

# Remote Peering of Internet Exchange Service

## Executive Summary

This document details FLAG's remote peering of internet exchange service. It provides an overview of the benefits and challenges of remote peering, along with a comprehensive description of our service offering. The document also outlines the service level agreement (SLA), billing details, and customer support procedures.

## Introduction

The internet is built on a foundation of interconnection. Networks exchange traffic with each other at internet exchange points (IXPs). Traditionally, to participate in peering at an IXP, a network operator needed to establish a physical presence at the IXP location. This often involved colocation space, dedicated equipment, and additional operational overhead.

Remote peering offers an alternative solution. With our remote peering service, you can connect to strategically located IXPs around the world without physically deploying infrastructure. We provide a secure and reliable connection to the IXP, allowing you to directly exchange traffic with other networks present there.



# What Is Remote Peering Of Internet Exchange

## Definition of Remote Peering:

Remote peering is a method for networks to connect to internet exchange points (IXPs) without physically establishing a presence at the IXP location. This is achieved by utilising a remote peering service provider like FLAG.

## Definition of Internet Exchange Point (IXP):

An internet exchange point (IXP) is a neutral facility where multiple networks interconnect to exchange internet traffic directly. IXPs provide a cost-effective and efficient way for networks to exchange traffic with each other, bypassing the traditional internet transit model.

## How Remote Peering Works:

Here's a simplified explanation of how remote peering works:

1. **Connection to FLAG Network:** You establish a dedicated connection to our network. This connection can be a point-to-point leased line or a virtual private circuit (VPN).
2. **VLAN Extension to IXP:** We extend a virtual local area network (VLAN) from the IXP to your network. This VLAN creates a dedicated and secure path for your traffic to reach the IXP.

## Peering with Other Networks:

Once connected to the IXP via our VLAN extension, you can establish peering relationships with other networks present at the IXP. This allows you to exchange traffic directly, reducing reliance on expensive transit providers and improving overall network performance.

## Benefits of Remote Peering of Internet Exchange

There are several significant advantages to utilising remote peering for internet exchange:

- **Improved Network Performance and Latency:** By keeping traffic local within the IXP, you can significantly reduce latency (delay) experienced by your users. This translates to faster loading times for websites, smoother streaming experiences, and improved responsiveness for applications.
- **Reduced Transit Costs:** A traditional internet transit model involves paying an internet service provider (ISP) to carry your traffic across their network. By peering directly with other networks at the IXP, you can bypass these transit fees, potentially leading to substantial cost savings.
- **Increased Control over Routing:** Remote peering allows you to have more control over how your traffic is routed. You can establish peering agreements with specific networks based on their traffic profile and geographic location, optimising routing paths for better performance.
- **Improved Reliability and Resiliency:** Peering provides redundancy for your network. If a single transit provider experiences an outage, your traffic can still flow through other peering partners at the IXP, minimising downtime and improving overall network resiliency.

## FLAG Remote Peering Service

FLAG offers a comprehensive remote peering service designed to simplify your access to IXPs and the benefits of direct internet traffic exchange. Here's an overview of our service offering:

- **Network Architecture**  
Our network architecture is designed for high performance and reliability.
- **Bandwidth Options**  
We offer a variety of bandwidth options to suit your specific needs. These options can range from dedicated, high-bandwidth circuits to more cost-effective shared bandwidth plans. Our sales team can help you determine the optimal bandwidth option based on your projected traffic volume.
- **Available Locations**  
We provide remote peering access to a wide range of strategically located IXPs around the world. This allows you to connect with a broad spectrum of peering partners and optimise traffic exchange for your specific geographic requirements.

| Sr. No. | Region | Country       | POP Code | Internet Exchange    |
|---------|--------|---------------|----------|----------------------|
| 1       | Asia   | Hong Kong     | HKHKG009 | Equinix Hong-Kong    |
| 2       | Asia   | Hong Kong     | HKHKG003 | Hong-Kong IX         |
| 3       | Asia   | South Korea   | KRSEO003 | KINX, Seoul          |
| 4       | Asia   | Singapore     | SGSIN001 | Equinix Singapore    |
| 5       | Asia   | Japan         | JPTOK002 | Japan IX (J P IX)    |
| 6       | Asia   | Japan         | JPTOK007 | JPNAP                |
| 7       | Asia   | Japan         | JPTOK007 | Equinix Tokyo        |
| 8       | Asia   | Taiwan        | TWTPE001 | T P IX-T W           |
| 9       | Europe | Netherlands   | NLAMSO01 | Amsterdam IX         |
| 10      | Europe | Germany       | DEFRA005 | DE-CIX, Frankfurt    |
| 11      | Europe | France        | FRMRS005 | FRANCE-IX Marseilles |
| 12      | Europe | France        | FRPRS001 | Equinix Paris        |
| 13      | Europe | France        | FRPRS002 | FRANCE-IX Paris      |
| 14      | MEA    | UAE           | AEDXB002 | UAE-IX, Dubai        |
| 15      | US     | United States | USLAX002 | ANY2, CA             |
| 16      | US     | United States | USASB001 | Equinix Ashburn      |
| 17      | US     | United States | USNYC007 | DE-CIX NY            |
| 18      | Europe | Germany       | DEFRA005 | Equinix Frankfurt    |
| 19      | Europe | UK            | UKLDN001 | Equinix London       |
| 20      | US     | United States | USSJC001 | Equinix San-Jose     |
| 21      | Asia   | Korea         | KRSEO002 | Equinix Seoul        |

### Service Level Agreement (SLA)

We are committed to providing a reliable and high-performing remote peering service. Our SLA outlines the performance guarantees you can expect, including:

- **Performance Guarantees**
  - **Uptime:** We guarantee a minimum network uptime of 99.9%
  - **Latency:** We strive to maintain low latency connections between your network and the IXP. Specific latency guarantees can be negotiated based on your service tier.
  - **Packet Loss:** We maintain a robust network infrastructure to minimise packet loss. Our SLA will specify the maximum acceptable packet loss rate.

### Customer Support Options

We offer comprehensive customer support to ensure a smooth experience with our remote peering service. Customer shall refer the FLAG Welcome Pack for further details on Customer onboarding.

### Billing and Rates

Our remote peering service is offered with transparent and competitive pricing. Here's a breakdown of the key billing components:

- **Lease Terms:** We offer flexible lease terms to suit your needs, ranging from monthly to multi-year contracts.
- **Billing Cycle:** We typically follow a monthly billing cycle. Alternative billing cycles can be negotiated for larger contracts.
- **Taxes:** Any applicable taxes or fees will be clearly outlined on your invoice.

## Service Fulfilment

We understand the importance of a smooth and efficient service implementation. Our team will work closely with you throughout the installation process:

- **Installation Process**
  - **Pre-Installation Activities:** Our team will work with you to gather necessary information, configure your network settings, and schedule the installation.
  - **Installation Procedures:** Our technicians will establish the physical connection between your network and our network. Configuration of the VLAN extension to the IXP will also be completed during this stage.
  - **Post-Installation Testing:** We will conduct thorough testing to ensure the connection is functioning properly and meeting your performance requirements.
- **Customer Acceptance Procedures:** Once testing is complete, we will present you with a formal acceptance document. Upon your approval, the service will be considered operational.
- **Customer Responsibilities:** You are responsible for providing a suitable connection point for our technicians and ensuring your network equipment is properly configured to utilise our service. Our team will provide detailed instructions and support throughout the process.

## Service Assurance

We are committed to maintaining a reliable and high-performing remote peering service. Here's how we ensure service quality:

- **Network Operation Centre (NOC) Overview:** Our 24/7 Network Operation Centre (NOC) is staffed with experienced network engineers who continuously monitor and manage our network infrastructure
- **Service Desk Contact Information:** We provide readily available contact information for our service desk to address any questions or issues you may encounter.
- **Escalation Process:** A clear escalation process is in place to ensure timely resolution of any service issues.
- **Planned Maintenance Procedures:** We will provide advance notification for any planned maintenance activities that may impact your service.