Scope of Work (SOW) For Data Centre Operations

Objective

The objective of this service is to ensure high availability of DC servers for the SBI Life Insurance Company Ltd (SBIL) Users and application/Database owners. The service shall ensure a reliable server administration and Incident/Problem management.

A.   BRIEF DESCRIPTION

- Availability, Performance and Capacity Management
- Change Management
- Incident & Problem & Fault Management
- Service Management
- Operational Management
- Compliance Management
- Project Management

1. Availability, Performance and capacity Management

☞ Monitoring of the Critical Parameters related to Hardware, Firmware of the all Data Centre Servers, DR servers, HO Servers, Seawoods Servers and Servers in Branch Offices. (based on the tools available at SBI Life).

☞ Monitoring of Critical Parameters of Server OS, Applications, Virtual Infra and DB.

☞ Notification to concerned Owner on Alert received during monitoring.

☞ Follow-up until Alert is been resolved.

☞ Coordination with respective OEM of the servers for various Hardware related events and Troubleshooting.

☞ Trigger acknowledgement to be recorded for building and maintaining KEDB and MIS reference for trend analysis.

☞ Configuring new ways using scripts for continuous Proactive Monitoring.

☞ Corrective & Preventive and break fix actions to be taken to avoid future failures.

Vendor will make all efforts to ensure that there is 99.99% up time calculated on monthly basis for HA related servers and services and 99.50% for Non-HA components mentioned in SOW. The downtime however will not be in effect under the following conditions:

1. Downtime due to Network failure.
2. Downtime due to any other infrastructure failure.
3. Planned downtime scheduled by SBIL.

2. Change Management
☞ Preparing "Change Management" forms and implementing approved configuration changes

☞ Periodic configuration backup of all Servers in DC, DR, HO & CPC –Seawoods, Belapur & Servers in Branch Offices.

☞ Configuration backup where necessary prior to implementation of configuration changes.

☞ The Entire change management should be in adherence with the ISO 27001:2013 ISMS guidelines.

☞ Rollback configuration when and if required.

3. Incident & Problem & Fault Management
☞ This activity includes coordination between SBIL and its IT related vendors to follow up for resolution of problems related vendor supplied IT software and hardware and to verify timely OEM/AMC/ Warranty

☞ Support for vendor provided services.

☞ Log calls with vendors and follow up for the resolution of the same.

☞ Adherence to escalation matrix of OEM TAC and AMC vendors for all downtime and Troubleshooting activities related to Hardware or Services.

4. Service Management

a) Windows OS/ Server Management
☞ Taking and resolving calls related to Windows OS environment
☞ Performing install, upgrade and Maintenance related to windows Environment.
☞ Maintaining Compliance of Windows OS related to Patch, Software and Secure configuration.
☞ Troubleshooting issue related to corruption, Drivers and other windows integrated components.
☞ Installing, Mounting and Configuring Servers
☞ Testing server functionality in Staging and Datacenter
☞ Daily monitoring of Server for any anomaly in hardware components
☞ Call logging to vendor/OEM for immediate action and resolution.
☞ Firmware up gradation of all equipment under Data centre team in co-ordination with OEM
☞ Using SBILIFE provided tools for daily operations and service functionality.

b) Files print and Cluster management
☞ Following proper approval process for creating, deleting, managing access rights to users on file server.
☞ Following proper approval process for performing day to day activates on file server
☞ Managing Shares with Necessary permission and quota.
☞ Creating share folders with necessary permission on approval with proper approval process
☞ Creating folders with security permission and proving access based on approvals as per SBILIFE approval matrix
☞ Ensure uptime of file server and clusters
☞ Ensure Housekeeping is maintained on file server periodically
☞ Ensure folder access review is carried out periodically.
☞ Performing all storage related functions as space addition of volumes mounting of volumes deletion of volumes etc.

c) Active Directory Services Administration
☞ Centralized Administration and trouble shooting of Microsoft Active Directory Services for CPC
☞ Monitoring of AD performance & Health and provide report to SBIL management.
☞ Automation in AD management with tools provided by SBI Life or using scripts available.
☞ Housekeeping of AD servers, groups, OU and Users, DNS (Internal & External) and Group policy.
☞ Coordination with SBIL external DNS provider for external DNS entries.
☞ Addition and Deletion of AD domain controllers on requirement
☞ Integration of components with Active directory on request.
☞ Centralised DNS and Group policy Management

d) Backup Administration
☞ Backup admins ensure that all backups happen smoothly as per the Backup Policy defined by SBI life. (Daily, Weekly, Monthly, Yearly)
☞ Backup Restoration: Restore the data as per process & Approvals defined by SBILIFE
☞ Tape Rotation: Maintain Backup Tape Rotations between the facilities as per the SBIL policy to ensure maximum data availability In case of disaster.
☞ Reports: Capture and maintain backup reports/Logs as per the frequency defined by SBILIFE
☞ Ensure backup software is upgraded / updated in to ensure compliance.
☞ Ensure compliance of Backup is followed with proper records of incidence and root cause analysis (RCA)
☞ Ensure backup review of jobs happens on periodic basis.

☞ Ensure SOP is updated periodically or in case of any change.
☞ Ensure housekeeping is maintained for old jobs, tapes etc.

e) FTP & IIS Administration
☞ Administration of old & New FTP servers, Including user access rights and disk space Management.
☞ Installation of IIS and related components like dot net etc.
☞ Managing high availability and Fault tolerance of each services.

f) DHCP & DNS Management
☞ Administration of DNS and DHCP servers,
☞ Managing and Maintaining scopes, zones and all related components related to DNS and DHCP
☞ Managing high availability and Fault tolerance of each service.

5. **Operational Management**

   a) Day & Night Shift Operations
☞ Monitor the various applications and sites.
☞ Backup Monitoring.
☞ Batch process Monitoring.
☞ AD replication status report
☞ Disk, DFS, Arcsight reports
☞ Backup reports
☞ Patch Troubleshooting
☞ Mailing application owners about any triggers received
☞ Alerting management in case of any anomaly / failure detected.
☞ Providing reports of the status, health of the Infra systems daily.

   b) Patch Management on Servers and Desktops
☞ Download and Test Microsoft Patches on test environment as per policy and carry-out deployment after obtaining the required approvals from concern authorities on all DC /DR servers across the scope of locations
☞ Deployment of patches on Saturday and Sunday as per SBIL defined policies
☞ Creating customised ISO image for Windows 10 and Windows Servers OS as per SBIL requirements

   c) Server Hardware support /replacement
☞ Maintaining the server hardware at DC, and server rooms under scope including hardware trouble shooting and replacement of parts provided by vendors
☞ Physical inspection of servers as per SBIL policy.
☞ Using Hardware OEM (Dell Support Assist / HP IRS) tools for report generation, calls logs and status updates.
☞ ILO, IDRAC configuration and management

   d) VMWARE / Hyper-v Server Support
☞ Provide L1, L2 support for hardware/OS/application etc.
☞ L1 Administration of VM environment (Creating VM, Managing VM, Reports, Resource management etc)

   e) Image Creation
☞ Creating of Windows Universal image for Server OS and Client OS using Microsoft MDT or any relevant provide tool
☞ Deploying and Testing the image for validation
☞ Integrating all approved software, patches, settings and secure configuration to be part of image creation process.

   f) Information Security and compliance implementation
☞ Perform OS and application hardening through security configuration document (SCD)-a template document provided by security Audit on servers

☞ Vulnerability assessment /Penetration testing (PT) on all servers through Vulnerability assessment online document (VAOD) software tool provided by Security Audit Department
☞ Fix the unsafe points as per the VA/PT report.
☞ Provide necessary technical reasons for not implementing certain VA/PT points
☞ Trouble shoots the problem of server's failure due to implementation of VA/PT
☞ User access review and submit to SBIL management.
☞ Backup Review and compliance

g) <u>Data Centre Asset Inventory</u>
☞ Maintain the DC, HO, Seawoods and DR site inventory of all servers and assets within SBIL network.
☞ Maintain AMC tracker & Lifecycle for hardware components and Windows Operating systems
☞ Maintain tape inventory and tape rotation cycle.

h) <u>Provide Availability Monitoring</u>
☞ Monitoring of Servers as per defined service window
☞ Provide Server Performance Monitoring
☞ Monitoring of all server platforms and Operating Systems for Critical Performance counters, event errors and warnings as per the service window specified
☞ Critical Performance counters include.
☞ CPU Utilization.
☞ Memory Utilization.
☞ Disk Utilization.
☞ Free Disk Space.
☞ Service and Server availability /uptime.
☞ Web service availability
☞ Application availability
☞ Dependency Monitoring and Analysis
☞ Creating RCA based on alerts and triggers

i) <u>Server Administration</u>
☞ Administration and monitoring of physical, virtual Servers at DC./DR
☞ Induction and De-induction of Servers which include rack mounting and dismounting.
☞ Windows OS installation as per the check list, configuration and troubleshooting
☞ Assisting in any OS installation on instruction of SBIL
☞ Modify and manage virtual machines.
☞ Migrating Windows server OS to latest version on request.
☞ Performing data copy and application migration.
☞ Providing support for windows application and assisting the application owners in troubleshooting Windows OS related issues.
☞ Providing RDP support and guidance to vendor application owners.

j) <u>Reports & MIS</u>
☞ MIS to be conducted every month with all service reports, incident and trends of the services affected and improvements.
☞ Daily Night Shift Activity Report
☞ Incident /Problem management Reports
☞ Asset Inventory report
☞ Daily Backup report
☞ Server monitoring report captured form monitoring tool.
☞ Monthly, Quarterly, half yearly reports and trends of team actives to be available and provided on request.
☞ Any MIS report as required by SBIL process.

k) Vendor Management Services
☞ Maintain database of the various vendors with details like contact person, e-mail id's, contact numbers, escalation matrix.
☞ Track the adherence of the Warranty/AMC vendors on the SLAs which they have with SBIL for various assets (SLA details would be provided by SBIL.).
☞ Timely escalate to SBIL in case of any non conformance of SLA by vendor.
☞ Maintain standard format/report defined along with SLA / NDA for all Warranty/AMC vendors

l) Process Documentation (ISO & ITIL) & implementation
☞ ISO & ITIL process maintenance, adherence and documentations
☞ Documentation update with version control as per SBILIFE defined frequency.

6. **Compliance management**
☞ Ensure compliance is met for all managed services like OS, Patch, backup, password change etc.
☞ Compliance reports to be submitted on request or made part of the MIS presentation on monthly basis.

7. **Project Management**
☞ Executing of Projects like Windows OS migration, Backup upgrade, other software upgrade in jurisdiction of Datacentre.
☞ Implementation of any projects as required by SBIL.
☞ Perform Proof of concept for software, utilities, application as per the standards; provide bench mark report to SBILIFE.

8. **Transition Management**

A transition Project team by bidder to be setup for the period for not more than one month to ensure following

☞ Smooth transition of all Data Centre & Windows related support services & activities.
☞ Onboarding of new resources with site specific orientation.
☞ Preparation of transition document and execution of plan
☞ Onboarding orientation of each level of engineer with daily checklist, SoP, shift handover process, fail-over drill, rollout, configuration template, backup, inventory update etc. all with proper flow chart and explanation as defined in scope of work.
☞ Training document of IT Service Desk work order creation, assignment and closure with comment.
☞ Review of existing template (Remedy or offline) for day to day functioning and introduction of new Template if any required to increase productivity and also measure day to day work.

Note: The above lists of activities are to be carried out by the resources but not limited to the above

B.   **TEAM STRUCTURE.**

Profile	No Of Resources	Location
System Administrator DC-Level 1	7	Belapur
System Administrator DC-Level 1	1	Natraj
System Administrator DC-Level 2	4	Belapur
Team Leader	1	Belapur
Project Manager for Network and Data centre	1	Belapur

C.   **RESOURCE DISTRIBUTION:**

Location	Type of Support	PM (Shared)	TL	L2	L1
DC, NOC	Onsite	1	1	4	7
HO, Natraj	Onsite, remote	-	-	-	1
CPC, Seawoods	Remote & on-site as and when required.	-	-	-	-
Branches	Remote from NOC	-	-	-	-
DR	Remote from NOC	-	-	-	-
Total Resources		1	1	4	8

PS:
i.   1 backup engineer for 10 resources of to be kept at onsite all the time.
ii.   Single Project Manager for Data Centre & Windows Support & Central Network Support operation.

       Note:
1) Bidders back office team will be supporting the onsite resource all time. If onsite Team is not able to resolve the issue within 2 hours back office expert support should Visit the site within 2 hours.
2) Additional resources for the business critical months may require enabling support Business needs
3) Bidder would have to provide support for any new branches or international branches from Data Centre in coordination with OEM / SI engineers on site.

I.   <u>**Services window for Support**</u>

24 x 7, 365 days/year at CBD Belapur
9 x 6. at HO Andheri Natraj.
Performing the additional roles and responsibilities as per SBIL requirement.
Holidays as per SBIL policies.
One-day week-off every week for all resources under contract
Shift will be decided as per the SBIL requirement.

D.   SKILL SET FOR RESOURCE

Resource Type	Qualification	Cert*	Experience
PM	BE, Science Graduate	Project Mgmt	8 +
Team Lead	BE,Science Graduate	MCSE, MCSA,ITIL	6+
L2	BE, Science Graduate	MCSE,MCSA	5+
L1	Graduate	MCSE	2+

*Desirable not mandatory

E.   SKILL SET REQUIRED

I.   System Administrator L1

- ☞ Strong Ability and Technical Knowledge to develop and Manage Data Centre Site Operations and Services.
- ☞ Capability & Availability to work in a 24*7 Environment.
- ☞ Responsible for ensuring that all services are run to the very high standard and achieve 99.9% Availability
- ☞ Should have technical knowledge in windows server operating systems and backup operation, monitoring operations.
- ☞ Should have knowledge with file permission and file management task.
- ☞ Should have basic Active Directory management capabilities like user management, Group management etc.
- ☞ Graduate with a relevant 2+ years of Experience in L1 Administration in Windows Servers Environment.
- ☞ Pursued Microsoft Certification course.
- ☞ Capable of Hardware activities such as Rack mounting/Dismounting of Servers, Network cable and Fibre cable connections.

II.   System Administrator L2

- ☞ Strong Ability and Technical Knowledge to develop / Deploy and Manage Data Centre Site Operations and Services.
- ☞ Experience with 24*7 Environment.
- ☞ Responsible for ensuring that all services are run to the very high standard and achieve 99.9% Availability
- ☞ Responsible for assisting in defining and Delivering Data Centre Operation Strategy
- ☞ Should have knowledge of Windows server environment of all flavours and Features
- ☞ Should be minimum MCSA certified or any relevant certification that is suitable for the above operations.

☞ Should be aware of basic networking and VM administration.
☞ Graduate with relevant 5+ years of Experience in L2 Administration in Windows Servers Environment.

☞ Should be ready to learn and adapt for any emerging technologies / product / services.

☞ Should be able to resolve all points related to Windows Security which are part of Security Baselining, Vulnerability assessment .application security testing, Penetration testing requirements.

☞ Good Communication Skill.
☞ Ability to lead and guide a Team.

III. Team Leader

☞ Strong Ability and profound technical Knowledge to drive team, activities and projects
☞ Should be well versed with emerging technologies
☞ Should be able to perform ITIL operation like change management, Incident and problem management and follow with team till closure.
☞ Should be able to create modify and update SOP documents on timely basis.
☞ Should be able to drive projects like OS migration, Hardware upgradation,
☞ Backup reconciliation, firmware updating and implement and maintain Microsoft related technology.
☞ Should create shift tracker and manage team to maintain adequate resources in each shift.
☞ Should have good communication skill.
☞ Should be the primary point of contact for any escalation and ensure the escalations are resolved based on the severity of the call.
☞ Should ensure all open tickets are being tracked and closed with SLA.
☞ Ensure all daily reports are being tracked and sent across to SBIL management.
☞ Should have ability to create excel dashboards and trend matrix of activates of SBIL.
☞ Should be able to groom new resources and ensure smooth handover.
☞ Should be able to drive new resource induction as per SBIL process.

IV. Project Manager.

☞ Strong Management and Technical Ability in Windows, Networking and Server platforms.
☞ Accountability for ensuring that all services are run to the very high standard and achieve 99.9% Availability
☞ Technical Ability to understand day to day operations and issues.
☞ Should have implementation skills and has to have at least completed 3-4 major IT / Networking projects.
☞ Having good presentation skills.
☞ Should have a relevant 8+ years of Experience in IT and Windows Server OS & Networking
☞ People management, Ability to lead, train and create favourable environment for team performance and motivate large teams in diversified environments.
☞ Service and Process management expertise.
☞ ITIL knowledge /Certification preferred.
☞ Solely responsible for seamless transition.
☞ Catalyst between SBI Life & cross functional stake holders
☞ Accountable for monthly SLA monitoring, review meetings etc.
☞ Coordination from various SBI Life initiated new projects / PoC Activities for planning, support & execution

F.   <u>**TEAM ROLES AND RESPONSIBILITIES**</u>

Sr.No	L1 Windows Server Support Scope Of Work (SOW)
1	Monitoring of all Server parameters.
2	Delete/Move data to free the disk space
3	User creation and attribute modification
4	AD Management / Monitoring
5	Reset Password of user
6	Move user in OU
7	User Access Management
8	Install and Update Antivirus
10	Backup Monitoring
11	File Share management
12	Managing Domains
13	Managing Volumes
14	Problem Management and Fixation of all error and issue
15	Managing Clusters
16	Creating Reports
17	Configuring SNMP TRAP, on the servers
18	Keeping track of EOL Versions
19	Perform task based on agreed SLA and Approvals
20	Patch management Support
21	Log review
22	Security Policies of logins
23	Call/Exception Handling
24	DNS /DHCP Management
25	Provide USB/CD/Data Card Access
26	Managing DC /DR Physical server hardware and Vendor coordination
27	OS installation, Hardening of Server
28	Trends of incident problem and change
29	System Administration Task
30	Assign Protocol Addresses
31	DHCP Management
32	Hardening of server manually / Automaton
33	Maintaining, coordinating with various teams, updating of records of SBIL data centre related process
34	Updating process related to Deviation, Induction and De-Induction, Change configuration forms, Patch Management forms, USB access rights etc
35	Maintaining backup tape records and co-ordination of Tape availability as per SBIL process
36	Maintaining coordinating and analysing backup records as per SBIL process
37	Gathering raw data and providing it to Team Leader Manager for MIS

Sr No	Team Lead/L2 Windows Server Support Scope Of Work (SOW)
1	Log viewing, analysing and rectification
2	Predictive analysis/Capacity Planning
3	Windows Operating system Troubleshooting
4	Fixing issues as per event Logs
5	Configuration of internal applications of OS (Such as IIS, DNS, DHCP)
6	Root cause analysis
7	Performance Management
8	Hardening and Fine tuning of Operating system
9	Analysis of memory dump, full scale admin
10	Patch Management of Windows Operating system
11	Troubleshooting of Active directory based upon critical event logs
12	Windows New roles and Feature Implementation and Documentation
13	Hardening and Fine tuning of Active directory sites & Services
14	Configuration & Customization of Active directory as per SBIL requirement
15	Active Directory Replication management
16	Active Directory Performance management
17	Cluster Management and Support
18	Group policy implementation, troubleshooting and deployment
19	Backup & Restore of Active directory database
20	Performing upgrades of Technologies
21	Managing L1 Team, keeping track and resolving critical escalations
22	Implementation and Architectural review and Designing of New Features
23	Automation of Manual task and new requirements using scripting of Microsoft OS, (Powershell , VBS, batch script)
24	Fine tuning and Baseline of AD, DNS / File Server, DHCP configuration as per Principle guidelines
25	Installation of Windows software's and database
26	Knowledge of image creation tools and technologies
27	Handle virtual environments and technologies
28	Strong Management and Technical Ability in Windows and Server platforms
29	Technical Ability to understand day to day operations and issues
30	Administration & management of windows active directory 2012,2016 and 2019 servers
31	Taking care of multi forest multi domain infrastructure for large sized organisation
32	Management of OU, User, Computer and Group accounts along with AD database.
33	Ensuring to maintain active directory rights to the users and computers
34	Managing & maintaining existing group policy architecture.
35	Creation & configuration of new group policies as per the application or infrastructure requirements.
36	Creation & configuration of Active Directory site & subnets for new location.
37	Ensuring 100% application of group policies to all domain objects.
38	Troubleshooting for active directory architecture within the organization.
39	Troubleshooting of escalated AD replication issues and DNS related issues.
40	Providing technical support to application teams who are integrating their application with AD.
41	Knowledge of MS Windows 2012,2016 File & Print Server Administration
42	Firmware upgradation for all Rack and blade servers including chassis
43	Storage integration with Windows Servers like Lun mounting, Additional of Lun to the present infra etc..
44	Accountability for ensuring that all services are run to the very high standard and achieve 99.9% Availability

Sr No	Project Manager.
1	Daily, Weekly Monthly MIS Review
2	Keeping track of SLA violation
3	Understanding new changes / Implementation
4	Maintain Escalation matrix
5	Team Management
6	Creation of POA, Drive project until completion
7	Serve as first Point of Contact to SBIL

8	Ensuring Compliance is met
9	Working on Incident management , Problem Management and SLA
10	Having strong technical Knowledge in Microsoft/Networking and surrounding Platforms
11	Should manage L1 and L2 for Datacentre , Windows Administration and Network team
12	Ability to drive, design major project until completion
13	Managing Man power, shift schedule and availability of adequate resources to meet the call requirements
14	Should undertake / complete implementation, create documents and include in daily, operations /process for L1 & L2
15	Handle critical escalation and provide immediate remediation / Solution

Note: list of activities mentioned in all above table is exhaustive but not comprehensive.

Disclaimer:

1) Above mentioned Scope of Work in exhaustive and not comprehensive. SBIL may assign new roles and responsibilities as per the requirements.
2) Above mentioned name of OEMs, Technologies, Tools & Key Products are presently deployed in SBI Life production IT networking setup of SBI Life Insurance. Vendor will have to provide similar level of support for any new OEM, Tools, Technologies, Product and Services introduced by SBI Life.
3) Vendor will have to provide similar level of support in case SBI Life decides to shift any of above mentioned location anywhere in India.

G. ## INFRASTRUCTURE DETAILS

Server Operating System Details:

1) Windows 2008 /2012 /2016 /2019 all flavours.
2) SAN HP XP7/EMC Dell, HP NAS,NETAPP,HUAWEI ,2600V3.
3) Linux servers all flavours
4) HPUX

Server	*Details*
Make	**Cisco, HP, Dell, Huawei**
No. of Servers	**1200 + Servers including Physical and VM servers.**
Version	Intel , AMD

Location of the Servers

Datacentre	*CPC*	*DR Site*	*Corporate Office*
CPD Belapur	**Seawoods**	**Hyderabad**	**Andheri**

Expected growth of the infrastructure is 10% per year.

H.   **3RD PARTY TOOLS AND SOFTWARE DETAILS**

Sr No	Details
1	Zabbix Monitoring Tool
2	HP IRS
3	Dell Support Assist
4	E-Gurkha
5	Arc Serve
6	BMC BBSA
7	Manage Engine (AD Audit, AD Manger)

Note: Above Scope of Work is exhaustive but not comprehensive.