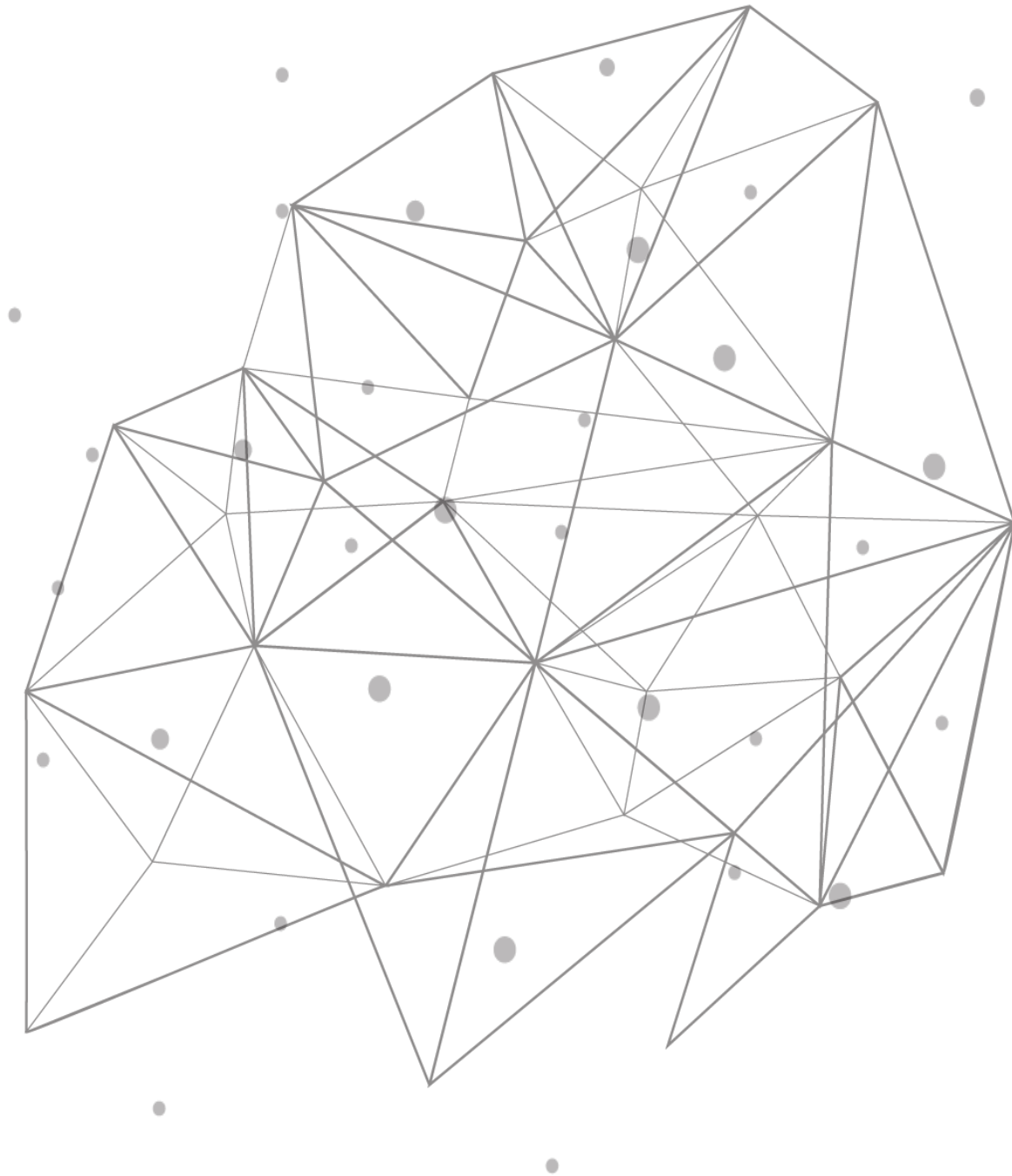

TCPWave IPAM - OpenStack Integration



Introduction - OpenStack

Cloud computing offers efficiencies and agility for deploying and scaling IT services, yet many organizations are reluctant to host critical workloads in public clouds. OpenStack provides a solution to this existing challenge — a secure and open private cloud platform designed to integrate with existing infrastructure and applications and the broadest public cloud offerings.

About OpenStack

OpenStack was created by the U.S. space agency NASA and the company Rackspace in 2010 for its project-related works. Later, AT&T, RedHat, IBM, and Huawei contributed to its development. It is an open-source cloud computing infrastructure project that uses pooled resources to build and manage private and public clouds. It manages and provisions network elements through APIs. It consists of several projects that deliver services such as:

- Nova - Compute Service
- Keystone - Identity Service
- Glance - Image Service
- Neutron - Networking
- Cinder - Block Storage
- Swift - Object Storage
- Horizon - Dashboard

OpenStack in Networking

OpenStack networking, also called Neutron, is a project within the OpenStack solution. Neutron gives users application programming interfaces (APIs) and provides essential networking functions and components.

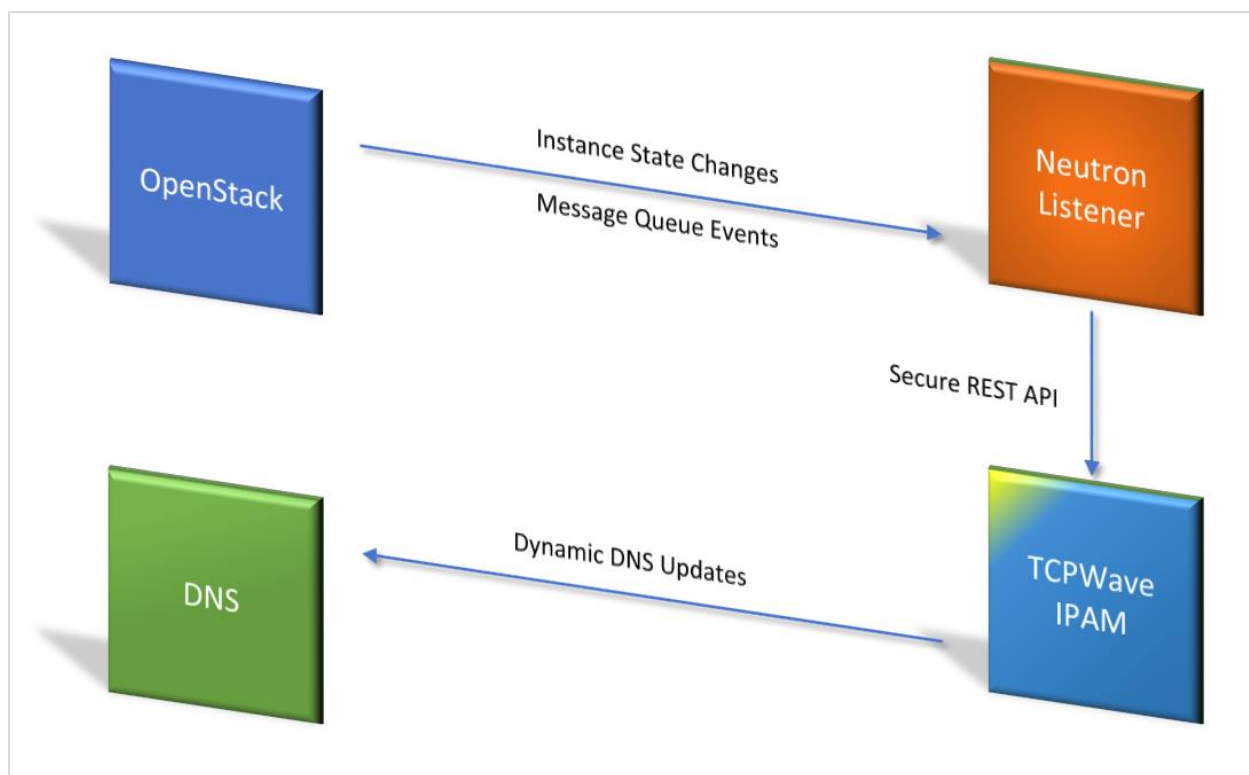
OpenStack Integration with TCPWave IPAM

TCPWave IPAM seamlessly integrates with OpenStack. Upon neutron event listener configuration, the DNS is automatically updated through the IPAM when the servers are added or deleted.

OpenStack automation is to manage DNS entries without manual intervention when servers are allocated or deallocated in OpenStack using the neutron-listener service implemented by TCPWave.

Architecture

When the server creation or deletion, floating IP creation or deletion operations are performed in OpenStack, then a secure SSL rest API is triggered to TCPWave IPAM, and DNS entry is added or deleted based on the event. The neutron monitor listens to the generated amqp events and sends requests to the IPAM. When a subnet is created or deleted in OpenStack, a similar action occurs in the TCPWave IPAM. Every compute instance created in OpenStack is automatically updated in TCPWave IPAM.



Configuration – Neutron Listener Service

[Click here](#) to know about the configuration details of the neutron-listener service.

Key Features

The key features of this integration provide users the power to automatically update IPAM/DNS of the following network actions:

- Creation of Servers
- Deletion of Servers
- Creation of floating IP
- Deletion of floating IP
- Subnet creation
- Subnet deletion

Business Advantages

By automating everyday network functions and tasks, the organizations can achieve the following business advantages:

- Seamless network automation
- Elimination of manual tasks
- Lower network costs
- Reduced cost of ownership
- Rapid innovation
- Increases organization's agility, availability

Conclusion

With this integration, the organizations can meet unique end-user requirements and access self-service capabilities, thereby increasing a high-performance networking environment and efficiency.

For a quick demo, contact the [TCPWave Sales Team](#).