

Application Infrastructure Management - Common Functions

The complete service is defined by the combination of the following items for which the specific selection must be in In Scope in the SOW:

- **Client Service Description** –service delivery operations that are common to all NTT Managed Services
- **Common Operations** – service delivery operations that are common to all services within the category of Application Infrastructure Management (the following sections of this description).
- **Service-Specific Operations** – service delivery operations that are specific to each service. These operations are additive to the *Client Service Description* and Common Operations and must be added as per Client contracted services.

1 Common Operations

For Applications that are explicitly listed as in scope in the SOW and under management the following notification will apply:

1.1 Client Notification

Method	Description
Email message	Generation of an email message with the following information: <ul style="list-style-type: none"> . System that generated the alert . Configured thresholds . Threshold that caused the error . Additional diagnostic information
Phone call	Phone call to a defined number, notifying the Client of the error condition and all applicable background information

1.2 Service Requests

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

Task	Description
Creation of users/groups	Creation of users and groups in the Application, including password maintenance
Log subsystem configuration	Management of the log information sent to SIEM system (when in-scope) or syslog server (if any); and
Management of manufacturer's guarantee	Management of software or firmware errors with the manufacturer; for any software licensing not supplied by NTT Client must possess a valid business level support contract and provide authorization for NTT engineers to utilize all provided support services.

1.3 Periodic Maintenance Tasks

As part of the Service, the following periodic maintenance tasks are included for Managed Applications/Services:

Task	Frequency	Description
Software Patch review and apply	Once per Quarter (except Operating Systems)	NTT will notify client of outstanding patches and, when applicable, Client must provide a maintenance window to allow servers to be automatically patched and rebooted. See <i>Client Service Description</i> for details on Patch Management processes and procedures.
Backup Review	Daily	Review of the correct execution of the associated backup jobs: full, incremental or differential; in case of an error with the execution, the resolution will follow the process for Incident Management. Mandatory: A backup method for the environment must exist.
Log management	Weekly	Compression and deletion/backup of the logs associated with the components under management.
High Availability / DR status check	Daily	If applicable, review of data replication between HA or DR systems: <ul style="list-style-type: none"> . Check data replication status . Check backup copy status

1.4 Backup and Restore

An integral part of the Service is the management of the backup policy and execution of restore requests. If the Client has contracted a validated backup solution, the Service will include the management of the backup policy and restore request fulfillment. The following tasks are included as part of Applications/Services management:

Task	Description
Basic backup policy implementation	When the Service is initially installed, a basic backup policy will be implemented on a supported backup system. This policy copies all of the configuration data of

	the server (standard locations) so that in the event a full reinstall of the server is required, all configuration files can be restored.
Backup policy changes	As the Service evolves, additional files may need to be protected, such as content. All changes to the backup policy will be implemented by NTT Engineering Teams at the request of the Client.
Advanced backup requests	In case a database or open files need to be protected, our engineers maintain a bank of scripts that can perform many of those tasks which shall be used in NTT's sole discretion. These types of backup operations are more complex and very specific to the Client's Solution. As an example, advanced backup policies may include user mailboxes, agendas and other granular elements of MS Exchange that can be restored if needed without a full server reinstall. Advanced backup policies require a backup solution In Scope in the SOW that can support these methods.
Restore of files	Restore files from backup to either their original location or a secondary location for further verification.
Restore of databases and open files	A restore may be performed if the backup was taken with the tools and scripts provided by our Engineering Teams. Specific restore options like point-in-time restore depend on the underlying database that has been protected.
Restore of configuration for servers and applications	If required, the basic backup policy may restore all configuration data on the application or service that is backed up.
Restore of elements	Restore of granular elements from the backup policy (if agents with this ability exist) to either the original location or a secondary location for further verification.

1.5 Limitations

The Applications under management have the following limitations:

- For every Application/Service under management, the maximum number of instances running on the same server included in the same cost is 2. For more than 2 instances running on the same server additional costs will apply.
- For every Application/Service under management on top of an Operating System, the OS where it runs must also be contracted via the Infrastructure Management service. Managing an application without OS management is not supported

2 Service Specific Operations

The service specific operations are contained in the Service Descriptions for the individual services as defined in the Statement of Work.

3 Service Transition

3.1 Tasks Included in the Standard Transition

As part of the Service, the following tasks are included in the setup fee for managed applications.

- Installation of the Application software as applicable
- Installation of management tools
- Installation of patches/hardening of the Application up to the recommended level or the level agreed to with the Client
- Creation of the users and groups required for the Service
- Configuration of the application security policies as per NTT policy
- Configuration of the Application software logging policy as per NTT policy
- Initial tuning of the Application component under management
- Documentation of the Application/Service which shall not be a Deliverable
- Monitoring setup on the monitoring tools and in the Application/Service
- Configuration management agent setup; and
- Backup agent setup and initial backup policy implementation (if a backup service exists).

3.2 Takeover Tasks Included in the Service

As part of the Service, the following tasks are included in the setup fee for taking over existing applications

- (a) Installation of the management tools needed by the NTT and defined in the Platform Access and Operational Support Tools section of the Client Service Description (monitoring, log management, configuration agents)
- (b) Installation of 1 minor patch or to the level agreed with the Client (any additional patching activity will be chargeable)
- (c) Creation of the users and groups required for the Service
- (d) Audit and normalization of the Application/Service, including:
 - (i) Users and groups
 - (ii) Packages and software installed
 - (iii) Services running
 - (iv) Network configuration
 - (v) Environment variables configuration
 - (vi) Configuration of the instances
 - (vii) Configuration of the service management scripts (start, stop);
- (e) Configuration of the application security policies as per NTT policy
- (f) Configuration of the Application/Service logging as per NTT policy
- (g) Initial tuning of the operating system or Application/Service
- (h) Documentation of the Application/Service which shall not be a Deliverable
- (i) Monitoring setup for monitoring as per the Monitoring Service Description
- (j) Backup agent setup and initial backup policy (system configuration) normalization (if a backup service exists and this does not cover storage of the backup itself which must be provided as In Scope in the SOW)

3.3 Tasks Not Included in the Standard Transition

The following tasks are not included in the standard transition:

- (a) Consultancy
- (b) Physical setup; or
- (c) Configuration of other Applications or devices not managed by the Supplier's Engineers as part of the Service.
- (d) Any tasks not explicitly included in this Service Description.

3.4 Takeover Tasks Not Included in the Standard Service

The following tasks are not included as standard when taking over an existing installation and may require additional charges, unless otherwise stated in the Statement of Work. The following are just a sample:

- (a) Changes to the topology or the solution in order to correct faulty designs which should be considered "Projects" due to the complexity of the requirements
- (b) Tasks during Out of Business Hours (OOBH)
- (c) Kick-off meetings to undertake remediation activities