

1 Managed Web Server

1.1 Overview of Service

This service provides configuration, monitoring and management of web servers in the cloud or in the Client's on-premises or colocation data center.

1.2 Client Responsibilities

- (a) Client must be in possession of an active service contract with the vendor of the asset under management.
- (b) Client must delegate authority to NTT to contact the vendor directly.
- (c) Any software or licenses required for this Service Description must be provided and the appropriate rights must be granted to NTT.
- (d) Any task required to be completed not on an NTT location.
- (e) Any other task not specifically identified as in scope in the SOW.

1.3 Service Specific Operations

(a) Monitors

The following monitors can be configured by default if supported by the hardware(not including underlying OS):

| Monitor | Description | Alert | Resolution |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------|
| Availability of the web server | The web server service is up and running | Yes | Engineering Teams will attempt to diagnose, try to solve the issue and escalate to the Client if needed. |
| Availability of the HTTP and HTTPS server ports | A connection to configured ports (80/TCP, 443/TCP, etc.) is established and banner returned | Yes | Engineering Teams will attempt to diagnose, try to solve the issue and escalate to the Client if needed. |
| URL content verification | Download of a given URL (with parameters and certificates) and checking returned content against some text and measuring response times | Yes | Engineering Teams will attempt to diagnose, try to solve the issue and escalate to the Client if needed. |
| Transaction monitors | Simulation of a browser requesting a series of pages, whilst keeping the session and matching responses with strings | Yes | Engineering Teams will attempt to diagnose, try to solve the issue and escalate to the Client if needed. |
| Performance counters: • Current connections • Requests queued | Collected data | No | N/A |

Alerts related to elements not under NTT management will be escalated to the Client.

(b) Service Requests

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

| Task | Description |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Creation of users, changes in permissions, password changes for the FTP accounts | Management of users, and FTP settings, including setting security parameters and configuration of logging |
| apache, nginx: setup and compilation of PHP and associated modules | Install and compile PHP with the associated modules at Client's discretion and at a maximum, once per month |
| Management of performance parameters of the web server | Implementation of changes to the parameters that affect the performance of the web server, including resource limits, memory allocation, etc. |
| Changes in the transaction/url monitors | Implementation of changes in the monitors associated with the Service, including recreation of the monitors and changes to the content match strings |
| Installation of SSL certificates | Generation of CSR's, install and import of SSL certificates and intermediate CAs |
| Management of virtual hosts | Creation, change and deletion of virtual hosts, including the management of bindings, application properties, resource limits, changes to mime-types |

| | |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Management of virtual directories and aliases | Creation, change and deletion of virtual directories, including setting of permissions, redirections, and application security settings |
| apache, nginx: management of Rewrites, Redirects, content expiration, caching, ProxyPass | Creation, change and deletion of rewrite rules, redirection, content expiration, caching policies and reverse proxying configurations |
| IIS: Add or remove IIS 7 native modules | Creation, change and deletion of IIS native, managed and Client developed modules |
| IIS: Management of security features: Client Certificate Mapping, IP Security, Request Filtering, URL Authorization | Creation, change and deletion of client certificates, IP based access rules and authorization |
| IIS: Management of .NET permissions | Creation, change and deletion of assembly policies and .NET permissions |
| Management of application pools | Creation, change and deletion of application pools, including web-garden settings, recycling policies, security settings |

1.4 Supported Technologies

The following technologies are supported:

- (a) Apache 2.4, running over CentOS/Red Hat Enterprise Linux 7, 8
- (b) Nginx: stable versions 1.x running over CentOS/Red Hat Enterprise Linux 7, 8
- (c) IIS 8.x running over Windows Server 2012 R2, IIS 10.x running over Windows 2016 and 2022

1.5 Supported Configurations

The following configurations are supported:

- (a) Standalone Web Server: A single server
- (b) Load balanced Web Server: Two or more servers clustered using a supported load balancing mechanism (load balancer management not part of the Service described in this section); and
- (c) IIS only: Shared Web Farm: Two or more servers using shared configuration; High Availability achieved using an external load balancer.

1.6 Supported Environments

The following environments are supported:

- (a) Client premises
- (b) Colocation data center
- (c) Cloud

1.7 Limitations

The following limitations apply for each technology:

- (a) Apache
 - (i) Uses only the modules bundled with the distribution version of Red Hat/CentOS.
 - (ii) System must be free of compiled modules or libraries (mod_jk is supported).
- (b) Nginx
 - (i) Stable versions will be installed by default; mainline versions including new features will only be installed if there is a specific requirement.
 - (ii) By default, only supported packages included either in the Linux distribution or the pre-built packages provided by the Nginx repositories are supported. Compiled versions will be supported only under special circumstances.
 - (iii) Only the modules bundled with the Nginx package will be installed.
 - (iv) System is free of compiled modules or libraries.
- (c) IIS
 - (i) No other ISAPI filter installed (homebrew).
 - (ii) .NET assemblies must be served either locally or by a Windows CIFS Share.
 - (iii) Shared Web Farms must use a remote shared filer to store IIS server configuration files, applicationHost.config and administration.conf.

1.8 Tasks Included in the Standard Transition

As part of the Service, the following tasks are included in the setup fee if specifically listed as In Scope in the SOW:

- (a) Installation and configuration of the FTP server associated with the web service
- (b) Hardening of the FTP server
- (c) Installation of the web server
- (d) Installation and configuration of the SSL certificates required
- (e) Installation and configuration of the required modules (PHP/ mod_jk, etc)
- (f) Configuration of performance parameters
- (g) Configuration of required virtual hosts
- (h) Configuration of the web server to password-protect specific directories and/or restrict access
- (i) Configuration of virtual directories and redirects
- (j) Configuration of the logs and rotation; and
- (k) Hardening of the web server

Apache / Nginx specific:

- (l) Configuration of URL rewrites
- (m) Configuration of reverse proxy

IIS specific:

- (n) Installation and configuration of the SMTP outbound relay server
- (o) Installation and configuration of the required .NET Frameworks
- (p) Installation and configuration of IIS native modules
- (q) Installation and configuration of IIS managed modules
- (r) Installation and configuration of IIS Client designed modules
- (s) Configuration of security features: Client Certificate Mapping, IP Security, Request Filtering, URL Authorization
- (t) Configuration of Application Pools and settings; and
- (u) Configuration of URLScan with the default policy.

(v) Tasks Included in the Takeover of a Client's Systems

The following tasks are included with a takeover of a Client's systems:

- (i) Audit and changes to the configuration of the security environment/security policy and hardening
- (ii) Audit and changes on specific IIS:
 - Virtual Hosts
 - Application pools
- (iii) Audit and changes on specific nginx and apache:
 - Compilation directives
 - Configuration file

1.9 Tasks Not Included in the Standard Transition

The following tasks are not included in the standard transition:

- (a) Design, Topology and Technical Architecture, including Disaster Recovery and Business Continuity Plan
- (b) Migration of workloads
- (c) Replication of VM's to Azure and AWS
- (d) Creation of templates for non-managed templates