IRP for Cloud

Public Cloud Routing Optimization in Action

White Paper

NOCTION
NETWORK INTELLIGENCE

OPTIMIZING APPLICATION TRAFFIC ON PUBLIC CLOUDS:

Public Cloud Providers allow organizations to develop and deploy services and applications with an unparalleled speed, flexibility and efficiency. Most of them, however, rely on conventional BGP routing to determine the shortest but often suboptimal path to reach their customers' end users. BGP ignores critical network performance metrics such as latency, packet loss, throughput, link capacity, congestion and historical reliability, frequently routing Public Clouds traffic through paths that are congested or affected by network anomalies. BGP lacks the ability to actively discover any of the aforementioned characteristics and therefore has no ability to make routing decisions based on them. This undermines the performance of cloud based applications that are sensitive to latency and packet loss and heavily impacts their end user experience.

Traditional Public Cloud optimization tactics are not able to fully address the challenges. The standard practice for Cloud providers who are trying to minimize latency and packet loss is to let clients host their applications as close to end users as possible, establishing more and more data centers around the world. However, even with this approach, cloud network performance issues continue to exist and become more severe and costly to Internet businesses that depend on lightning-quick web experiences for their customers.

IRP for Cloud offers a simple, cost effective way to improve public cloud network performance and ensure the utmost Quality of Service to end users.

IRP for Cloud:

- Lower latency than AWS for 52% of lossy destinations on average
- Lower packet loss than AWS for 78% of problematic destinations on average
- Additional level of redundancy for your cloud routing outage prevention strategy
- Easy 5 minutes set up with AWS CloudFormation
- Minimum changes to your existing infrastructure
- Start and stop service whenever you want. No commitments
- Detailed network optimization reporting, available through an easy to access web interface

The service leverages Noction's proven Intelligent Routing Platform technology, which analyses traffic in order to detect network congestion and blackouts. The affected network routes are probed for a set of specific metrics, such as latency and packet loss, through all the available providers in order to reroute client's traffic through the best performing path. Therefore, all routing decisions are based on precise measurements and not a "generic weather" map of the Internet.

To offer the Intelligent Routing Platform capabilities to a wider public cloud audience, the IRP for Cloud service has been created and is currently available to AWS users.

IRP for Cloud delivers network optimization benefits in a seamless and affordable way; offering, on average, lower packet loss than AWS for 78% of destinations and lower latency for 52% of destinations.

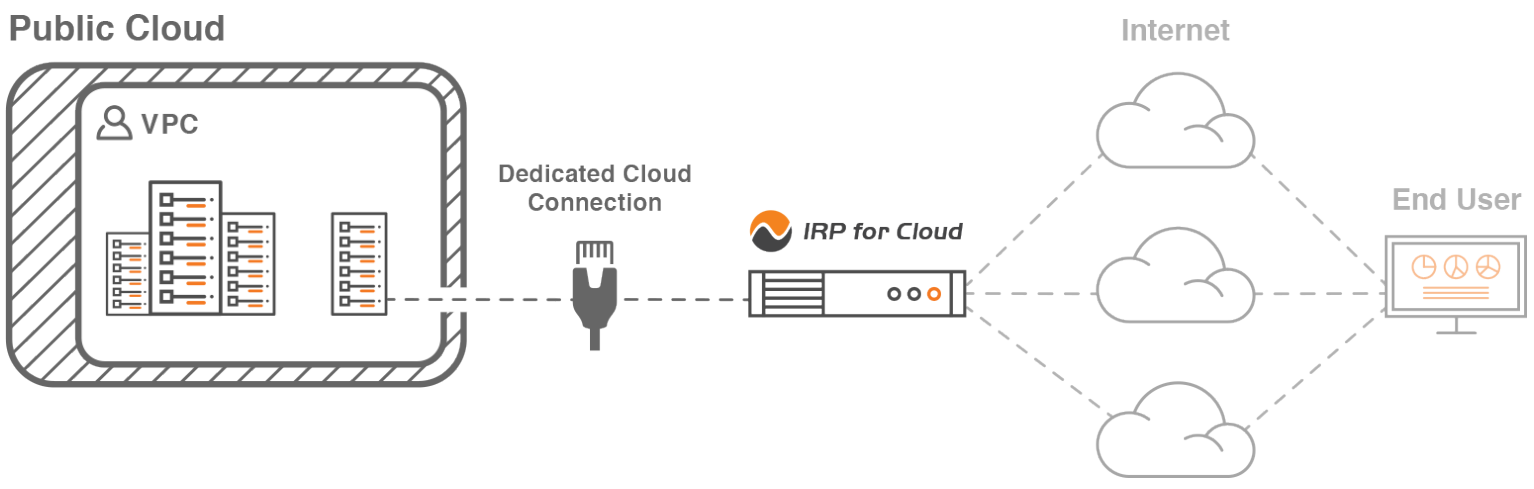
Service helps public cloud users better understand the impact of the virtual network optimization on their cloud application performance. By accessing the IRP for Cloud comprehensive frontend, clients are able to see real-time network data, including the amount of improvements performed due to latency, packet loss or complete outage reasoning, as well as the amount of total probed and improved traffic.

More and more businesses deploy their applications with public cloud providers. The faster the cloud applications are, the more competitive companies behind them become. IRP for Cloud addresses the public cloud networks performance limitations, adding intelligent decisions to traditional BGP routing. But how does it really work?

HOW IT WORKS:

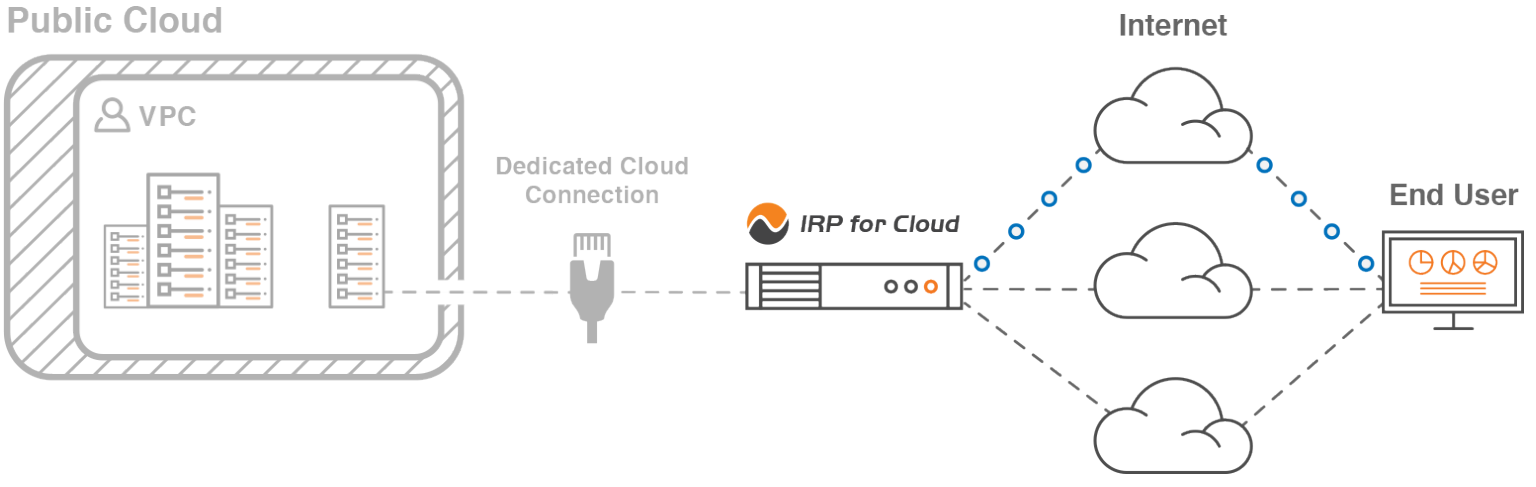
Interconnecting public cloud infrastructure with the IRP for Cloud service is quite straightforward. A client needs to run a designated IRP for Cloud satellite VM that can be found on the cloud provider's marketplace.

When deployed, the IRP for Cloud satellite VM runs entirely within the client's VPC and remains under the customer's full control at all times. In order to fully automate interconnection, including incident handling, the IRP for Cloud satellite VM requires a series of authorizations assigned to it. Once those are granted, the interconnection is established and there are no other changes to a client's existing infrastructure.



Interconnecting Public Cloud infrastructure with IRP for Cloud

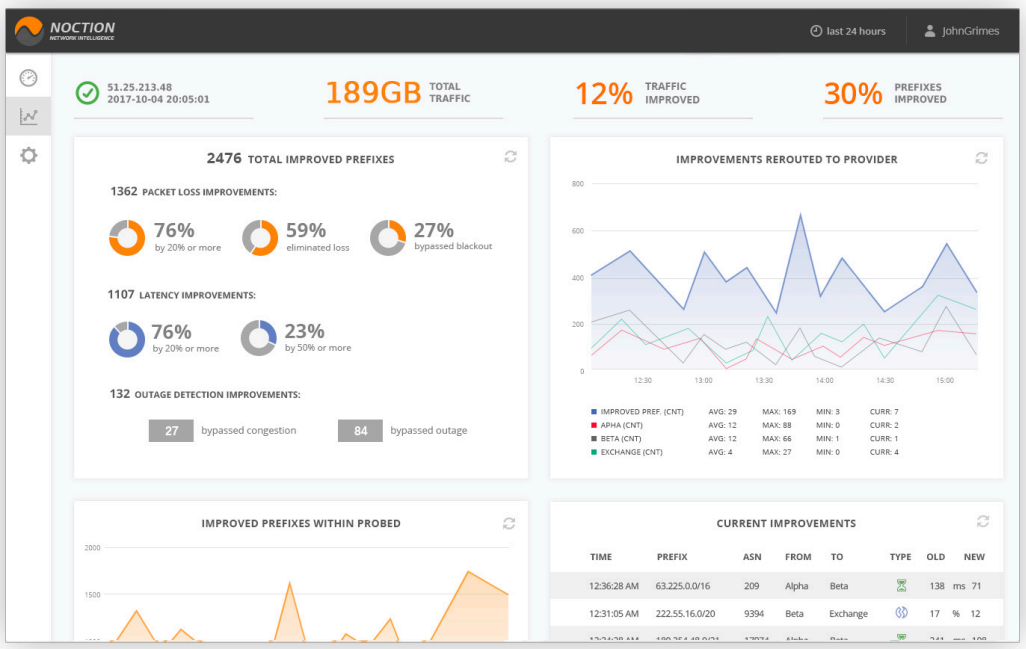
Once connected, IRP for Cloud starts to optimize outbound traffic by leveraging the Noction Intelligent Routing Platform technology, which passively analyses traffic to see which prefixes are being used the most. Then it actively probes relevant prefixes for metrics such as latency, jitter and packet loss; calculating improvements to find the best route. Based on these measurements, IRP automatically reroutes traffic through the optimal path.



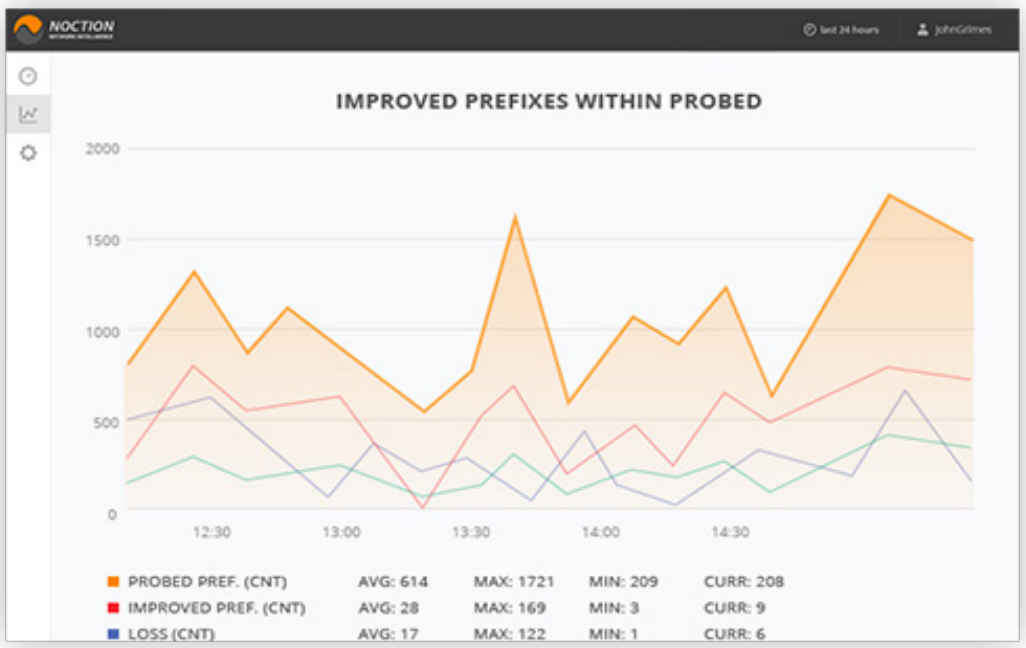
IRP for Cloud automatically rerouting traffic through the optimal path

IRP FOR CLOUD ANALYTICS AND REPORTS:

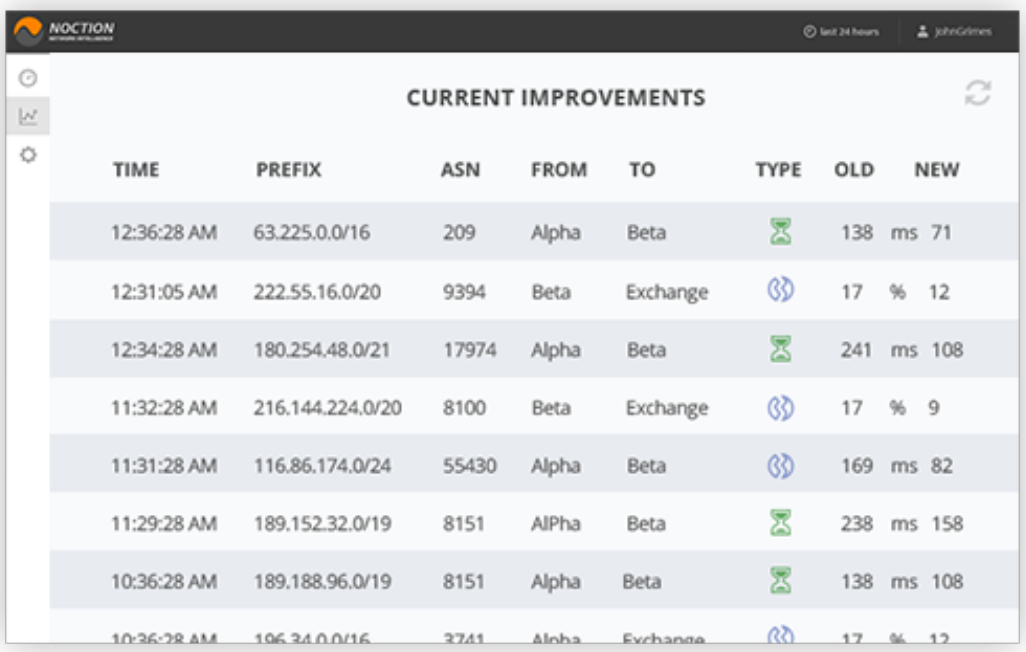
IRP for Cloud dashboard provides comprehensive information on the average latency and loss improvements, current traffic improvements, amount of total and improved traffic, the number of prefixes being probed and improved as well as the number of detected and bypassed outages.



The reports and graphs for a given period of time of up to 3 months.



An explicit list of the currently active improvements per the cloud network is also available.



CONCLUSION:

Users are continuously demanding immediate results for optimal application and website performance in our connected, always-on World. However, Internet performance is highly variable and is changing constantly. Congestions and delays occur in all parts of the Internet, from the first mile to the last.

For organizations for which every millisecond counts, IRP for Cloud overcomes the traditional public clouds BGP routing deficiencies, substantially minimizing latency and packet loss of the cloud based applications traffic. This in its turn results in optimal network performance and a seamless user experience.

ABOUT NOCTION:

Noction is a privately funded technology company with offices in the US, Europe and Asia. Founded in 2011, Noction is providing cutting edge network intelligence technologies, enabling enterprises to take full advantage of maximum network performance for business-critical applications such as e-commerce, VoIP and media streaming across IP networks.