1   Networking Management - Load Balancers

1.1   Overview of Service

This Service provides configuration, monitoring, and management of load balancers in NTT Private Cloud, Client's on-premises or colocation data center.

1.2   Client Responsibilities

(a)   The Client must be in possession of an active hardware service contract with NTT Uptime Support Services or the vendor of the load balancer(s) under management

(b)   The Client must delegate authority to NTT's engineers to contact the load balancer vendor directly

(c)   Except in cases where device is provided by NTT, any management of licenses if required are Client responsibility

(d)   Any software required to service or access the ethernet switches must be provided to NTT

(e)   All access required for remote access and monitoring must be enabled by Client

(f)   Any task requiring physical access

1.3   Service Specific Operations

(a)   Monitors

The following monitors can be configured by default if available on the hardware:

Monitor	Description	Alerts	Performance Info	Resolution
Port Status	Check port status	Yes	N/A	Engineering Teams will solve the issue
Port Usage	Check port's bandwidth usage	No	Graphs for the parameter measured over time	N/A
Port Errors	Existence of a problem or error in a port	No	Graphs for the parameter measured over time	N/A
Virtual IP Checking [1]	Existence of a problem in a load balancing policy	Yes	N/A	Engineering Teams will try to solve the issue and escalate to the Client if required

Notes:

(1) Virtual IP (VIP) checking applies if the load balancers are under NTT management

(b)   Service Requests

As part of the Service, the fulfilment of the following types of requests are included:

Task	Description
Creation and management of VIPs and IP pools/ service groups	Creation, change and deletion of VIPs configured in the device and the IPs of the web nodes; IP address configuration of web servers not included
Creation and management of service checks	Creation, change and deletion of service checks configured in the load balancing policy. Connection to the web server to detect/configure the service response not included
Management of load balancing policy	Management of the Load Balancing policy (round robin, weights, etc.)
Management of SSL certificates	Addition, removal and modification of SSL certificates associated to the service
Management of GSLB	Management of failover policy with GSLB/GTM (active, passive, etc.)

1.4   Supported Technologies

The following technologies are supported:

(a)   Citrix NetScaler (Physical or Virtual)

(b)   F5 BIG-IP LTM/GTM (Physical or Virtual)

The following configurations are supported:

(c)   Single device: A standalone load balancer

(d)   HA/Cluster configuration: Two or more devices of compatible models in an HA active/passive configuration

(e)   GSLB/GTM configuration: Two or more devices of compatible models in a GSLB/GTM active /passive setup

(f)   Layer 4-7: Activation and management of layer 4-7 features (content switching, web application firewall, health pages monitoring based, etc.). Note: Layer 4-7 features may result in additional management and manufacturer costs.

The following configurations are not supported

(g)   Out-of-path configurations not supported without SSL offloading; or

(h)   NetScaler VPX only supported on small deployments with low SSL traffic

1.5   Supported Environments

The following environments are supported:

(a)   Client premises device with remote management

(b)   Colocation data center

(c)   NTT Private Cloud

1.6   Limitations

The following limitations apply when supporting systems in Client's on-premises or colocation data center:

(a)   NetScaler VPX running on NTT's ECL 2.0 only supported if a standard NetScaler image is used as a dedicated virtual appliance.

(b)   NTT ECL 2.0 integrated images for NetScaler are not supported.

1.7   Tasks Included in the Standard Transition

As part of the Service, the following tasks are included in the setup fee:

(a)   Creation of VLANs

(b)   Creation of VIPs and service groups

(c)   Configuration of basic service-checks (port, error 200, etc.)

(d)   Configuration of advanced service-checks (content-match, scripts)

(e)   Configuration of SSL offloading

(f)   *In HA environments*: service clustering

(g)   *In HA environments*: configuration of GSLB/GTM

1.8   Tasks Not Included in the Standard Transition

The following tasks are not included in the standard transition:

(a)   Physical installation of Client-owned load balancer(s) and any task requiring physical access

   10 September 2024

Sensitivity Label: General