EVC add request with the correct cloud provider credentials.

Pricing and Billing

Pricing is determined by the Service and the Service Rate (bandwidth) selected. CoreSite OCX services do not carry a term commitment and remain on a month-to-month basis until disconnected. Each service contains an NRC and an MRC component.

Billing commencement begins as soon as the automated provisioning is complete, and the order status is shown as “active”.

Billing for services ceases as soon as a disconnect order request is complete and the service status shows “Disconnected.”

Pricing for services vary depending on the product as well as the service rate selected for each product.

Navigating through MyCoreSite Service Delivery Platform

USING THE CORESITE CUSTOMER SERVICE DELIVERY PLATFORM

The secure, reliable and efficient CoreSite customer service delivery platform, found at www.mycoresite.coresite.com, allows its customers to track current deployments, monitor existing services, order new services, and obtain personalized support 24/7. Available features on the platform include the following:

- Trouble ticket services for 24/7 emergency support
- Remote hands services for 24/7 non-emergent support
- Monitor current and track historical power usage, humidity, and temperature via Corelnsite®
- Service delivery platform access and permissions management
- Emergent and non-emergent notification management
- Interconnection, power and build out services ordering
- Interconnections disconnect requests
- The CoreSite Open Cloud Exchange® access
- Any two-relationship management
How it Works

- Invoices and legal contracts
- Reports
  - Access history
  - Network usage
  - Order history for both active and inactive services
  - Current and historical power usage, humidity, and temperature
- Scheduling of deliveries and equipment removal
- Self-help support through CoreSite’s Knowledge Base
- Inquiry tracking
- Certification documentation

ACCOUNT STRUCTURE

The CoreSite customer service delivery platform gives customers an account for each data center site in which they have existing cage or cabinet space and services in. This allows customers to set service delivery platform and access permissions for users at each building. For example, if Company XYZ deployed in CoreSite’s LA1 and NY1 data centers, an administrator for Company XYZ can give John Doe service delivery platform access at LA1 but does not need to also offer access at NY1 because each data center location is a separate service delivery platform account.

However, any user with service delivery platform access to multiple accounts may view all accounts together by selecting “All Accounts” on the top left of the service delivery platform. Alternatively, he may choose to view each account individually. Keep in mind the following implications of this structure:

1. Each User Permission List is specific to a site / customer account. If an Administrator would like the user to have service delivery platform or physical access to multiple accounts, that user must be set up in the User Permission List for each account.

2. When looking for a specific Order ID, users should ensure that they are on the correct account page or have selected All Accounts.
How it Works

HOMEPAGE

The service delivery platform homepage is designed to provide a quick overview of any open service and support Orders, and to highlight those which require customer attention or approval. The page is broken into multiple tabs to allow users to quickly navigate to a specific Order type. If you receive an email requesting your approval or to supply additional information, you should be able to locate the applicable order under the Action Required section.

Once you have identified the Order you would like to view, merely click on the hyperlinked Order ID. Case comments and details will be visible at that time.

MY ACCOUNT

The My Account tab provides a wide variety of customer specific information. Customers can set-up employees with specific physical and service delivery platform access levels, view historical long-term access logs, review invoices and legal contracts, as well as manage contacts for The CoreSite Open Cloud Exchange®. As some of this information can be sensitive in nature, Customers can determine who can view it.

LOGGING INTO THE CUSTOMER SERVICE DELIVERY PLATFORM

2. Enter your username and password:
   - Username = email address;
   - Password = preferred password

Difficulty logging in?

If your password is not working, click the Forgot Password link. You will receive an email with a link to reset your password.

USER PERMISSIONS

The User Permissions page is designed to allow authorized users to manage access to the CoreSite Service delivery platform or physical access to the data center. Upon the initial creation of an account in the CoreSite Service delivery platform, CoreSite will set up one user with administrative access. This user then can add additional users and manage their permissions. An Administrator also can set up additional Administrators, thereby giving others the ability to add and manage new users.
How it Works

MANAGING MYCORESITE.COM PERMISSIONS

Only individuals identified as an Account Administrator can manage service delivery platform preferences, physical access, and user lists. Non-administrators will not have the ability to view the User Permission List, but they may view their own permissions and a list of Account Administrators by clicking on their username on the top left of the service delivery platform. Users will have the ability to edit their contact information and reset their password. They will not have the ability to edit their permissions.

SETTING UP AN ACCOUNT ADMINISTRATOR

When an account is initially created, a CoreSite Customer Support Representative will set up the initial Account Administrator as requested by the customer. At that time, the Administrator can log in to the service delivery platform and modify or update service delivery platform preferences for other users. However, an Administrator is not allowed to modify his / her own permissions or remove himself / herself from the account. CoreSite or another Administrator on the account may do this on his / her behalf. Only an Account Administrator will be able to view all users. A user not identified as an Account Administrator will only see his / her profile information and the names of the Account Administrators on the account(s) to which he / she has access.

TO SET UP A NEW USER

2. Under the My Account tab, click on User Permissions.
3. Click on the New Security Matrix Record icon on the right-hand side of the screen.
4. Enter the email address of the individual:
   - If the email already exists in the system, it will add the default contact information for that individual.
5. Add all the contact information details requested.
6. Select preferences for their service delivery platform access by checking the Web Access box:

<table>
<thead>
<tr>
<th>Admin:</th>
<th>Checking this field gives the user all admin rights to the accounts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Customer:</td>
<td>Select this option if the user is an individual that you would prefer not view pricing information, legal documents, or invoices.</td>
</tr>
<tr>
<td>Access and Packages:</td>
<td>This field determines preferences for short-term access requests, package delivery Orders and equipment removal Orders.</td>
</tr>
</tbody>
</table>
How it Works

<table>
<thead>
<tr>
<th>Remote Hands and Trouble Tickets:</th>
<th>This field determines preferences for Remote Hands and Trouble Ticket Orders.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orders and Inventory:</td>
<td>This field determines preferences about all products (build out services, power, and interconnection), reporting tools, the Any2 Relationship Manager, The CoreSite Open Cloud Exchange® Service delivery platform, and all active services.</td>
</tr>
<tr>
<td>Invoices and Legal Documents:</td>
<td>This field determines preferences with regard to invoices and legal documents.</td>
</tr>
</tbody>
</table>

- Notification preferences allow users to determine if they would like to receive emergency notification and/or non-emergent notifications:

  - Emergent Notifications: Notifications sent by CoreSite in the event of emergency maintenance or a potential event in the data center.
  - Non-Emergent Notifications: Notifications sent by CoreSite regarding scheduled maintenance activity or general Order notifications.

- Other notifications not subject to these preferences may include requests for approval or additional information on active Orders, surveys, marketing communication, or direct customer communication.

- Notes are available for any use by the Account Administrator, however adding a note will not generate any changes.

TO MODIFY PREFERENCES FOR AN EXISTING USER

1. Log in to the service delivery platform at [www.mycoresite.coresite.com](http://www.mycoresite.coresite.com).
2. Under the My Account tab, click on User Permissions.
How it Works

3. Select the user for whom you would like to edit preferences and click the Edit or Delete buttons on the left-hand side of the screen.

NOTE:
You may view the entire list of user permission details on this page, as well as grant or revoke physical access for each user.

ADDING CUSTOMERS OF RESELLERS TO THE USER PERMISSIONS LIST

Account Administrators may add individuals to the User Permission List to allow for service delivery platform and physical access while preventing them from viewing the following:

- Pricing (MRCs and NRCs) on products and services.
- Legal contracts.
- Invoices.

To add a contact to the User Permission List with this limited functionality, be sure to check off the “remove ability to view pricing / contracts” radio dial box under the Web Access Details when setting the individual up with permissions.

Unless preferences are set to the contrary in the service delivery platform, these customers of resellers will be able to use the service delivery platform functionality in every other way, including but not limited to the following:

- Act as Account Administrators by adding others to the User Permissions List. They will not be able to give access to pricing, legal documents, or invoices.
- Request any product CoreSite offers (without pricing specified).
- Submit Trouble Tickets or Remote Hands requests.
- Grant physical access to the space(s) to which the End Customer has access.
- Contact CoreSite support directly.
How it Works

Ordering Services in the OCX

There are three services users may order through the OCX:

- OCX Port
- Virtual Router
- EVC

To order these services, follow the steps below:

1. Navigate to the menu pane on the left-hand side of the screen.
2. Click “Order Services and Support”.
3. Click “Open Cloud Exchange®”.
4. Next select the service you wish to order and click the “continue” button.

How to Order a Port

Navigating to the Port Order Form

1. Follow Steps 1 to 4 in the “ordering OCX services” section to navigate to the Port ordering page.
How it Works

2. Click on the “Port” tile and click “continue”.

COMPLETING THE PORT ORDER FORM

Part 1: Fill out the required data fields in the Port Order form:

1. Select Account.
2. Select Space.
3. Enter Point of Contact.
4. Enter valid Email.
How it Works

5. Enter phone number.

Part 2: Upon selection of the account and space data fields, the interconnection service Details data parameters will be prompted for user input:

1. Select the desired Product.
2. Select yes or no for a coordinated hot cut.
3. Select quantity.
4. Enter a desired customer want date.
5. Select yes or no for port listing on the OCX.

Part 3: Product Attributes and additional Order details:

1. Provide a unique customer port name.
2. Select the appropriate port designation.
3. (Optional) Provide a customer reference label.
4. (Optional) Provide a customer purchase order.
How it Works

5. Provide a description of work. If no additional details are needed, please enter “N/A”.

Part 4: Accept terms and conditions:

1. Review Terms and Conditions. To accept, Click the checkbox in the upper left-hand side of the terms and conditions box.

2. Click the submit request button to complete order.

Once the order is submitted, CoreSite will begin the automated process to provision your OCX Port.

How to Order a Virtual Router

NAVIGATING TO THE VR ORDER FORM

1. Follow Steps 1 to 4 in the “ordering OCX services” section to navigate to the Port ordering page.
How it Works

2. Click on the “Virtual Router” tile and click “continue”.

COMPLETING THE VR ORDER FORM

Part 1: Fill out the required data fields in the Virtual Router order form:

NOTE:
Virtual Routers are supported in select markets only.

For those customers who do not have an environment (space and power) with CoreSite, a “Services Only” contract is required to order a virtual router and/or other OCX Interconnection services.

1. Select the virtual router market.
2. Select account.
3. Select Space.
How it Works

4. Enter a unique name / identifier for the virtual router.

5. (Optional) Specify an invoice label.

Part 2: Service rate, Contact information, and terms and conditions:

1. Select the desired service rate.

2. Add additional contacts for the request.

NOTE:
The primary contact information will be populated based off the logged in user. Click the “+” button to add more contacts to the request.
How it Works

3. Agree to the terms and conditions of the order.

By submitting this order, you agree to our standard terms and conditions, which can be reviewed here.

- I have read and agree to the Terms and Conditions.

4. Click “Submit Order.”

Once the order is submitted, CoreSite will begin the automated process to provision your Virtual Router.

How to Order an Ethernet Virtual Connection (EVC)

- Create an EVC between your existing CoreSite OCX services.
- Create an EVC from CoreSite OCX services to a Cloud Provider.
- Create an EVC from CoreSite OCX services to an OCX Participant.

Creating a Connection from your OCX Port to Your Virtual Router

Navigating to the EVC Order Form

1. Follow Steps 1 to 4 in the “ordering OCX services” section to navigate to the Port ordering page.

2. Click on the “EVC” tile and click “continue.”
How it Works

3. On the next screen, select the tile that displays “Connect a Virtual Router to an OCX Port” and click “Continue”.

COMPLETING THE EVC ORDER FORM

Part 1: Fill out the required data fields in the EVC order form:

1. Select Virtual Router.
2. Select OCX Port.
3. (Optional) Specify an IP Address.
4. (Optional) Specify an VLAN.
5. Select desired service rate.
6. Provide a unique name for your EVC.
7. (Optional) Specify an Invoice Label.
8. Provide a Point of Contact.
9. Provide Contact Email.
10. Provide Phone Number.
11. Agree to the terms and conditions of the order.
12. Click “Submit Order.”

**Creating a Layer 2 Connection to AWS**

This section outlines the process to create AWS Hosted Connections using the CoreSite Open Cloud Exchange® and how to accept the connections in the AWS management portal. Before this process can begin, the Open Cloud Exchange® port must be operational, and the customer will need an active AWS account.

**NOTE:**
AWS Hosted Connections supports service rates between 500Mbps and 10Gbps.

**ORDERING STEPS**

**STEP 1: ORDERING YOUR OPEN CLOUD EXCHANGE® EVC**

1. Login to the MyCoreSite customer service delivery platform.
2. Select Order Services and Support.
3. Choose Interconnection.
4. Order OCX.
5. Select EVC.
6. Click Order.

**New EVC(s) Order Form: AWS**

- Input Contact Information:
  - Select Account and Site;
  - Enter the Point of Contact (Up to 5 contacts).
- Select Target:
  - Account: AWS Direct Connect;
  - Port: Select target port;
How it Works

- AWS Account ID: Unique identifier associated with the customer’s AWS service.
  - Enter Buyer Details:
    - Port: Populate buyer port;
    - VLAN (Available range: 400-899 or leave blank for auto selection);
    - Service Rate: 50, 100, 200, 300, 400, 500Mbps – 1, 2, 5, 10Gbps;
    - Name your EVC.
  - Agree to Terms and Conditions.
  - Press Submit Order.

**STEP 2: ACCEPT THE HOSTED CONNECTION**

After the EVC order has been submitted, CoreSite will allocate a Hosted Connection to the AWS Account ID. Once allocated, the end customer must accept the connection within their AWS Direct Connect console.

1. Open the AWS Direct Connect console.
2. From the navigation bar, select the appropriate Hosted Connection region:

<table>
<thead>
<tr>
<th>Location</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston, New York,</td>
<td>US East 1 (N. Virginia)</td>
</tr>
<tr>
<td>Virginia:</td>
<td></td>
</tr>
<tr>
<td>Chicago:</td>
<td>US East 2 (Ohio)</td>
</tr>
<tr>
<td>Denver:</td>
<td>US West 2 (Oregon)</td>
</tr>
<tr>
<td>Los Angeles and Bay</td>
<td>US West 1 (N. California)</td>
</tr>
<tr>
<td>Area:</td>
<td></td>
</tr>
</tbody>
</table>

3. In the navigation pane, choose Connections.
4. Select the appropriate connection and expand the details.
5. Check the box to accept the terms of the connection and then press Accept Connection.
How it Works

Creating a Layer 3 Connection to AWS

**NAVIGATING TO THE EVC ORDER FORM**

1. Follow Steps 1 to 4 in the “ordering OCX services” section to navigate to the Port ordering page.
2. Click on the “EVC” tile and click “continue”.
3. On the next screen, select the tile that displays “Connect to a service provider or other OCX participant”.
4. Select the tile that displays “Connect to a Service provider” and click “Continue”.

![Image of the EVC order form](image-url)
5. Next, select the tile labeled “Layer 3 Connection”. Click “Continue”.

COMPLETING THE EVC ORDER FORM

Part 1: Fill out the required data fields in the EVC order form:

1. Select Provider you wish to connect to. In this case select AWS.
2. Select the Target Location.
3. Select the Target Port.
4. Enter your AWS Account ID.
5. The Virtual Interface type will be defaulted to Private. CoreSite OCX currently does not support Public VIFs.
6. Select Buyer Account.
7. Select the desired Virtual Router.
How it Works

8. Provide a unique name for your EVC.

9. (Optional) Specify an Invoice Label.

10. Specify the service rate desired.

11. Click the “Validate and Continue” button to proceed.

Part 2: Complete the Layer 3 Peering Details:

1. Provide the New Cloud Subnet in CIDR Format.

2. Provide your AWS Access Key ID.
3. Provide your AWS Secret Access Key.

Part 3 (Optional): Provide prefix details. You may enter up to 100 prefixes. If you wish to apply:

1. Select the policy you wish to apply to the prefix.
2. Provide the peer network address in CIDR form.
3. Select the desired range: “Exact” or “Range”:
   a. If you select range, provide the “Start” and “End” of the range.
4. Repeat Steps 1 to 3a for any additional prefixes provided:
   a. Click the “+” button to add more prefixes.
5. Click “Review Order”.

Layer 3 Peering Details

Access Key ID

Secret Access Key

Prefix Details

Select Import or Export
Enter Peer Network
Peer Network Range
Start
End

1. Select

Exact
Range

Clone
Part 4: Add contact information and review your order:

1. Enter valid contact information for this request.

2. Review all data parameters associated with the EVC Request. If any information is incorrect or changes need to be made, users may click the “Back” button and make the necessary changes.
3. After confirming all information is accurate check the Terms and Conditions check box.
   a. You may also view the Terms and Conditions by clicking the hyper link.

   b. The terms and conditions will appear in a separate modal window for review.
4. Click “Submit Order”.

After completing Step 4, the order will be submitted and automated provisioning will begin. No other action is required at this time.
How it Works

AWS Credentials

The CoreSite OCX utilizes programmatic access to accept your hosted connection and BGP sessions on your behalf. To create Layer 3 connections to AWS, users are required to provide their Access Key ID and their Secret Access Key. These access keys are created in the AWS Portal and can be retrieved after creation. To create AWS Access Keys users must be and log into the AWS console as an IAM user. The credentials required are limited to what is outlined below and should not be the user’s root credentials.

Steps to creating and obtaining your access keys:

1. Log into the AWS portal as an IAM user: https://console.aws.amazon.com/iam/.
2. Navigate to the upper right-hand side of the screen and click on the user name.
3. Next, click the “Security Credentials” tab.
4. Scroll down the page and locate the Access keys section (access key ID and secret access key).
5. Click “Create Access Key”.
6. A new modal window will appear upon successful creation of the Access Keys.
7. Download the Access Keys as a .csv file or copy / paste the keys. These keys will be needed to complete the EVC order to AWS.

NOTE:
If this feature is disabled, then you must delete one of the existing keys before you can create a new one.
For more information, please go to the links below:

- [https://aws.amazon.com/premiumsupport/knowledge-center/create-access-key/](https://aws.amazon.com/premiumsupport/knowledge-center/create-access-key/)
How it Works

Creating a Layer 2 Connection to Azure

This section outlines the process to create Microsoft ExpressRoute circuits using the Azure Management Portal and how to provision Layer 2 circuits (EVCs) to Microsoft Azure using the CoreSite Open Cloud Exchange®. Before this process can begin, the Open Cloud Exchange® port(s) must be operational, and the customer will need an active Azure account.

NOTE:
Microsoft recommends two ports (Primary and Secondary) for redundancy.

ORDERING STEPS

- **STEP ONE**
  - Creating a Virtual Circuit
- **STEP TWO**
  - Creating the EVC
- **STEP THREE**
  - Complete Configuration

STEP 1: CREATING A VIRTUAL CIRCUIT IN THE AZURE PORTAL

1. Login to Microsoft Azure Portal
2. Select ExpressRoute Product
3. Add Circuit
4. Enter Circuit Name (i.e., ER-COR-LA1-10G)
5. Select Provider (i.e., CoreSite)
6. Choose Peering Location:
   - Chicago
   - Denver
   - Los Angeles
   - New York
   - Silicon Valley2
   - Washington DC2
How it Works

7. Set Bandwidth:
   - 50, 100, 200 or 500 Mbps
   - 1, 2, 5 or 10 Gbps
8. Select SKU:
   - Standard or Premium
9. Choose Billing Model:
10. Unlimited or Metered
11. Select Subscription
12. Determine Resource Group:
   - Create new or use existing
13. Choose Location (Correlates to Azure Region).
14. Press Submit.

After submitting the ExpressRoute request, the circuit will remain in an “Unprovisioned” status until the next steps are completed within the Open Cloud Exchange®. Service Key will be required for the next step.

STEP 2: ORDERING YOUR OPEN CLOUD EXCHANGE® EVC

1. Login to the MyCoreSite customer service delivery platform
2. Select Order Services and Support
3. Choose Interconnection
4. Order OCX
5. Select EVC
6. Click Order
How it Works

New EVC(s) Order Form: Microsoft ExpressRoute

1. Input Contact Information:
2. Select Account and Site
3. Enter the Point of Contact (Up to five contacts)
4. Select Target:

<table>
<thead>
<tr>
<th>Account:</th>
<th>Microsoft Azure ExpressRoute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port:</td>
<td>Select target port.</td>
</tr>
<tr>
<td>Service Key:</td>
<td>Captured in the last step of Create ExpressRoute Circuit.</td>
</tr>
<tr>
<td>Service Type:</td>
<td>Private, Public or Microsoft</td>
</tr>
</tbody>
</table>

5. Enter Buyer Details:
   a. Port: Populate both port drop downs if diversity is needed.
   b. Buyer VLAN (Available range: 400-899 or leave blank for auto selection).
      ➢ The buyer VLAN value is used in the 802.1Q configuration on the customer router. A follow up email will be sent to the buyer with the target VLAN value which is used in the ExpressRoute peering configuration and within the BGP configuration on the customer router.
   c. Service Rate:
      ➢ 50, 100, 200 or 500 Mbps
      ➢ 1, 2, 5 or 10 Gbps
   d. Name your EVC.

6. Agree to Terms and Conditions
7. Press Submit Order

STEP 3: CONFIRMING CONFIGURATION

After submitting the order, the EVC(s) will be configured, and confirmation emails are sent to you (the buyer) and Microsoft (the target) with the connection details including the relevant
target VLAN information. This VLAN information will be used in the ExpressRoute peering configuration within the Azure portal and in the BGP configuration on the customer router.

Creating a Layer 3 Connection to Azure

NAVIGATING TO THE EVC ORDER FORM

1. Follow Steps 1 to 4 in the “ordering OCX services” section to navigate to the Port ordering page.
2. Click on the “EVC” tile and click “continue”.
3. On the next screen, select the tile that displays “Connect to a service provider or other OCX participant”.
4. Select the tile that displays “Connect to a Service provider” and click “Continue”.
5. Next, select the tile labeled “Layer 3 Connection”. Click “Continue”.

COMPLETING THE EVC ORDER FORM

Part 1: Fill out the required data fields in the EVC order form:

1. Select Provider you wish to connect to. In this case select Microsoft Azure.
2. Select the Target Location
3. Select the Target Port
4. Enter your (ExpressRoute) Service Key
How it Works

5. The Peering Type will be defaulted to Private Peering. CoreSite OCX currently does not support Microsoft Peering (Public)
6. Select Buyer Account
7. Select the desired Virtual Router
8. Provide a unique name for your EVC
9. (Optional) Specify an Invoice Label
10. Specify the service rate desired
11. Click the "Validate and Continue" button to proceed

Part 2: Complete the Layer 3 Peering Details:

1. Provide the New Cloud Subnet in CIDR Format
   a. Please note – a /27 subnet or larger is required for all Microsoft Azure VNETs.
2. Provide your Client ID
3. Provide your Client Secret Value
4. Provide your Subscription ID
5. Provide your Tenant ID
6. Provide the Resource Group Name
7. Select the Resource Group Region
How it Works

8. Provide the ExpressRoute Circuit Name

Part 3 (Optional): Provide prefix details. You may enter up to 100 prefixes:

1. Select the policy you wish to apply to the prefix.
2. Provide the peer network address in CIDR form.
3. Select the desired range: “Exact” or “Range”:
   - If you select range, provide the “Start” and “End” of the range.
4. Repeat steps 1-3a for any additional prefixes provided:
   - Click the “+” button to add more prefixes.
5. Click “Review Order”.
How it Works

Part 4: Add contact information and review your order:

1. Enter valid contact information for this request.
How it Works

2. Review all data parameters associated with the EVC Request. If any information is incorrect or changes need to be made, users may click the “Back” button and make the necessary changes.

3. After confirming all information is accurate check the Terms and Conditions check box.

4. Click “Submit Order”.

After completing Step 4 the order will be submitted, and automated provisioning will begin. No other action is required at this time.
How it Works

Microsoft Azure Credentials

The credentials required are limited to what is outlined below and should not be the user’s root credentials. Azure credentials required:

<table>
<thead>
<tr>
<th><strong>ExpressRoute (ER) Service Key:</strong></th>
<th>The key is the unique identifier assigned by Microsoft to identify your ER circuit.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Client ID:</strong></td>
<td>This value represents the ID tied to a specific Azure client. This is also referred to as the “Application ID”.</td>
</tr>
<tr>
<td><strong>Client Secret ID (Value):</strong></td>
<td>This is the unique identifier used to authenticate your application.</td>
</tr>
<tr>
<td><strong>Subscription ID:</strong></td>
<td>Represents the unique identifier for your Azure Subscription.</td>
</tr>
<tr>
<td><strong>Tenant ID:</strong></td>
<td>Represents the unique identifier of the Azure Active Directory instance. This is also referred to as the “Directory ID”.</td>
</tr>
<tr>
<td><strong>Resource Group:</strong></td>
<td>A container that holds related resources for an Azure solution.</td>
</tr>
<tr>
<td><strong>Resource Group Region:</strong></td>
<td>The region in which the resource group will be stored.</td>
</tr>
<tr>
<td><strong>ExpressRoute Circuit Name:</strong></td>
<td>This is a unique identifier that the circuit creator assigned to the ER Circuit.</td>
</tr>
</tbody>
</table>

Gather your Microsoft Azure Credentials by Logging into the Microsoft Azure portal (1).

**SUBSCRIPTION ID**

1. In the Azure Portal, locate the navigation panel on the left side of the screen and click “Subscriptions”. You may also use the search function if this does not appear on the navigation pane.
How it Works

2. Select the subscription ID you wish to use and copy / record the value:
   • If you do not have any existing subscriptions, you may create one.

   NOTE:
   Subscription ID can also be located in the details section of your ER Circuit.

CLIENT ID AND TENANT ID

1. In the Azure Portal, locate the navigation panel on the left side of the screen and click “Azure Active Directory”. You may also use the search function if this does not appear on the navigation pane.
2. Click on “App Registrations”.
3. Locate the application you wish to use and click on the display name:
   • If you do not have any existing applications, you may create one.
4. Once the application details appear, copy / record the values for the:
   • Client ID (Application ID);
   • Tenant ID (Directory ID).

CLIENT SECRET ID

1. In the Azure Portal, locate the navigation panel on the left side of the screen and click “Azure Active Directory”. You may also use the search function if this does not appear on the navigation pane.
2. Click on “App Registrations”.
3. Click “Certificates and Secrets”.
4. Select “Client Secrets”.
5. Locate the secret you wish to use:
   • If you do not have any existing secrets, click “New Client Secret”;
   • Enter a description and designate the duration:
How it Works

- Click “Add”.

**IMPORTANT:**
Users must copy the value represented in the “Value” column. Do not record the value in the “Secret ID” column.

**RESOURCE GROUP AND RESOURCE GROUP REGION**

1. In the Azure Portal, locate the navigation panel on the left side of the screen and click “Resource Groups”. You may also use the search function if this does not appear on the navigation pane.

2. Locate the Resource Group you wish to use:
   a. If you do not have any existing secrets, click “Add”
   b. Select a subscription model
   c. Provide a name for the resource group
   d. Select “Region”
   e. Click “Review + Create”

3. Copy / record the values for the Resource Group and Resource Group Region.

**NOTE:**
The Resource Group, and Resource Group Region is assigned to the ER Circuit upon creation in the Azure Portal.
How it Works

EXPRESSROUTE CIRCUIT NAME

1. In the Azure Portal, locate the navigation panel on the left side of the screen and click "ExpressRoute Circuits". You may also use the search function if this does not appear on the navigation pane.

2. Locate the ExpressRoute Circuit you wish to use. The name of the circuit will be displayed on the list view:
   - You may also click on the circuit to view more details. The ER Circuit name will be displayed on the top left corner of the page;
   - Other credentials can also be viewed here such as the Subscription ID and the ExpressRoute Service Key.
How it Works

CREATING AN EXPRESSROUTE CIRCUIT

1. Log into the Microsoft Azure portal.
2. Once logged in, click the “ExpressRoute Circuits” button on the navigation pane on the lefthand side of the screen. If that button is not available, navigate to the search bar at the top of the screen or hit the “Browse” button and search for “ExpressRoute Circuits”.
3. Click “Add”.
4. Enter Circuit Name.
5. Select Provider.
6. Choose Peering Location.
7. Set Bandwidth.
8. Select SKU.
10. Select Subscription.
12. Choose Location (Correlates to Azure Region).
13. Click “Create”.

For more information, please go to the links below:

Creating a Layer 2 Connection to Google

This section outlines the process to create Google Cloud Partner Interconnect circuits using the Google Console and how to provision Layer 2 circuits (EVCs) to Google Cloud using the CoreSite Open Cloud Exchange®. Before this process can begin, the Open Cloud Exchange® port(s) must be operational, and the customer must have an active Google Account.

**STEP 1: CREATING THE GCP VLAN ATTACHMENT**

Prior to ordering your EVC from CoreSite you must create your VLAN Attachment in the Google Cloud Platform Console. To login into the console, you can click here:

1. From the Dashboard, click on the menu icon at the top left corner of the screen to reveal the menu blade. (Figure 1A)

   **NOTE:**
   If you have multiple projects created, ensure you are in the correct project. Click on the drop-down menu in the blue bar at the top of the page next to ‘Google Cloud Platform’. Scroll down to the ‘NETWORKING’ section. (Figure 1B).

2. Click on the ‘VLAN attachments’ tab.
3. Click on the ‘Add VLAN attachment’ button.
4. Select the radio button next to ‘Partner Interconnect’ and click the ‘CONTINUE’ button. (Figure 2A and 2B)
5. Click on the 'I already have a service provider' button. (Figure 3)

Creating a Redundant Pair of VLAN Attachments [recommended]

1. Select the radio button next to 'Create a redundant pair of VLAN attachments [recommended]' and complete the following fields (Figure 4):
   a. VPC Network: Choose a previously created VPC network from the drop-down menu.
   b. Region: Choose the appropriate region from the drop-down menu.
How it Works

c. VLAN A, Cloud Router: Choose a previously created Cloud Router from the drop-down menu. This is usually for the primary EVC.
d. VLAN attachment name: Name the VLAN attachment. All lower case, no spaces, and up to 62 characters.
e. (Optional) Description: Provide a description of the VLAN attachment.
f. VLAN B, Cloud Router: Choose a previously created Cloud Router from the drop-down menu. This is usually for the secondary EVC.
g. VLAN attachment name: Name the VLAN attachment. All lower case, no spaces, and up to 62 characters.
h. (Optional) Description: Provide a description of the VLAN attachment. This is an optional field. Click on the ‘Create’ button.
How it Works

2. Once complete, a set of pairing keys will be displayed next to the VLAN attachment names.
   a. Click on the ‘Copy’ icon button just to the right of the pairing-key and save it somewhere (e.g. Notepad, Slack, etc.). (Figure A)
   b. You will be required to enter and validate the pairing-keys when you order your Open Cloud Exchange EVCs.

3. (Optional) Pre-activate these VLAN attachments: Check the box next to ‘Enable’. (Figure B)
   • Note - You can pre-activate the VLAN attachments later.

4. Click on the ‘OK’ button. (Figure C)

Creating a Single VLAN Attachment

1. Select the radio button next to ‘Create a single VLAN (no redundancy)’ and complete the following fields (Figure 6):
   a. VPC Network: Choose a previously created VPC network from the drop-down menu.
   b. Region: Choose the appropriate region from the drop-down menu.
   c. VLAN, Cloud Router: Choose a previously created Cloud Router from the drop-down menu.
   d. VLAN attachment name: Name the VLAN attachment. All lower case, no spaces, and up to 62 characters.
   e. (Optional) Description: Provide a description of the VLAN attachment.
How it Works

f. Click on the ‘Create’ button.

2. Once complete, a pairing-key will be displayed next to the VLAN attachment name.
   a. Click on the ‘Copy’ icon button just to the right of the pairing-key and save it somewhere (e.g. Notepad, Slack, etc.). (Figure 7A)
   b. You will be required to enter and validate the pairing-key when you order your Open Cloud Exchange EVC.

3. (Optional) Pre-activate these VLAN attachments: Check the box next to ‘Enable’ (Figure 7B)
   • Note - You can pre-active the VLAN attachment later.

4. Click on the ‘OK’ button (Figure 8C).
How it Works

5. The newly created VLAN attachment will now be listed within the ‘VLAN attachments’ tab. (Figure 8A)

6. Under the ‘Status’ column, the state will be listed as: Waiting for service provider. (Figure 8B)

Add a Redundant VLAN to an Existing VLAN

1. Select the radio button next to ‘Add a redundant VLAN to an existing VLAN’. Complete the following fields:
   a. Select VLAN attachment: From the drop-down the menu, choose an existing VLAN attachment that you want to provide redundancy to. The new VLAN that you create will use the same region and network, making a redundant pair.
   b. Redundant VLAN, Cloud Router: Choose a previously created Cloud Router from the drop-down menu. The Cloud Router that’s grayed out (not selectable) means it already assigned to the redundant VLAN attachment.
      i. VLAN attachment name: Name the VLAN attachment. All lower case, no spaces, and up to 62 characters.
      ii. (Optional) Description: Provide a description of the VLAN attachment.
How it Works

iii. Click on the ‘Create’ button.

2. Once complete, the pairing-key will be displayed next to the VLAN attachment name.
   a. Click on the ‘Copy’ icon button just to the right of the pairing-key and save it somewhere (e.g. Notepad, Slack, etc.). (Figure 10A)
   b. You will be required to enter and validate the pairing-key when you order your Open Cloud Exchange EVC.

3. (Optional) Pre-activate these VLAN attachments: Check the box next to ‘Enable’. (Figure 10B)
   • Note - You can pre-active the VLAN attachment later.

4. Click on the ‘OK’ button. (Figure 10C)

5. The newly created VLAN attachment will now be listed within the ‘VLAN attachments’ tab. (Figure 11A)
How it Works

a. Under the ‘Status’ column, the state will be listed as: Waiting for service provider. (Figure 11B)

5. The newly created VLAN attachment will now be listed within the ‘VLAN attachments’ tab. (Figure 11A)

   a. Under the ‘Status’ column, the state will be listed as: Waiting for service provider. (Figure 11B)

6. When your VLAN Attachment is completed, your Google Pairing Key will appear next to your VLAN Attachment Name(s) and will be required to complete the next step in creating your EVC in the CoreSite Portal:
STEP TWO: ORDERING YOUR OPEN CLOUD EXCHANGE EVC

1. Login to the MyCoreSite customer portal
2. Select Order Services & Support
3. Choose Interconnection
4. Order OCX
5. Select EVC
6. Click Order

NEW EVC(S) ORDER FORM – Google

1. Input Contact Information
   a. Select Account and Site
   b. Enter the Point of Contact (Up to 5 contacts)
2. Select Target
   a. Account – Google Cloud Platform Interconnect
   b. Google Pairing Key – Captured in Figure 8; note your pairing key identifies your edge domain
   c. Port – Select target port
3. Enter Buyer Details
How it Works

a. Port – Populate buyer port
b. Buyer VLAN (Available range: 400-899 or leave blank for auto selection)
c. Service Rate
   i. 50, 100, 200, 300, 400 or 500 Mbps
   ii. 1, 2, 5 or 10 Gbps
d. Name your EVC
e. Enter a Description

4. Agree to Terms and Conditions
5. Press Submit Order
How it Works

STEP THREE: CONFIRM THE ATTACHMENT

1. After submitting the order, the EVC(s) will be configured and confirmation emails are sent to the buyer and target with the connection details including the relevant buyer and target VLAN information.

2. Within the GCP portal the state will change to one of the following after the EVC provisions successfully.
   
   a. VLAN attachment not pre-activated: Activation needed

   ![VLAN attachment table]

   a. VLAN attachment pre-activated: BGP configuration needed

   ![BGP configuration needed]

Creating a Layer 3 Connection to Google

Navigating to the EVC Order Form

1. Follow steps 1-4 in the “ordering OCX services” section to navigate to the Port ordering page.

2. Click on the “EVC” tile and click “continue”.

3. On the next screen, select the tile that displays “Connect to a service provider or other OCX participant”.

4. Select the tile that displays “Connect to a Service provider” and click “Continue”.

5. Next, select the tile labeled “Layer 3 Connection”. Click “Continue”.

![Layer 3 Connection to Google]

![EVC Order Form]
How it Works

Completing the EVC Order Form

Part 1: Fill out the required data fields in the EVC order form:

1. **Select Provider you wish** to connect to. In this case select Google Cloud

![Select a Service Provider Target](image)

2. Select the Target Location

3. Redundancy: Select whether your connection requires a single VLAN or a redundant VLAN attachment. *Please note: Creating a redundant VLAN attachment will result in two EVC’s being created.*

4. Select Buyer Account

5. Select the desired Virtual Router

6. Provide a unique name for your EVC

7. (Optional) Specify an Invoice Label

8. Specify the service rate desired

9. Click the “Validate and Continue” button to proceed

Part 2: Complete the Layer 3 Peering Details and Credentials

1. Provide the New Cloud Subnet in CIDR Format

2. Select the GCP Region

3. Provide the GCP Project

4. Provide the Service Account Credentials in proper JSON format
How it Works

(Optional) Part 3: Provide prefix details. You may enter up to 100 prefixes.

1. Select the policy you wish to apply to the prefix
2. Provide the peer network address in CIDR form
3. Select the desired range: “Exact” or “Range”
   - If you select range, provide the “Start” and “End” of the range
4. Repeat steps 1-3a for any additional prefixes provided
   - Click the “+” button to add more prefixes
5. Click “Review Order”

Part 4: Add contact information and review your order

1. Enter valid contact information for this request
2. Review all data parameters associated with the EVC Request. If any information is incorrect or changes need to be made, users may click the “Back” button and make the necessary changes.
3. After confirming all information is accurate check the Terms and Conditions check box
4. Click “Submit Order”
How it Works

After completing step 4, the order will be submitted and automated provisioning will begin. No other action is required at this time.

Google (GCP) Credentials

The CoreSite OCX utilizes programmatic access to accept your hosted connection and BGP sessions on your behalf. To create layer 3 connections to Google, users are required to provide the GCP Region, GCP Project, and their Service Account Credentials. These access keys are created and stored in the Google Portal.

- **GCP Region** - This field represents the Google Region in which the Virtual Router will be created in. CoreSite's currently only supporting regions in the United States.

- **GCP Project** - This field represents the Google Project in which the Cloud Resources will be created and stored in.
  - For more information on GCP Projects: [https://cloud.google.com/storage/docs/projects#--text=A%20project%20organize%20all%20your%20monitoring%20settings%20for%20those%20APIs](https://cloud.google.com/storage/docs/projects#--text=A%20project%20organize%20all%20your%20monitoring%20settings%20for%20those%20APIs)

- **Service Account Credentials** – This field requires users to provide their Google service account keys. The account keys provided serve as authentication allowing CoreSite to create Google Cloud Resources on the user’s behalf. CoreSite requires information be provided in JSON Format.
  - For more information on Service Account Keys: [https://cloud.google.com/iam/docs/creating-managing-service-account-keys](https://cloud.google.com/iam/docs/creating-managing-service-account-keys)

**Steps to obtaining your GCP Service Account Credentials:**

1. Log into the Google Cloud Console: https://console.cloud.google.com
2. Navigate to the Menu pane on the top left corner of the page
How it Works

- Locate the "IAM & Admin" tab
- Click "Service Accounts"

3. Select the Google project that you wish to use. If you do not have an existing project, you will need to create one.

4. On the Service accounts page, click the email address of the service account whose keys you want to view.

5. Click the "Keys" tab. The Google Cloud console will display a list of keys for the service account.

Steps to Creating your GCP Service Account Credentials:

1. Log into the Google Cloud Console: https://console.cloud.google.com

2. Navigate to the Menu pane on the top left corner of the page
   a. Locate the "IAM & Admin" tab
   b. Click "Service Accounts"

3. Select the Google project that you wish to use.

4. On the Service accounts page, click the email address of the service account that you want to create a key for.

5. Click the "Keys" tab.

6. Click "Add Key"
   a. Then click "Create new key"

7. Select JSON as the Key type and click "Create".
   b. NOTE: Clicking Create downloads a service account key file. After you download the key file, you cannot download it again.
Creating a Layer 2 Connection to Oracle

This section outlines the process to create Oracle FastConnect circuits in the Oracle Console using an Oracle Provider and how to provision L2 circuits (EVCs) to Oracle FastConnect using the CoreSite Open Cloud Exchange®. Before this process can begin, the Open Cloud Exchange® port(s) must be operational, and the customer must have an active Oracle account.

**STEP 1: ORACLE CLOUD CONSOLE**

Prior to ordering your EVC from CoreSite you must create your virtual circuit(s) in the Oracle Cloud Console. To login into the console, you can click here. When creating your virtual circuits, you will be given the option to create public or private circuits. For detail on how to create your virtual circuit see below:
How it Works

Creating a Virtual Circuit

1. From the Dashboard, click on the menu icon (bars) at the top left corner of the screen to reveal the menu blade. (Figure 1A)

   a. Under ‘Core Infrastructure’, select ‘Networking’ and then click on ‘FastConnect’. (Figure 1B)
How it Works

2. Click on the ‘Create FastConnect’ button.

Figure 2

[Image of the Oracle Cloud FastConnect Connections in CoreSite interface]
How it Works

3. Choose ‘Use Oracle Provider’. (Figure 3A)
   a. Choose ‘CoreSite: Open Cloud Exchange®’ in the ‘PROVIDER’ drop-down menu. (Figure 3B)
   b. Click the ‘Next’ button.

NOTE:
From here you will either chose a PUBLIC or PRIVATE VIRTUAL CIRCUIT. Please refer to either the Private or Public Virtual Circuit ordering in the following steps.

ORDERING A PRIVATE VIRTUAL CIRCUIT (SEE PAGE 5 FOR ORDERING A PUBLIC VIRTUAL CIRCUIT)

1. Choose ‘Private Virtual Circuit’ under ‘VIRTUAL CIRCUIT TYPE’. Complete the following fields accordingly (Figure 4A):

<table>
<thead>
<tr>
<th>Name (Optional):</th>
<th>Name the FastConnect virtual circuit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compartment:</td>
<td>Choose the appropriate compartment. This is where the FastConnect circuit will be provisioned.</td>
</tr>
</tbody>
</table>
## How it Works

**Dynamic Routing Gateway In (Compartment Name here):**

Choose an existing Dynamic Routing Gateway (aka DRG).

**Provisioned Bandwidth:**

Choose your desired bandwidth. The choices are 1, 2, 5 or 10 Gbps.

---

![Private VC](image)

**Figure 4**

Private VC
## How it Works

<table>
<thead>
<tr>
<th>Customer BGP IP Address:</th>
<th>Enter a private IP address (within RFC-1918 range) for your on-premises router:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. This needs to be a /30 subnet (255.255.255.252) and will be the last host.</td>
</tr>
<tr>
<td></td>
<td>2. Must be in a CIDR format (e.g., 10.0.0.22 /30).</td>
</tr>
<tr>
<td></td>
<td>3. If the IP address is already in use within the selected DRG (see Step 4c), it will inform you before you can proceed to create the FastConnect circuit. (Figure 5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oracle BGP IP Address (Optional):</th>
<th>Enter a private IP address (within RFC-1918 range):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. This needs to be a /30 subnet (255.255.255.252) and will be the first host.</td>
</tr>
<tr>
<td></td>
<td>2. Must be in a CIDR format (e.g., 10.0.0.21 /30).</td>
</tr>
<tr>
<td></td>
<td>3. If the IP address is already in use within the selected DRG (see Step 4c), it will inform you before you can proceed to create the FastConnect circuit. (Figure 5)</td>
</tr>
</tbody>
</table>

**Figure 5**

Private VC

![IP Network 10.0.0.20/30 is already in use on DRG](image)
How it Works

Customer BGP ASN:

Enter an AS number belonging in the private range (e.g., 64555). h.
(Optional) USE A BGP MD5 AUTHENTICATION KEY: Check mark the box if your system requires MD5 authentication. (Figure 6A)

1. If you choose to select this option, a field will appear where you must enter the BGP MD5 authentication key. (Figure 6B)
   a. Click on the ‘Create’ button. (Figure 4B)

2. Wait for the FastConnect virtual circuit to be created.

3. Once complete, an OCID key will be listed next to ‘OCID’ in an abbreviated format. (Figure 7A)
### How it Works

#### ORDERING A PUBLIC VIRTUAL CIRCUIT

(See page 3 for ordering a Private Virtual Circuit)

1. Choose ‘Public Virtual Circuit’ under ‘VIRTUAL CIRCUIT TYPE’. Complete the following fields accordingly: (Figure 8A)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (Optional):</td>
<td>Name the FastConnect virtual circuit.</td>
</tr>
<tr>
<td>Compartment:</td>
<td>Choose the appropriate compartment. This is where the FastConnect circuit will be provisioned.</td>
</tr>
<tr>
<td>Provisioned Bandwidth:</td>
<td>Choose your desired bandwidth. The choices are 1, 2, 5 or 10 Gbps.</td>
</tr>
<tr>
<td>Public IP Prefixes (Optional):</td>
<td>Enter the list of public IP prefixes you own to advertise over this virtual circuit. (Figure 8B)</td>
</tr>
<tr>
<td></td>
<td>1. You can add public IP prefixes later within the FastConnect virtual circuit.</td>
</tr>
<tr>
<td></td>
<td>2. Oracle will verify ownership of each prefix.</td>
</tr>
<tr>
<td></td>
<td>3. Maximum 50 prefixes.</td>
</tr>
<tr>
<td></td>
<td>4. Use a comma-separated list or one prefix per line.</td>
</tr>
<tr>
<td>Customer BGP ASN:</td>
<td>Enter your AS number. (Figure 8C)</td>
</tr>
<tr>
<td>Use BGP MD5 Authentication Key:</td>
<td>Checkmark the box if your system requires MD5 authentication. (Figure 9A)</td>
</tr>
<tr>
<td></td>
<td>1. If you choose to select this option, a field will appear where you must enter the BGP MD5 authentication key. (Figure 9B)</td>
</tr>
</tbody>
</table>
How it Works

2. Click on the ‘Create’ button. (Figure 8D)

3. Wait for the FastConnect virtual circuit to be created.

4. Once complete, an OCID key will be listed next to ‘OCID’ in an abbreviated format. (Figure 10A)
   a. Click on the ‘Copy’ button just to the right of the OCID key and save it somewhere (e.g., Notepad, Slack, etc.). (Figure 10B);
   b. You will be required to enter and validate the OCID key when you order your Open Cloud Exchange® EVC;
   c. The Lifecycle State will be ‘Pending Provider’. (Figure 11B);
How it Works

d. The newly created FastConnect virtual circuit will now be listed within the FastConnect dashboard. (Figure 11A)

STEP 2: ORDERING YOUR OPEN CLOUD EXCHANGE® EVC

1. Login to the MyCoreSite customer service delivery platform.
2. Select Order Services and Support.
3. Choose Interconnection.
4. Order OCX.
5. Select EVC.
6. Click Order.
How it Works

New EVC(s) Order Form: Oracle

1. Input Contact Information:
   a. Select Account and Site;
   b. Enter the Point of Contact (Up to 5 contacts).

2. Select Target:
   a. Account: Oracle Cloud FastConnect;
   b. Oracle Cloud Identifier (OCID): Captured in Figure 7;
   c. Port: Select target port 3. Enter Buyer Details;
   d. Port: Populate buyer port;
   e. Buyer VLAN (Available range: 400-899 or leave blank for auto selection);
   f. Service Rate: 1, 2, 5 or 10 Gbps;
   g. Name your EVC;

3. Enter a Description

4. Agree to Terms and Conditions

5. Press Submit Order
How it Works

STEP 3: CONFIRMING YOUR CIRCUIT

1. After submitting the order, the EVC(s) will be configured, and confirmation emails are sent to the buyer and target with the connection details including the relevant buyer and target VLAN information.
How it Works

2. After you’ve ordered your EVC in the CoreSite Customer Service delivery platform you will see your Virtual Circuit in the Oracle Cloud Console turn green and listed as “Provisioned”.

Creating a Layer 3 Connection to Oracle

NAVIGATING TO THE EVC ORDER FORM

1. Follow Steps 1 to 4 in the “ordering OCX services” section to navigate to the Port ordering page.
2. Click on the “EVC” tile and click “continue”.
3. On the next screen, select the tile that displays “Connect to a service provider or other OCX participant”.
4. Select the tile that displays “Connect to a Service provider” and click “Continue”.
5. Next, select the tile labeled “Layer 3 Connection”. Click “Continue”.

COMPLETING THE EVC ORDER FORM

Part 1: Fill out the required data fields in the EVC order form:

1. Select Provider you wish to connect to. In this case select Oracle.
2. Select the Target Location
3. The Peering Type will be defaulted to Private Peering. CoreSite OCX currently does not support Public Peering
4. Select Buyer Account
5. Select the desired Virtual Router
How it Works

6. Provide a unique name for your EVC
7. (Optional) Specify an Invoice Label
8. Specify the service rate desired
9. Click the “Validate and Continue” button to proceed

Part 2: Complete the Layer 3 Peering Details:

1. Provide the New Cloud Subnet in CIDR Format.
2. Select the OCI Region.
3. Provide OCI Compartment ID.
4. Provide your Tenancy OCID.
5. Provide your User OCID.
6. Provide your OCI Key Pair Fingerprint.
7. Provide your OCI Key Pair Private Key.

Part 3 (Optional): Provide prefix details. You may enter up to 100 prefixes:

1. Select the policy you wish to apply to the prefix.
2. Provide the peer network address in CIDR form.
3. Select the desired range: “Exact” or “Range”:
   - If you select range, provide the “Start” and “End” of the range.
4. Repeat steps 1-3a for any additional prefixes provided:
   - Click the “+” button to add more prefixes.
5. Click “Review Order”.

NOTE:
There are additional steps required inside the Oracle Console to compete dynamic routing. Please the “Oracle Console Routing” section.
How it Works

Part 4: Add contact information and review your order:

1. Enter valid contact information for this request.

2. Review all data parameters associated with the EVC Request. If any information is incorrect or changes need to be made, users may click the “Back” button and make the necessary changes.

3. After confirming all information is accurate check the Terms and Conditions check box.

4. Click “Submit Order”.

After completing Step 4 the order will be submitted, and automated provisioning will begin. No other action is required at this time.

ORACLE CONSOLE ROUTING: SETTING UP ROUTING TABLES INSIDE THE ORACLE CONSOLE TO ALLOW COMMUNICATION BETWEEN ENVIRONMENTS

There are additional steps required from the user to set up routing policies between different environments within Oracle. Oracle Cloud requires users to also input routing information in the “route table” of their Virtual Cloud Network (VCN). Follow the steps outlined below to complete routing policies to/from your Oracle environment:

1. Log into the Oracle Console using your Cloud Tenant, username, and password. You will be redirected to the Oracle Cloud home page.

2. Click the menu pane at the top left corner of the screen and locate the “Networking” section.
   a. Under the networking section click “Virtual Cloud Networks”.

3. Locate and click the Virtual Cloud Network you wish to make changes to
How it Works

4. A new page will appear providing information about the Virtual Cloud Network (VCN). From here locate and click the “Route Tables” hyperlink on the left hand side of the page.

5. Locate the route table you wish to make changes to or click “create route table”.

6. A page will appear providing information about the Routing Table. From here, users will be able to add/change/modify routing policies as needed.

Oracle Credentials

Gather your Oracle Credentials by Logging into the Oracle Console.

Oracle credentials required:

- **OCI Region**: a localized geographic area and where your OCI tenancy exists. Users will need to select the correct region associated with their Tenancy. The subsequent API Credentials are unique to your OCI region.

- **OCI Compartment ID**: A compartment is a collection of related resources (such as cloud networks, compute instances, or block volumes) that can be accessed only by those groups that have been given permission by an administrator in your organization. Users will need to provide the correct OCI Compartment ID.

- **Tenancy OCID**: A secure and isolated partition within Oracle Cloud Infrastructure (OCI) where you can create, organize, and administer your cloud resources. When you sign up for OCI, a tenancy is created for your company. Tenancy also refers to the root compartment that contains all of your organizations compartments and other OCI resources. Users will need to provide the Tenancy OCID.

- **User OCID**: This value represents the OCID of the user submitting the request. Oracle assigns each user a unique ID. Users will need to provide the User OCID.
How it Works

- **Fingerprint:** This value represents the fingerprint of the Oracle key pair. Key pairs are used to authenticate a remote user and contain a private key and public key. Users will need to provide the Fingerprint.

- **Private Key:** This field represents the private key portion of the Oracle key pair. Users will need to provide the Private Key.

For additional information please visit the [Oracle Cloud Infrastructure Documentation](https://docs.oracle.com/en-us/iaas/Content/API/Concepts/console.htm) page.

**Steps to obtaining your Oracle Cloud Service Account Credentials:**

**OCI Region**

7. Log into the Oracle Console using your Cloud Tenant, username, and password. You will be redirected to the Oracle Cloud home page.

8. The current tenancy region can be located in 2 ways:
   a. Navigate to the top of the page and locate the region which is displayed in the URL:

   ![console.us-ashburn-1.oraclecloud.com](image)

   b. In the top right corner of the page, locate the region display name:

   ![US West (Phoenix)](image)
How it Works

OCI Compartment ID

9. In the Oracle Portal, navigate to the top left corner of the screen and click the menu icon.
10. Click on “Identity and Security”
11. Click on “Compartments”
12. A list of Compartments will be presented on the page. Locate the compartment you wish to use and hover over the “OCID” column. Click the “Copy” hyperlink that is presented in the modal window that appears.

Tenancy OCID

1. In the Oracle Portal, navigate to the top right corner of the screen and click the profile icon.
2. Click on “Tenancy: “user””. New page will appear containing your tenancy details.
3. Under the “Tenancy Information” section, in the OCID field click on “copy”. Your user OCID information will be copied.
How it Works

User OCID

1. In the Oracle Portal, navigate to the user profile on the top right corner of the screen and click on the picture.
2. Click on the user name. A new page will appear containing your user details.
3. Under the “User Information” section, in the OCID field click on “copy”. Your user OCID information will be copied.

Fingerprint and Private Key

1. In the Oracle Portal, navigate to the user profile on the top right corner of the screen and click on the picture.
2. Click on “User Settings”
3. Navigate to the lower left hand corner. Under the “Resources” section, locate and click on “API Keys”
4. A list of API keys will be displayed in the table. Click “Add API Key”.
   a. Note, adding an API key will generate a new set of API keys. If you wish to use an existing API Key, you may do so.
5. A modal window will appear. Click/select “Generate API Key Pair”
6. Click “Download Private Key”. **NOTE: the private key can be only downloaded One Time. Once downloaded, ensure that the key is stored in a secure location.**
7. Click “Add”
How it Works

8. A configuration file will appear in the modal window containing the required API Keys including the Fingerprint. You may copy the Fingerprint here if you wish. Click “close”

9. You may also obtain the fingerprint in the API key table if needed.
Creating a Connection to an OCX Participant

NOTE:
At this time, only Layer 2 EVCs are supported between OCX participants

NAVIGATING TO THE EVC ORDER FORM

1. Follow Steps 1 to 4 in the “ordering OCX services” section to navigate to the Port ordering page.
2. Click on the “EVC” tile and click “continue”.
3. On the next screen, select the tile that displays “Connect to a service provider or other OCX participant.”
How it Works

4. Select the tile that displays “Connect to an OCX Participant” and click “Continue”.

COMPLETING THE EVC ORDER FORM

Part 1: Fill out the required data fields in the EVC order form:

1. Select Account.
2. Select Site.
3. Confirm Contact detail information.
4. (Optional) Add additional contacts.
5. Select the target account.
6. Select the target port.
7. Select the buyer port.
8. (Optional) Specify a VLAN.
9. Select the desired Service Rate.
How it Works

10. Provide a unique name for your EVC.
11. (Optional) provide a reference label and number.
12. Provide a Description. If a description is not needed then please enter “N/A”.
13. Agree to the terms and conditions.
14. Click “Submit Request”.

After completing Step 14, the order will be submitted and automated provisioning will begin. No other action is required at this time.

Enabling Layer 3 Connections between Different Cloud Environments

PREREQUISITES

1. An existing (Active) Virtual Router.
2. Understand how you would like to set up your IP space.
3. Cloud Provider 1 Subnet.

To enable connectivity between cloud providers, follow the steps outlined below:

<table>
<thead>
<tr>
<th>Step 1:</th>
<th>Create a Layer 3 EVC to the first cloud service provider.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2:</td>
<td>Create a Layer 3 EVC to the second cloud service provider.</td>
</tr>
<tr>
<td>Step 3:</td>
<td>Tie your networks together using Dynamic Routing.</td>
</tr>
</tbody>
</table>

EXAMPLE USE CASE

This example will provide a walkthrough of how to enable cloud to cloud connectivity between AWS and Microsoft Azure. We will assume that AWS is the first cloud provider and Microsoft Azure as the second (Secondary) cloud provider.
## How it Works

**STEP 1: CREATE A LAYER 3 EVC BETWEEN YOUR VR AND AWS**

Follow the detailed steps located in the section of this document titled “Creating a Layer 3 connection to AWS”. Once all steps are completed, automated provisioning will take place to build your EVC to AWS. Upon successful automated provisioning, your EVC will show an “Active” status.

### Virtual Connection Order Summary

#### CAS-121654

- **Provisioning**: Your EVC is currently being provisioned

### Review Layer 3 EVC Order Details

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>Target Location</th>
<th>Target Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWS</td>
<td>Microsoft ExpressRoute (New York)</td>
<td>CH1.05.MOF.05.COR.01-IF 03-SFP+ 08.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AWS Account ID</th>
<th>Virtual Interface Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
</tr>
</tbody>
</table>

### Buyer Details

- **Buyer Account**: Acme Inc. - LA1
- **Virtual Router**: MyVR | CAS-121654

### Service Details

<table>
<thead>
<tr>
<th>Service Number</th>
<th>Status</th>
<th>Service Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVC-00109965</td>
<td>Active</td>
<td>9/6/2018</td>
</tr>
</tbody>
</table>

- **Monthly Recurring Cost**: $500.00
- **AS Number**: 46634
- **IP Address**: 10.46.129.46

### Contact Info

- **Point of Contact**: John Smith
- **Email**: example@mail.com
- **Phone Number**: (123) 456-7691
How it Works

STEP 2: CREATE A LAYER 3 EVC BETWEEN YOUR VR AND MICROSOFT AZURE

Follow the detailed steps located in the section of this document titled “Creating a Layer 3 connection to Azure”. Once all steps are completed, automated provisioning will take place to build your EVC to Azure. Upon successful automated provisioning, your EVC will show an “Active” status.

STEP 3: SET UP DYNAMIC ROUTING TABLES TO ALLOW COMMUNICATION BETWEEN CLOUD ENVIRONMENTS

This step in the process outlines the necessary steps that need to be taken for traffic to flow from one cloud environment to another.

1. Navigate to the OCX Dashboard and locate the EVC inventory screen.
How it Works

2. Select the EVC in which you wish to enable cloud to cloud connectivity and click the hyperlinked service number.

3. Click the “Routing Policies” tab.

4. To add a new prefix, click the “Add New Prefix” button. To modify an existing entry, locate the prefix and click the “Edit” button.

5. A modal window will appear for users to make changes to their routing table.

6. In the policy field, select “Import” and enter the subnet associated to the first cloud environment:
   a. For this example, we are enabling connectivity between an AWS (1) and Microsoft Azure (2) cloud environment. This step requires users to provide the AWS subnet. The policy type to apply should be set an import policy.

7. Select the network range.

8. Click the “+” button to have another row generated.

9. In the policy field, select “Export” and enter the subnet associated to the secondary Cloud environment:
   a. For this example, we are enabling connectivity between an AWS (1) and Microsoft Azure (2) cloud environment. This step requires users to provide the Azure subnet. The policy type to apply should be an export policy.
How it Works

10. Click the “Add” button. Once the “Add” button is clicked, the information will be saved and applied to your EVC.

11. Repeat Steps 1 to 10 for the Microsoft Azure EVC (or secondary EVC). Steps 1 to 10 must be completed for the secondary cloud provider EVC to complete the routing table between both cloud environments.

12. After all steps are complete for both EVCs, the process will be complete and the two cloud environments can begin exchanging traffic.

NOTE:
Setting up routing policies for your prefixes can be done at the time of EVC creation or after users have submitted their EVC requests.
How it Works

Managing Your Services

OCX DASHBOARD

The OCX Dashboard provides users with a comprehensive view of all services created on the Open Cloud Exchange®. In this view, users can manage their connections and view the details of their respective OCX products.
How it Works

Navigating to the OCX Dashboard

1. Navigate to the menu pane on the left-hand side of the screen.
2. Click “Inventory”.
3. Click “OCX Dashboard”.

INVENTORY VIEW

The inventory view provides users the ability to manage and take action on the OCX products associated with their account. In this view, users can view their ports, Virtual Routers, and EVCs.

Toggling Between Different Products

To view different products, click on the different tabs displayed on screen.

<table>
<thead>
<tr>
<th>Ports:</th>
<th>Comprehensive view of all Port Services with your account.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Routers:</td>
<td>Comprehensive view of all Virtual Router Services with your account.</td>
</tr>
<tr>
<td>EVCs:</td>
<td>Comprehensive view of all EVCs with your account.</td>
</tr>
</tbody>
</table>

MONITORING

The monitoring view provides users with information regarding traffic information on their active ports.
How it Works

To View Monitoring information

1. Click the “Monitoring” tab at the top of the screen.

2. Select the correct service type: Click the “Ports” or “EVCS” tab.

3. Locate the Service in the table presented:
   a. You may also utilize the “Search” function in the top right-hand side of the screen.

4. Once you have located the service, click “View Monitoring”.

---

DISCONNECTING YOUR SERVICES

To disconnect a service, users must navigate to the “Service Details” page for the service in question. Follow the steps below to navigate to the “Service Details”.

Navigating to the Service Details Page

1. Navigate to the Inventory screen of the OCX Dashboard.

2. Select the Service Type: Ports, Virtual Routers, or EVCS.
3. Locate the service you wish to disconnect and click the Hyperlinked Service Number in the “Service Number” column.

NOTE:
Only “Active” services can be disconnected.

1. Once the Service Details Page is presented, scroll to the down page, and click the “Disconnect” button.

2. Users will then be prompted to fill out additional fields associated with the disconnect request.

3. Confirm Point of Contact information and add additional contacts if desired.

4. Complete the “Disconnect Details” section of the form.

5. Agree to the Terms and Conditions.

6. Click “Submit Request”.

NOTE:
Complete Steps 1 to 9 for each service that you wish to disconnect.
How it Works

Routing Tables and Management

NOTE:
The OCX only supports Private IP address space at this time.

STATIC ROUTES

Users can manage their Static Route Tables via the Virtual Router Service Details. To Navigate to the Virtual Router Service Details, follow the steps below:

1. Navigate to the menu pane on the left-hand side of the screen.
2. Click “Inventory”.
3. Click “OCX Dashboard”.
4. From there, select the Virtual Router product.
5. Navigate to the Virtual Router service you wish to modify and click on the hyperlinked service number. This will lead you to the Virtual Router Service Details page.
6. Once you are in the Virtual Router Service Details page, click on “Routing Tables”.

INVENTORY MONITORING

My Ports (30)

PORTS VIRTUAL ROUTERS EVCS
How it Works

7. From there, users will be able to add new routes, edit existing routes, or delete existing routes.

NOTE:
There may be additional steps required by the Cloud Provider to establish Dynamic Routing. Please check with your Cloud Provider for any additional requirements.
How it Works

Adding New Static Routes

To add new Static routes:


2. Next, provide the Network Address in CIDR Format.
3. Provide the next hop IP address.

1. (Optional) Users may click on the “+” button to add more static routes:
   a. Clicking the “Clone” button will automatically add another instance of the static route that is cloned.

2. After all Static Routes are entered, click the “Add” button on the bottom right corner to save the routes and apply the changes to your Virtual Router.
How it Works

Deleting a Static Route

To delete a Static route:

1. Navigate to the Virtual Router Service Details Page.
2. Locate the Static Route that you wish to delete in the routing table.
3. Click the “Delete” button.
4. Confirm that you wish to delete the static route and click “Yes, Delete”.

After completing Step 4, the static route will be deleted from the routing table.

Editing an Existing Static Route

To edit / modify an existing Static route:

1. Navigate to the Virtual Router Service Details Page.
2. Locate the Static Route that you wish to delete in the routing table.
3. Click the “Edit” button. A modal window will appear and allow changes to be made to the existing static route.
How it Works

4. After making the desired changes, click the “Save” button.

After Step 4, the changes made to the static route will be applied.

DYNAMIC ROUTING

Prefixes

Users can manage their Dynamic Route Tables via the EVC Service Details. To Navigate to the EVC Service Details, follow the steps below:

1. Navigate to the Inventory screen of the OCX Dashboard.
2. Select the “EVC” Tab.
3. Locate the service you wish to apply changes to and click the Hyperlinked Service Number in the “Service Number” column. After clicking the hyperlinked Service Number, the Service Details Page will be presented.

NOTE:
The OCX only supports Private IP address space at this time.
How it Works

4. Next, select the “Routing Policies” Tab at the top the page.

From this screen, users will be able to add new prefixes or modify / delete any existing prefixes.

Adding New Prefixes

1. Navigate to the Layer 3 EVC Service Details Page.
2. Click “Add New Prefix”. A modal window will appear, and users will be prompted to fill out additional fields associated with the prefix add.
3. Select the policy to be applied to the prefix.
4. Enter the peer network in CIDR format.
5. Select the Network Range:
   a. If “range” is selected, provide the range start and end.
6. (Optional) Users may click on the “+” button to add more static routes:
   a. Clicking the “Clone” button will automatically add another instance of the static route that is cloned.
How it Works

7. After all Prefixes are entered, click the “Add” button on the bottom right corner to save the routes and apply the changes to your EVC.

Deleting a Prefix

To delete a prefix:

1. Navigate to the Layer 3 EVC Service Details Page.
2. Locate the prefix that you wish to delete in the routing table.
3. Click the “Delete” button.
4. Confirm that you wish to delete the static route and click “Yes, Delete”.

After completing Step 4, the prefix will be deleted from the routing table.
EDITING AN EXISTING STATIC ROUTE

To edit / modify an existing Static route:

1. Navigate to the Layer 3 EVC Service Details Page.
2. Locate the prefix that you wish to modify in the routing table.
3. Click the "Edit" button. A modal window will appear and allow changes to be made to the existing prefix.
4. After making the desired changes, click the "Save" button.
How it Works

After completing Step 4, the changes made to the prefix will be applied.

RESTRICTED IP RANGES

When setting up dynamic routing, it is important to be aware of the restricted IP ranges that are not available for use. There are two IP address blocks that are restricted:

**172.31.0.0 / 16**
This block is reserved for Virtual Router Loopback IP addresses.

**169.254.0.0 / 16**
This block is reserved for use of link-local IPv4 address space for BGP peering between virtual routers and the cloud provider infrastructure(s).

All other IP ranges are supported by CoreSite and are available for customer use.
Q: IS THERE REDUNDANCY BUILT INTO THE OPEN CLOUD EXCHANGE® NETWORK?

A: Yes. The Open Cloud Exchange® is a dual-edge and dual-core configuration for all sites, which ensures full redundancy in the network and maximizes uptime. This includes our campus and national architecture where we always have at least two diverse routes between data centers. Note: when customers order two ports in the same market, which we strongly recommend, we will provision the ports on separate switches to ensure full diversity.

Q: DOES THE OPEN CLOUD EXCHANGE® SUPPORT 802.1AD (AKA QINQ) ENCAPSULATION OR STACKED TAGS?

A: No. The Open Cloud Exchange® only supports 802.1Q (aka dot1q).

Q: AFTER PROVISIONING MY EVC IN THE CORESITE SERVICE DELIVERY PLATFORM, WHICH VLAN SHOULD I USE WHEN CONFIGURING MY ROUTER?

A: Once an EVC has been provisioned, the buyer and target VLAN IDs will be provided. When setting up your own router, you will use the Buyer (your) VLAN ID. Note – when finalizing your peering sessions with some cloud providers, you will also need to know the Target (CSP) VLAN ID, which can be found in a confirmation email when your EVC is ordered and can also be found in the MyCoreSite customer service delivery platform on The Open Cloud Exchange® Dashboard.

Q: DO YOU SUPPORT CONNECTIVITY BETWEEN OTHER CORESITE LOCATIONS AND MARKETS THROUGH THE OPEN CLOUD EXCHANGE®?

A: Yes. Once connected to The Open Cloud Exchange®, the buyer can provision EVCs to all CoreSite locations through our inter-market connectivity. This provides a convenient option to connect your deployments with CoreSite across the county, connect to diverse cloud regions / zones and gain access to CoreSite’s nationwide ecosystem.

Q: WHAT IF I WANT TO CONNECT TO A DIFFERENT OR DIVERSE CLOUD REGION?

A: Once connected to The Open Cloud Exchange® you will have access to all CoreSite locations through our inter-market connectivity, which will allow you to connect to multiple cloud regions / locations. See tables below showing cloud regions by location.

Q: IS A BGP (BORDER GATEWAY PROTOCOL) SESSION ESTABLISHED WITH CORESITE?

A: No. A BGP session is stood up between the buyer and the target customers.

Q: IS THE OPEN CLOUD EXCHANGE® MEF (METRO ETHERNET FORUM) COMPLIANT?

A: Yes. It is MEF 10.2 compliant using the UNI–to–UNI model.
Q: DOES THE OPEN CLOUD EXCHANGE® SUPPORT PROTECTED PORTS (LAG / LACP)?
A: Yes. The Open Cloud Exchange® supports dynamic LACP with the maximum of two ports in the LAG. LAG ports are set up as active / active.

Q: DO YOU SUPPORT JUMBO FRAMES? WHAT IS THE MAX MTU (MAXIMUM TRANSMISSION UNIT) SIZE?
A: Yes; the max MTU is 9100 bytes.

Q: WHAT ARE THE SERVICE LEVEL TARGETS FOR THE OPEN CLOUD EXCHANGE’S® UPTIME AND AVAILABILITY?
A: The Open Cloud Exchange® targets the below Service Level Targets. Please note: Service Level Agreements applicable to your use of OCX is governed by your MSA.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>99.999%</td>
</tr>
<tr>
<td>Frame Loss Ratio (FLR)</td>
<td>0.01%</td>
</tr>
<tr>
<td>Frame Delay (FD)</td>
<td>&lt;2 ms</td>
</tr>
<tr>
<td>Inter Frame Delay Variation (IFDV)</td>
<td>&lt;0.5 ms</td>
</tr>
<tr>
<td>Mean Time to Repair (MTTR)</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Q: WHAT CLOUD PROVIDERS AND AVAILABILITY ZONES CAN BE CONNECTED THROUGH THE OPEN CLOUD EXCHANGE® AND INTER-MARKET CONNECTIVITY?

<table>
<thead>
<tr>
<th>CoreSite Locations</th>
<th>Azure Location</th>
<th>Local Azure Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH1, CH2</td>
<td>Chicago</td>
<td>North Central US</td>
</tr>
<tr>
<td>DE1, DE2</td>
<td>Denver</td>
<td>West Central US</td>
</tr>
<tr>
<td>LA1, LA2, LA3</td>
<td>Los Angeles</td>
<td>N/A</td>
</tr>
<tr>
<td>NY1, NY2, B01</td>
<td>New York</td>
<td>N/A</td>
</tr>
<tr>
<td>SV1, SV2, SV3, SV4, SV7, SV8</td>
<td>Silicon Valley2</td>
<td>West US</td>
</tr>
<tr>
<td>VA1, VA2, VA3, DC1, DC2</td>
<td>Washington DC2</td>
<td>East US, East US2</td>
</tr>
</tbody>
</table>
### AWS DIRECT CONNECT (HOSTED CONNECTIONS)

<table>
<thead>
<tr>
<th>CoreSite Locations</th>
<th>Direct Connect Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>NY1, NY2, B01, VA1, VA2, VA3, DC1, DC2, MI</td>
<td>US East (N. Virginia)</td>
</tr>
<tr>
<td>CH1, CH2</td>
<td>US East (Ohio)</td>
</tr>
<tr>
<td>LA1, LA2, LA3, SV1, SV2, SV3, SV4, SV7, SV8</td>
<td>US West (N. California)</td>
</tr>
<tr>
<td>DE1, DE2</td>
<td>US West (Oregon)</td>
</tr>
</tbody>
</table>

### GOOGLE CLOUD PLATFORM

<table>
<thead>
<tr>
<th>CoreSite Locations</th>
<th>Cloud Interconnect Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA1, LA2, LA3</td>
<td>us-west2 (Los Angeles)</td>
</tr>
<tr>
<td>DE1, DE2</td>
<td>us-west4 (Las Vegas)</td>
</tr>
<tr>
<td>VA1, VA2, VA3, DC1, DC2</td>
<td>us-east4 (Virginia)</td>
</tr>
<tr>
<td>SV1, SV2, SV3, SV4, SV7, SV8, SV9</td>
<td>us-west1 (Oregon)</td>
</tr>
<tr>
<td>CH1, CH2</td>
<td>us-central1 (Iowa)</td>
</tr>
</tbody>
</table>

### ORACLE FAST CONNECT

<table>
<thead>
<tr>
<th>CoreSite Locations</th>
<th>Cloud Interconnect Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA1, LA2, LA3</td>
<td>Phoenix, AZ</td>
</tr>
<tr>
<td>VA1, VA2, VA3, DC1, DC2</td>
<td>Ashburn, VA</td>
</tr>
<tr>
<td>CH1, CH2</td>
<td>Ashburn, VA</td>
</tr>
</tbody>
</table>
Contact Us

CoreSite understands the importance of being available for our customers and recognizes the need to have our contact information easily accessible. Under the Contact Us tab, customers will find general contact information and specific contact information for the Sales Account Manager. Self-help tools are also available through Knowledge Base and Inquiries.

Knowledge Base

Knowledge Base is a searchable database of articles on a variety of topics including CoreSite policies and procedures, Rules and Regulations, Local data center Information, Data Center Best Practices, Any2 Policies, and certifications (SOC1, SOC2, ISO 270001). As we know our customers often prefer not to wait to get a response, the Knowledge Base directs users quickly to articles that will answer their questions.

Inquiries

In CoreSite’s new ticketing system, customers may submit an inquiry and track the status of the response on the homepage or under Activity History. Attachments and comments can be added by both the customer and CoreSite staff to offer complete information in a timely manner.

In the event of an emergency or if you require Remote Hands support, such requests are easily accessible on many pages throughout the service delivery platform.