# WaTech's Cloud Highway Frequently Asked Questions (FAQs)

1. **Question:**
Is the Equinix Cloud Exchange Portal exposed to the agency so that we can build our own off-ramps?

   **ANS**:
   No, the Equinix Cloud Exchange Portal is not exposed to agencies. The Equinix Cloud Exchange Portal is provisioned & managed by WaTech on behalf of agencies as part of WaTech's Cloud Highway Service.

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2. **Question**:
Can the bandwidth capacity of WaTech's cloud highway be ramped (scaled) up and down to meet customer demand(s)?

   **ANS**:
   Yes, the bandwidth of WaTech's Cloud Highway can be scaled per customer's demand.
   Caveats include, but are not limited to:
   - The bandwidth capacity of the Cloud Virtual Circuits must align with the bandwidth capacity of the associated ExpressRoute per Microsoft's Service Level Agreement (SLA). Thus, if you have an ExpressRoute with a bandwidth capacity of 500Mbps then the associated Cloud Virtual Circuit must align at 500Mbps.
   - Customers are responsible to work with their cloud service provider(s) to scale their cloud environment(s) accordingly.
   - A $600 change fee applies every time a customer requires to make changes to their Cloud Virtual Circuits.

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3. **Question**:
What bandwidth capacity tiers are available with WaTech's Cloud Highway Service for customers to choose from? Why are there not additional bandwidth capacity options available for customers to use?

   **ANS**:
   The bandwidth capacity tiers available with WaTech's Cloud Highway Service align with the bandwidth capacity tiers used by both Microsoft and Amazon Web Services (AWS) which are:
   - 50Mbps
   - 200Mbps
   - 500Mbps
   - 1Gbps
   - 10Gbps

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4. **Question**:
   When will WaTech work to upgrade the capacity of the cloud highway? What triggers WaTech to upgrade the Ethernet circuits supporting WaTech's Cloud Highway? What is the threshold(s) that WaTech uses to initiate capacity increases?

   **ANS**:
   WaTech uses a 70% utilization threshold for planning purposes. For decades, it has been common industry practice(s) to use 70% as a "rule of thumb" for budgeting purposes. Actual thresholds are determined dynamically using a complex algorithm that includes, but not limited to:
   - Protocol Types –
     - Ethernet
     - MPLS
     - TCP/IP
     - VPN (IPSEC, SSL)
     - Wireless
     - Routing Protocols (OSPF, EIGRP, BGP)
   - Data Trends per particular times of day – after work (non-peak) hours versus during business (peak) hours.
   - Packet Loss – measured as a percentage of packets lost with respect to packets sent.
   - Error Rate(s) – the number of corrupted bits expressed as a percentage or fraction of the total sent.
   - Throughput (Transport Speed) – the actual rate that data is transferred.
   - Traffic Types which include, but not limited to –
     - Transactional
     - Bursting versus normal utilization
     - Network control
     - Network management
     - Multimedia conferencing
     - Signaling
     - Real-time (video, voice)
   - Latency – the delay between the sender and the receiver.
   - Jitter – the variation in packet delay at the destination source.
   - Availability & associated SLAs – the contracted SLAs applicable to the computing segments involved.
   - Bandwidth – the maximum rate that information can be transferred, typically measured in bits/second.
   - Capacity utilization peaks – Predictability of time frames when full utilization of network resources is forecasted to happen.
   - Infrastructure limitations (constraints & restraints).

   WaTech's Network Capacity Management service(s) proactively monitors WaTech-provided circuits, connectivity, and infrastructure to ensure sufficient performance of customer connections.

5. **Question**:
   Is WaTech's cloud highway dynamic? What component(s) or parts of WaTech's Cloud Highway is/are considered "off-ramps"?

   **ANS**:
   WaTech's Cloud Highway does offer dynamic capacity features depending on configuration of customer "off-ramps" (aka dedicated cloud vendor connections). The details differ because the various cloud providers offer multiple connection methods, some fixed and others are dynamic. Part of the Cloud Highway onboarding process is consultation to match features and capabilities with customer business requirements.

6. **Question**:
   Does WaTech's cloud highway meet the outlined CJIS requirements under section 5.10.1.5 Cloud Computing along with the additional information in Appendix G.3?

   **ANS**:
   CJIS Section 5.10.1.5 Cloud Computing applies to cloud vendors (commonly referred to as cloud service providers) which include Microsoft and Amazon Web Services. WaTech is not a cloud computing vendor therefore this compliance regulation does not apply to WaTech's cloud highway.

7. **Question**:
   What compliance does Seattle Equinix Data Center have?

   **ANS**:
   The compliance standards for the Seattle Equinix Colocation Data Center can be found here.
   URL ref: (https://www.equinix.com/services/data-centers-colocation/standards-compliance/).

8. **Question**:
   What are the different cloud use cases?

   **ANS**:
   WaTech's Office of CyberSecurity (OCS) has memorialized three use cases concerning public cloud connectivity –
   1. Internet only
   2. Internet with an Agency Network Extension
   3. Agency Network Extension Only
   URL ref:
   (https://watech.sp.wa.gov/ocs/SPC/CustomerResources/Public%20Cloud%20Discussion/Public%20Cloud%20Use-Case%20Discussion.pdf)

9. **Question**:

How long does it take for Equinix to deploy a new cross connect?

**ANS**:

- For cross connect requests between Equinix customers in the same building, the standard turn around lime to implement a new cross connect is 24-hours.
- For cross connect requests between the Meet-Me-Room (MMR) in the Seattle Westin Building and Equinix customers, the standard turn around lime to implement a "extended" cross connect is 10-days.
- For cross connect requests between Equinix customers and Amazon Web Services (AWS), the standard turn around lime to implement a "direct connect" is subject to the priorities of AWS.

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10. **Question**:

Does WaTech provide encryption over the Cloud Highway?

**ANS**:

Per OCIO Standard 141.10, customers are responsible to encrypt their own data. To assist customers with their encryption requirements, WaTech enables customers to terminate IPSEC (VPN) encryption on the Cloud PE (routers) in the Equinix Colocation Data Center.

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11. **Question**:

What is the expected latency (delay) associated with WaTech's Cloud Highway?

**ANS**:

Per WaTech Ethernet Contract, the maximum latency (delay) between the State Data Center (SDC) and the Quincy Data Center (QDC) up to the Seattle Westin Building is not to exceed fifteen (15) milliseconds (ms).

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12. **Question**:

How long does it take for WaTech to deploy a new cross connect?

**ANS**:

Once a customers is up and running production traffic (operational) on WaTech's Cloud Highway, WaTech can provision new cross connects within 2-3 business days once a customer's request is received by the Cloud Highway Service Team.

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13. **Question**:
Do customer Cloud VDOMs count against the five (3x) allocated number of VDOMs for each agency?

**ANS**:
Yes, each agency's Cloud VDOM counts towards a customer's VDOM total.

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14. **Question**:
Where can I find more information about WaTech's Cloud Highway Service?

**ANS**: Customers can find the most up-to-date information and detail about WaTech's cloud highway by referencing the [Cloud Highway Webpage](https://watech.wa.gov/solutions/it-services/Cloud-Highway).
URL ref: ([https://watech.wa.gov/solutions/it-services/Cloud-Highway](https://watech.wa.gov/solutions/it-services/Cloud-Highway)).

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**15. Question:**

Why can't customers use the same IP space within their LAN/WAN as well as up in their public cloud environment?

**ANS:** They can, only on a per network (VRF) aspect up to their VDOM to the fusion (privates are not advertised to the fusion).

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**16. Question:**

Why would I use Azure Government instead of Commercial?

**ANS:** If your Agency follows the CJIS, IRS 1025 or FEDRAMP (high) for compliance then you should use Azure GOV.