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REQUEST FOR PROPOSAL

FOR THE PROCUREMENT OF
MICROSOFT PRODUCTS



NATIONAL CENTRE FOR INFORMATION & TECHNOLOGY

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1 Introduction

National Centre for Information Technology (Herein referred as NCIT) was established in 2003 as the main government agency for the development, promotion and dissemination of Information Technology (IT) in the Republic of Maldives.

NCIT mandate includes but not limited to below areas;

- To establish, operate, maintain and develop the Government Computer Network.
- To advise the Ministry on the National IT Strategy to fully harness and exploit IT for economic and social development and to plan, co-ordinate and implement the programmes and projects to achieve the IT Policy of the government.
- To implement e-Government by coordinating and developing Information Systems Plans of the Government for greater productivity, wider public access to information and faster delivery of services.
- To carry out reviews and studies in technology and policy, in cooperation with industry and other Government agencies, to accelerate the development of the local IT and allied industries.
- To establish guidelines, benchmarks and standards necessary for Maldives at that time and to disseminate the information to the public.
- To review and approve proposed information systems plans of government agencies and parasitical.
- To provide IT consultancy to Government agencies and the private sector conduct a periodic information systems survey in the Government to foster a well-coordinated and integrated Information Systems.
- To advice and assist Government ministries and agencies concerned in the review and design of IT education and training curricula to ensure to develop the human resource in IT for the Maldives.
- To develop and carry out awareness programs to improve wider public awareness and understanding of the national IT vision, plan projects and activities.

In accordance with the NCIT's strategy to update entire government information systems to enhance information flow, gain efficiency and improve security and controls, NCIT is seeking a suitable vendor to develop and implement Enterprise wide agreement using Microsoft solutions.

The solution has to be designed in to a private cloud environment for unified resource requesting, orchestration, provisioning, monitoring and management platforms across virtualized and non-virtualized systems.

Entire solution has to be deployed in the NCIT Data center. Solution, consultancy, design, implementation and subsequent knowledge transfer has to be provided by the respective vendor. Additionally, vendor must have capacity and capability to provide end to end support infrastructure. Training has to cover end user as well as admin and development staff members.

Solution should contain;

- Backbone of identity and security
 - In addition, NCIT also needs to manage all the endpoints centrally bringing policy framework, compliance and standardization using system center
- Collaborative messaging platform.
- Single platform of collaboration and development including web portals, business process platforms.
- Should have integrated document imaging platform, fully integrated with SharePoint to govern a singular platform of document archival and management solution.

2 Scope of Work (SOW)

Proposed solution should consist of below components.

2.1 Microsoft Licensing

Refer Section 7 (Licensing requirement)

2.2 Product Deployment

Bidder must propose a complete plan on deploying below software solutions as described in Section 8 (Solution overview).

- I. Active Directory design and upgrade plan
- II. Microsoft Exchange server design and upgrade plan
- III. Microsoft SharePoint server design and upgrade plan
- IV. Microsoft System Center Configuration Manager design and upgrade plan
- V. Microsoft Skype for Business server design and upgrade plan
- VI. Document management and archival solution

2.3 Training and development

The bidder should propose a comprehensive training and development plan for the Government of Maldives throughout 5 years of contract period. Training and development section of the proposal must be segregated in to below areas.

1. End user training –

a. Microsoft office – Train the Trainer program

<i>Title of the training</i>	<i>Contents expected</i>	<i>No of staff members to be trained for 5 years</i>
Complete Microsoft office training and Certification	Microsoft Word Microsoft Excel Microsoft PowerPoint Microsoft Outlook (refer Annexure 1 for more information) Microsoft Access	200

b. Senior Government official training on Microsoft Office Tips and Tricks

<i>Title of the training</i>	<i>Contents expected</i>	<i>No of staff members to be trained for 5 years</i>
Microsoft office Tips and Tricks training	Microsoft Word Microsoft Excel Microsoft PowerPoint Microsoft Outlook (refer Annexure 1 for more information) Microsoft Access (Basics)	3000

2. Training on Administration staff

Complete training and Microsoft Certification (certification cost must be included)

<i>Title of the training</i>	<i>Contents expected</i>	<i>No of staff members to be trained for 5 years</i>
Microsoft Windows Server (AD)	5 days (refer Annexure 1 for more information)	225
Microsoft Exchange Server	5 days (refer Annexure 1 for more information)	
Microsoft System Center configuration	5 days (refer Annexure 1 for more information)	
Microsoft Skype for Business	5 days (refer Annexure 1 for more information)	
Microsoft SharePoint Administration	5 days (refer Annexure 1 for more information)	

3. Training of Development staff

Complete training and Microsoft/related Certification (certification cost must be included)

<i>Title of the training</i>	<i>Contents expected</i>	<i>No of staff members to be trained for 5 years</i>
Microsoft SharePoint Development	5 days (refer Annexure 1 for more information)	150
ECM – Enterprise Content Management	3 days (refer Annexure 1 for more information)	150

4. Project Manager's service must be provided by the bidder to monitor and report the progress of the project (covering all aspects of the implementation/training etc.) – All costs related to this engagement must be absorbed in the training costs proposed
5. On site Microsoft certified engineer must be deployed during the first three months of the project – All costs related to this engagement must be absorbed in the training costs proposed

NCIT will provide the list of government staff members to be trained to the winning bidder.

2.4 Support and maintenance

It is bidder's responsibility to clearly identify and implement a necessary support infrastructure for NCIT covering all aspect of the project.

- i. Bidder must provide a comprehensive Plan and Diagram on support flow including all dependencies, contingencies and escalation procedures
 - a. First Level – NCIT Technical team
 - b. Second Level – NCIT Technical team
 - c. Third Level – NCIT Technical team, Local partner, LSP
 - d. Fourth Level – NCIT Technical team, Local partner, LSP, Microsoft
- ii. Must provide necessary training for NCIT staff to manage First level and Second level support requirements arising from NCIT itself and various other government organizations
- iii. Bidder must clearly specify support mechanism for Third and Forth level support – Local support must be available for critical failures
- iv. Proposed support mechanism must be backed with Back to back Microsoft Premiere
- v. Proper support infrastructure must be laid as per NCIT guidelines. Timely training must be carried out to run the operation smoothly

3 General conditions

3.1 Joint venture (JV) or consortium

1. The local partner can come in to a Joint venture (JV) or a consortium agreement with an authorized Large Solution Partner (LSP)
2. Agreement should be signed between both parties clearly specifying each parties' roles and responsibilities
3. Microsoft Enterprise agreement is a tri party agreement between Microsoft, NCIT and selected LSP
4. License delivery is a responsibility of both LS partner and local partner
5. Under the consortium local partner's mandatory requirements cannot be fulfilled by the LS partner's qualification or experience

4 Financial Requirements

4.1 Financial Security

1. **Bid Security**;- the bidder shall submit a bank guarantee (Beneficiary; Ministry of Finance & Treasury of Maldives), of amounting to One Hundred Thousand United States Dollars (USD 100,000/-), which will be released within (3) months period.
2. **Credit Facility**;- the bidder should agree and propose a payment plan equally divided across five (05) years of project period (should submit acceptance in writing).
3. **Performance Security**;- The bidder should agree for a retention of 5% of the total contract value (should submit acceptance in writing). Which will be implied over the five (5) years (i.e. 1% retained from each year's installment payment). However, the retained payment of 1% will be paid based on deliverable, at the end of each year. This process will be implied throughout the 5 years of the contracted period.

4.2 Payment Terms

1. The payment offer must be made in Maldivian Rufiyaa (MVR).
2. The bidder should agree and propose a payment plan equally divided across five (05) years of project period.
3. Bidder should mention per year payable amount (including GST & other applicable Taxes) in Maldivian Rufiyaa.
4. Subsequently the bidder must mention each year's comprehensive offer in United States Dollar, in a separate sheet.
5. NCIT reserves the right to choose the currency on year when settling the payments based on the circumstances at the time of execution of the payment.
6. The offer shall include;
 - a. Software License and assurance for 5 (five) years
 - b. Installation, commissioning and Support
 - c. Training and development
 - d. Support and Maintenance
7. In case of an official adjustment of exchange rates, NCIT will work with authorities to compensate the variation.
8. On signing of the contract 15% to the total contract value will be dispersed and the balance 5% will be released based on the deliverable, after deducting 1% retention as mentioned in clause ((4.1)-3).
9. Release of retention payment mentioned under financial security clause ((4.1)-3) will be subjected to deliverable assessed by NCIT.

4.3 Other Financial Documents

1. The bidder should submit past two (2) years of their audited financial statements (including;- P&L, Balance Sheet & the cash flow statement).

5 Qualification criteria

5.1 Mandatory requirements

1. The local consortium partner or local bidder must be a legally registered organization within republic of Maldives having a registered local office with domain expertise and experience.
2. The local partner must be a Microsoft Managed Partner
3. The consortium should be in the Microsoft business for last ten (10) years
4. The consortium should have Microsoft competencies in respective areas as listed in below table. (copies of the necessary Certification to be enclosed)

Microsoft;

No	Competency	Required Certification
1	Collaboration and Content	Gold / Silver
2	Datacenter	Gold / Silver
3	Devices and Deployment	Gold / Silver
4	Messaging	Gold / Silver
5	Learning	Gold / Silver

5. The consortium must have Back to back premier agreement with Microsoft - Should be able to extend Microsoft support as and when required

5.1.1 Mandatory requirements - Technical

1. Implementation capability - the bidder should submit Microsoft Transcripts and CVs for all resource persons
2. The consortium must have minimum of 2 design consultants for AD, Exchange, Virtualization, Skype for Business Server, System center, SharePoint. Document management architect should have minimum of 3 (three) years of experience in designing and implementing similar solutions specified in scope of work
3. The consortium should have minimum 4 engineers in Server Implementation with at least three years of experience in implementing AD, Exchange, Skype for Business Server, Virtualization, System center, SharePoint and Document management based Infrastructure
4. SharePoint, Document management and archival design and implementation consultants –
 - a) Should have minimum of 3 (Three) years' experience in SharePoint customization, SharePoint designer tools and expertise in Asp .Net coding, expertise in Visual Studio etc.

b) Consultants in this section must meet below criteria.

No	Competency	Required Certification	Minimum No of Consultants expected
1	Certified Document Imaging Architect	CDIA+	4
2	Certified Information Professionals	CIP	3

5.1.2 Mandatory requirements – Training related

In order to comply with the Training scope proposed in the Section 2 (Scope of work) Training plan must cover below technologies. It is expected to train 3725 staff members in the Government within next 5 years as per below table using certified trainers in respective areas including train and certify NCIT admin staff members to govern the private cloud.

Consortium or local partner must have at least 6 nos. of Microsoft certified trainers to support on below training deliverables.

Technologies:

- I. Microsoft Windows Server 2012 R2
- II. Microsoft Exchange 2013/2016
- III. Skype for Business Server 2015
- IV. Microsoft SQL Server
- V. Microsoft System Configuration Management Server
- VI. Microsoft SharePoint Server configurations
- VII. Disaster site replication of all above mentioned servers
- VIII. Microsoft Office, the latest version
- IX. Enterprise content management

Target Group	Title of the training	Contents expected	No of staff members to be trained during 5 years of contract
Train the trainer program	Complete Microsoft office training and Certification - Train the Trainer program	Microsoft Word Microsoft Excel Microsoft PowerPoint Microsoft Outlook	200
Senior Government officials	Microsoft Office Tips and Tricks	Microsoft Word Microsoft Excel Microsoft PowerPoint Microsoft Outlook	3000

Administration staff members	Microsoft training and certification	Microsoft Windows Server (AD) Microsoft Exchange Server Microsoft System Center configuration Microsoft Skype for Business Microsoft SharePoint Administration	225
Development staff members	Microsoft training and certification	Microsoft SharePoint Development	150
Development staff members	ECM Practitioner (3-5 Days)	ECM – Enterprise Content Management	150

5.1.3 Mandatory requirements - Services and Support related

1. The bidder or the consortium must have proven Help Desk system available 24 x 7 to record technical and remediate complaint calls and all such complaints should be logged together with the date and time. The Bidder should submit a detail process outline of the same.
2. The bidder or the consortium should have similar experience in providing support for Microsoft licensing & installation services. (Particularly products proposed in this bid)
3. Similar project references

Organization	Contact person & designation	Contact numbers, email, fax etc.	Details of project and the total value	Current status
1.				
2.				
3.				
4.				
5.				

4. During five (5) years support and maintenance contract the partner should;
 - I. Provide necessary guidance
 - II. Provide standard support
 - III. Should ensure availability of updates and upgrades
 - IV. Guidance for implementations of newly released versions
 - V. Porting all such updates/versions in the servers

5.2 General requirements

General criteria is not mandatory. The partners qualifying for general criteria will be on added advantage in the selection process.

1. The consortium partner have similar experience in providing Enterprise Agreement and services to a Government in the region will be preferred. (documentary evidence to be provided)
2. Local consortium partner having locally established training center to deliver related trainings locally is preferred. (Training institute registration certificate from Ministry of education to be attached)
3. Local consortium partner having locally registered testing center (Certiport and Pearson) will be preferred. (necessary for Microsoft related exams and certifications)
 - a. The bidders without local Testing center facility must propose a Certification mechanism and associated cost
4. The consortium exhibiting experience in document imaging, archiving industry for at least last 10 years and with least three nos. of similar project references will be preferred. (Each project value must be more than MVR. 3M or US\$. 200,000, reference documents must be included)
5. The bidder or the consortium having at least two (2) PMP certified project managers with redundant resources will be preferred

6 Evaluation criteria

The Bid Evaluation Methodology proposed in this section provides the framework to evaluate the tender and to select the successful implementation and support Partner. The Evaluation criteria is aligned to the procurement policies of NCIT. The methodology includes Mandatory (Technical, Training related, Services and Support related), General and Commercial evaluation to assess the suitability of the Solution proposed and also the Implementation, support Partner.

Mandatory Evaluation: The mandatory evaluation of the vendor will be done by NCIT based on the information provided by the vendor as response to the Mandatory Requirements Specified in the RFP (Section 5). All components in Section 5 are compulsory.

The components of mandatory qualification requirements have been explained in the section 5.1.

The components of mandatory Technical evaluation requirements have been explained in the section 5.1.1.

The components of mandatory Training evaluation requirements have been explained in the section 5.1.2.

The components of mandatory Services and support requirements have been explained in the section 5.1.3.

The components of General qualification criteria have been explained in the section 5.2.

Insufficient information as response to mandatory evaluation criteria specified in section 5 will result the particular Bid to eliminate in the selection process.

The proposals shall be evaluated for compliance to the mandatory and general qualification criteria. The requirements mentioned under Section 5 ensures that the selected implementation partner has the capability and infrastructure to manage a complex and large scale implementation as required for the project.

Evaluation process will be carried out in three stages.

1. Stage 1 – Technical Evaluation

In stage 1, the proposals will be assessed against the Mandatory and general criteria specified under Section 5 in the RFP.

Technical Score = 60 X

Technical mark

Highest technical mark among those conforming tenders

2. Stage 2 – Financial Evaluation

In Stage 2, financials of the tenders have passed on Stage 1 will be assessed. A maximum financial score (i.e. 35) will be allocated to the proposal that offers the lowest price. The financial score for each proposal will be calculated using the following formula,

$$\text{Financial Score} = 35 \times \frac{\text{Lowest price among those conforming tenders}}{\text{Tender price (Quoted price of the partner)}}$$

2.1. A five “5” marks will be allocated for “Business Performance. The assessment will be based on the company profile, credentials, liquidity and the audited financial statements submitted. Stage 2.1, A total “5” marks for company profile, credentials, liquidity and the audited financial statements.

3. Stage 3 – Combined Technical, Financial & Business Performance Evaluation

In Stage 3, based on the three above evaluations a combined score will be calculated using below formula.

TOTAL SCORE: Technical (60) + Financial ((Lowest Bidder (35) + Business Performance (5))

7 Licensing requirement

Part#	Item Description	Quantity
KV3-00381	Windows Enterprise Upgrade with SA	2000
76A-00025	Microsoft Enterprise CAL with SA	2200
FUD-00936	CIS Datacenter with SA	30
7JQ-00341	SQL Server Enterprise Core With SA	14
7NQ-00302	SQL Server STD Core with SA	10
395-02412	Exchange Server Enterprise with SA	12
312-02177	Exchange Server STD with SA	3
H04-00232	SharePoint Server with SA	10
6YH-00575	Skype for Business Server with SA	6
021-05331	Office Standard with SA	1000
43T-00001	Project Online with Project Pro	10
	Windows Upgrade for Academic	1000
	Office ProPlus Academic	1000
	Win Server CAL Academic	1000
	Win Server Academic	10
	Document Management solution	For 3000 users

8 Solution overview

8.1 Design and conceptual diagrams

The bidder must provide conceptual diagrams for all below areas covering entire project.

1. Active Directory Forest Architecture – Conceptual diagram
 2. Exchange Server Farm Architecture – Conceptual diagram
 3. SharePoint Server Farm Architecture – Conceptual diagram
 4. Skype for Business Server Farm – Conceptual
 5. System center Stack – Conceptual
 6. Document Management System – Conceptual
 7. Total solution – Conceptual
- Note; the proposed designs should be endorsed by Microsoft before the implementation and should qualify for ISO standards.

8.2 Design and upgrade of Active Directory infrastructure

The bidder should design and deploy the Microsoft Active Directory Services (AD DS) and other necessary components related to the infrastructure including remote sites.

This engagement comprises of activities needed to assess the current infrastructure, potential impact of migrating all ministries, joining to private cloud etc.

1. Gather information about the current AD environment
2. Understanding about the operational environment to be supported by AD
3. Identify the potential impact of new AD architecture
4. Upgrade path and related impacts
5. Identify any gaps, major issues and risks associated with deploying new AD infrastructure

8.2.1 Design

The Design phase of this engagement shall include comprehensive plan for deployment of Active Directory (AD) technology across Government of Maldives.

Specific activities should include;

- a. Develop preferred future state including features and functionality of AD to be deployed
 - b. Identification of design, integration and interaction components when deploying the required AD framework across the government
 - c. Development of a high-level AD design, along with any corresponding deployment options
 - d. Development of group policies for an enterprise implementation
 - e. Recommended hardware specification needed to implement the developed AD design
 - f. Preparation of an overall cost estimate for the implementation of AD based on the developed high-level design and set of assumptions, and
 - g. Development of a formal **Active Directory Component Project Plan** for the implementation of Active Directory solution.
- a. Design and implementation of logical structure of AD DS;
 - b. Design and implementation of physical structure of AD DS;

- c. Design and migrate the placement of FSMO roles and Global Catalog
- d. Design and migrate the DNS (Name resolution) structure
- e. Design the Windows Time service hierarchy
- f. Design of basic Group Policy Objects for AD DS
- g. Design AD DS objects naming convention (for users, groups, hosts, sites and site links).
- h. Design and migrate the OU structure
- i. Design Windows Server 2012 Hyper-V machines to host the workloads
- j. Deploy the AD DS infrastructure according to the recommended server configuration and architecture.
- k. Designing and Providing Storage sizing to accommodate all proposed solution requirements.
- l. Build designed AD DS environment in Test lab and test the deployment and upgrade scenarios.

8.2.2 Technical Deployment

- a. Active Directory will follow Windows Server 2012 R2 single forest, single domain design and the total number of user objects in the domain spread across Branches/Offices of the Government of Maldives.
- b. Additional Domain controllers to be deployed in NCIT and specified DR site
- c. All domain controllers to be standardized to Windows 2012 R2 full installation
- d. All the domain controllers should be configured as the Global Catalog and the AD site design will be based on Hub and spoke topology with appropriate subnet definition
- e. Site Link configuration and Site link naming should follow the best recommended Microsoft Windows 2012 R2 AD Architecture
- f. Schedule for replication: The default schedule allows replication 24hrs/day, 7 days/week, this default setting should remain on all site links
- g. Frequency for replication: For site links that associate remote sites hosting domain controllers with the combined central site, the replication frequency should be configured to replicate every Replication Configuration
- h. Flexible Single master Operations (FSMO) placement: FSMO roles are Schema master, Domain naming master, PDC emulator, RID master, Infrastructure master. The PDC Emulator and RID Master should be located on a single domain controller. The Infrastructure Master, Domain Naming Master and Schema Master should also be located on a single machine (different to the previous server described)
- i. Group policy should be deployed as per NCIT specifications. NCIT specified Domain policy should be applied at the domain level for all the User accounts
- j. Naming conventions of the User accounts/OU's/Groups, computers and Servers has to be standardized as per NCIT specifications

8.3 Design and implement Exchange Server farm (Email infrastructure)

NCIT requires consulting services to complete all aspects of the Microsoft Exchange upgrade including software installation, configuration and migration of email, calendars, and contacts.

The Proponent will be required to undertake, but not limited to, the following tasks:

- Assessment of current environment and recommendations for implementation parth with Microsoft best practices
- Development of a roadmap for implementation of the solution that will provide unified, consistent and standard business processes and technology to support a high availability messaging environment
- Installation and configuration of Exchange with the NCIT Project Team which includes;
 - Migration all mailboxes, Calendars and contacts
 - Outlook Web Access browser based access to email
 - Message/PST archiving
 - Relevant project documentation - including plans, schedules, procedures, progress reports and post implementation review report

The Microsoft Exchange software and systems are to be operated and maintained by NCIT personnel upon implementation.

- a. Work closely with NCIT's project leads in the installation and implementation of the total solution
- b. Analyze the existing email and calendaring environment and map all existing functionality to the proposed Exchange solution
- c. Provide guidance, procedures, documentation, tools, training and direct assistance to migrate email, calendars, contacts, groups and conferences from the existing email solution to Microsoft Exchange
- d. Provide recommendations on adequate Exchange Server backup
- e. Define all product and licensing requirements for the Microsoft Exchange/Outlook environment, including support and maintenance
- f. Prepare a detailed installation and migration plan
- g. Prepare a detailed plan for data conversion from Existing Email to Exchange for email, calendars and contacts for each mail user
- h. Define changes/hardware requirements for both Microsoft Exchange and storage with respect to the existing environment in place that will be used to facilitate the implementation of Microsoft Exchange 2013/2016
- i. Define the required changes to the Blackberry BES environment that may be required to move to Exchange from existing (if Applicable)
- j. Design and implementation the current Email Solution to Exchange 2013/2016 to be able to accommodate all Mailboxes
- k. Design all levels High availability and Site Resiliency inside Primary Datacenter and in between Primary and Disaster Recovery Data Centers
- l. The Implementation should include migration of current set of mailboxes, distribution groups and creation of new mailboxes and groups
- m. The appropriate sizing for the storage and mailboxes should be provisioned as per the NCIT guidelines
- n. The front-end Server configuration should include outlook web access, Mobile Access features.
- o. All Exchange servers should follow NCIT security requirements and Email Governance policies
- p. Implementation strategy should include configuration of Mail clients for the Email ID's created
- q. All the exchange related configurations should follow the NCIT specification and requirements provided during the implementation planning phase

- r. Design should follow the Microsoft Exchange 2013/2016 best recommendations
- s. All the Exchange related implementation and configuration should be tested before moving into production environment
- t. Custom scripts or configuration should be used as a part of the migration plan as per the NCIT guidelines
- u. Exchange 2013/2016 OWA page should be customized according to NCIT guidelines
- v. Exchange 2013/2016 database online backup (Differential backup) should be taken on a day to day basis and a complete Normal Backup on weekly basis. The same backup to be tested for recovering mailboxes and mails at regular intervals
- w. The solution must be High available in primary Data center
- x. Reverse proxy solution for Publishing Outlook web Access as well as outlook anywhere
- y. Solution must be integrated with existing SPAM filtering solution or Vendor may propose spam guard with the offer

8.4 Design and Implement Skype for Business Server Infrastructure

Additionally NCIT is looking to implement a Skype for Business Server with Enterprise Voice, initially for the entire organization in order to productively communicate and collaborate internally as well as in certain instances externally with other ministries.

For all sites, implement Skype for Business Server 2015 including,

- Provide expanded SK4B topology & design, and a list of requirements for implementation.
- Provide on-site end user support for pilot users post cut-over and Help Desk support during pilot evaluation period.
- Provide troubleshooting and problem resolution as needed.
- During the SK4B Pilot, to assist in providing the pilot users with a seamless transition to SK4B and to improve their end user experience.
- Provide complete and detailed list of additional hardware/software/utility resources needed to complete the setup.
- Plan out SK4B implementation for Users in different Sites/Locations

8.4.1 Design

- Design The Skype for Business Server Topology to be implemented in the NCIT Private Cloud environment to manage all users on premise but in different locations.
- Design Archiving and Monitoring mechanism for Skype for Business conversations
- Design external user access for Skype for Business Server implementation for internal users to use features from outside organization as well as for external participants to be able to join meetings conducted by internal users
- Design Skype for Business Server Publishing
- Design Certificate and DNS Requirements for Skype for Business Server
- Propose and design High Availability plan
- Design Unified Messaging with Exchange 2016
- Design mobile access mechanism
- Capacity Planning for Skype for Business Server

- Network and Bandwidth Assessment for the requirement.

8.5 Design and Implement SCCM Infrastructure

NCIT requires Microsoft System Center solutions (SCCM) to capture and aggregate knowledge about its infrastructure, policies, processes, and best practices so that IT staff can build centrally manageable system and also automate operations.

In order to achieve this requirement SCCM has been selected as the suitable solution in order to manage workstations as well as to obtain necessary reporting as and when required.

The scope involves installation and configuration of Microsoft System Center Configuration Manager 2012 R2, Operations Manager, and End Point Protection (SCCM, SCOM, SCEP) to enable NCIT IT Personnel to more effectively manage configuration, operation and security of the IT Infrastructure.

The proponent shall undertake, but not limited to, the following tasks:

- Design and Implementation of the centralized patch management solution, Centralized Server/Desktop/Laptop hardware and software inventory, Software metering, remote software distribution, remote trouble shooting and remote OS deployment
- Design should be a part of the Active Directory design and optimized for NCIT's network architecture
- Central SCCM server and Database server should be implemented
- Patch management solution should segregate the desktops, laptops and servers and flexibility for the patches
- All the patches and application should be installed seamlessly without user intervention
- Patch management configuration and settings should be optimally set during non-peak hours
- Asset management configuration and reports should be according to NCIT guidelines
- Detailed report on the software and hardware inventory and metering should be provided for all the desktops, laptops and servers
- Appropriate audit configuration and reports should be generated as per the NCIT guidelines
- Software distribution should provide facility to use MSI packages
- The entire SCCM 2012 configuration should be as per with NCIT guidelines
- Deploy System Centre Endpoint Protection (SCEP) 2012 R2 to utilize the Windows Firewall with Advanced Security
- Provide full documentation of recommended configuration parameters in line with NCIT's validated requirements
- Anti-malware activity reports to be configured according to the NCIT guidelines
- Reporting should be designed to allow full organization view or single entity reports

8.6 Design Virtualization Infrastructure and System Center Virtual Machine Manager

- Planning and designing System Center 2012 R2 Virtual Machine Manager
- Deploying System Center 2012 R2 Virtual Machine Manager
- Planning and Designing Hyper-V with clustering Infrastructure
- Deploying All Microsoft Solution on Hyper-V virtualization Infrastructure

- e. Migrating all Hyper-V Supported physical environments to Virtualized infrastructure

8.7 Design and implement System Center Operations Manager

- a. Planning and Designing System Center 2012 R2 Operation Manager
- b. Deploying System Center 2012 R2 Operation Machine Manager
- c. Provide application level monitoring on NCIT key applications
- d. Provide notifications during key system service failures
- e. Provide comprehensive system dashboard for IT team and Management

8.8 Design and implement SharePoint base collaboration platform with process automations

- a. Design SharePoint Server for Intranet portal, basic work flow configuration, implementation of document management system
- b. The overall design of the SharePoint Server should be in line with the NCIT guidelines and user adaptability
- c. Design should be flexible in such a way the SharePoint Server platform can be expanded and additional custom applications can be added in future
- d. The SharePoint Server platform should be integrated with Windows 2012 R2 Active Directory for delegated, secured access and updating of the content by various departments and ministries
- e. Following modules are envisioned for the intranet portal
 - I. Document sharing and collaboration
 - II. Knowledge Management (People profiles, feedback systems, blogs).
 - III. End to end credit approval process automations
- f. Sizing of the storage has to be carried out for above requirements
- g. Detailed architecture plan should be provided for the SharePoint Server Platform and appropriate .aspx and Silverlight technologies should be used
- h. The design should consist of separate front end server, application server and database server
- i. Appropriate testing of the architecture has to be carried out before deploying in the production environment
- j. The configuration should follow security guidelines and specifications of NCIT
- k. Required SharePoint configurations such as indexing, search and design architecture should be according to NCIT's specification and guidelines

8.9 Design and implement Document Management solution (DMS)

- a. Design and implement of document management system
- b. The overall design of the document management solution should be in line with the NCIT guidelines and user adaptability
- c. Design should be flexible in such a way that document management platform can be expanded and additional custom applications can be added in future
- d. The document management platform proposed should be able to integrate with Windows 2012 R2 Active Directory & exchange Server 2013/2016 for delegated, secured access, updating the content and collaboration with various Departments and Ministries
- e. Sizing of the storage has to be carried out for above requirement
- f. Detailed architecture plan should be provided for the document management solution deployment
- g. The design should consist of separate front end server, application server and database server
- h. Appropriate testing of the architecture has to be carried out before deploying in the production environment
- i. The configuration should follow security guidelines of NCIT
- j. Required document management configurations such as indexing, search and design architecture should be clearly mentioned
- k. Design and implementation of Document management policies and security policies

9 Training Curriculum

Refer Annexure 1

10 Technical compliance

Refer Annexure 2

Annexure 1

Training Curriculum

1. End user Training

a. Complete Microsoft office Train the Trainer (TtT) training and Certification

Word 2016

Duration: 2 Days

Lesson 1: Getting Started

- Closing a Document
- Creating a New Document
- Identifying Screen Symbols
- Lesson Objectives
- Looking at the Screen
- Moving Around in the Document
- Opening a Document
- Save to Web
- Saving as Another File Format
- Saving Documents
- Sharing Documents
- Switching Between Documents
- Using Document Properties
- Using E-mail
- Using SharePoint
- Using the Quick Access Toolbar
- Using the Ribbon
- Working with Documents
- Working with Text
- Working with the Compatibility Mode

Lesson 2: Manipulating Text

- Adjusting the Zoom
- Arranging Windows
- Changing the View
- Editing Text
- Finding and Replacing Items
- Lesson Objectives
- Moving Text Using Drag-and -Drop
- Selecting Consecutive Text
- Selecting Non-Consecutive Text

- Selecting Text
- Splitting the Window
- Using Cut, Copy and Paste
- Using Paste Special
- Using Repeat
- Using the Office Clipboard
- Using the Selection Bar
- Using Undo
- Working with Multiple Windows

Lesson 3: Formatting Content

- Aligning Text
- Changing the Character Spacing
- Changing the Spacing
- Formatting Characters
- Formatting Paragraphs
- Indenting Paragraphs
- Lesson Objectives
- Using the Font Dialog Box
- Using the Format Painter

Lesson 4: Working with Tabs

- Creating a Multilevel List
- Creating Outlines
- Customizing the Lists
- Organizing List Information
- Setting Tab Stops
- Setting Tabs on the Ruler
- Setting Tabs with the Tabs Dialog Box

Lesson 5: Formatting Documents

- Adding Watermarks
- Alternating Header s and Footers

- Applying Page Borders
- Applying Themes
- Changing the Orientation
- Changing the Paper Size
- Changing the Marg ins
- Controlling the Text Flow
- Creating Headers and Footers
- Customizing Themes
- Inserting Page Breaks
- Inserting Page Numbers
- Inserting the Date or Time
- Setting up the Document
- Using Headers and Footers
- Using Page Color
- Using Themes
- Working with Columns
- Working with Document Backgrounds
- Working with Section Breaks

Lesson 6: Getting Ready to Print

- Checking the Spelling and Grammar
- Preparing to Print
- Proofing Your Document
- Using AutoCorrect
- Using Comments

Lesson 7: Using Tables

- Adjusting the Width or Height
- Converting a Table to Text
- Converting Text to a Table
- Creating a Qu ick Table
- Deleting Rows, Columns or Cells
- Drawing a Table
- Inserting a Table
- Inserting Rows, Columns or Cells
- Manipulating Tables
- Manipulating Text in Cells
- Merging and Splitting Cells
- Modifying the Borders and Shading
- Selecting Items in the Table
- Sorting Lists of Data

- Using Table Styles
- Working with Tables
- Working with Text

Lesson 8: Working with Illustrations

- Adding Captions
- Customizing Shapes
- Inserting Clip Art
- Inserting Pictures
- Manipulating Pictures
- Using Drop Caps
- Using Screenshots
- Using SmartArt
- Using Text Boxes
- Using WordArt
- Working with Shape Objects

Lesson 9: Creating Mass Mailing

- Documents
- Creating Simple Mailing Documents
- How Do I Merge?
- Understanding Data Sources
- Understanding the Main Document
- Using Existing Documents
- Using the Mail Merge Wizard
- What are Mailings?

Lesson 10: Sharing Documents

- Creating a Table of Contents
- Inserting Fields
- Marking a Document as Final
- Navigating with References
- Protecting Documents
- Recovering Document Versions
- Restricting Access to Documents
- Understanding Building Blocks
- Using Footnotes or Endnotes
- Using Passwords
- Using Quick Parts
- Using the Navigation Pane

Excel 2016

Duration: 2 Days

Lesson 1: Introducing Excel

- Closing a Workbook
- Creating a New Workbook
- Entering Numbers
- Entering Text
- Entering Data in a Worksheet
- Entering Dates and Times
- Identifying Screen Symbols
- Inserting Symbols and Special Characters
- Looking at the Screen
- Managing Files and Folders
- Mouse Symbols
- Moving Around the Worksheet
- Opening a Workbook
- Saving Workbooks
- Selecting Cells
- Switching Between Workbooks
- Types of Data
- Understanding Basic Terminology
- Using the Quick Access Toolbar
- Using the Ribbon
- What is an Electronic Spreadsheet?
- What is Excel?
- Working with the Compatibility Mode
- Working with Workbooks

Lesson 2: Constructing Cell Data

- Adding Color to the Worksheet Tabs
- Adjusting the Row Height
- Adjusting the Columns and Rows
- Changing the Column Widths
- Copying and Moving Data
- Copying and Moving Cells Using the Mouse
- Cutting, Copying and Pasting Data
- Deleting Rows and Columns
- Editing Cells and Undoing Changes
- Finding and Replacing Data
- Finding Data
- Hiding/Un-hiding Rows & Columns

- Hiding/Un-hiding Worksheets
- Inserting and Deleting Cells
- Inserting and Deleting Rows and Columns
- Inserting or Deleting Worksheets
- Inserting Rows and Columns
- Lesson Objectives
- Managing Worksheets
- Moving or Copying Worksheets
- Renaming Worksheets
- Replacing Data
- Using AutoFill
- Using AutoFit
- Using Paste Special
- Using the Office Clipboard

Lesson 3: Using Formula and Function

- Common Excel Functions
- Conditional Functions
- Creating and Editing Formulas
- Displaying and Printing Formulas
- Flash Fill
- Lesson Objectives
- Mathematical Operators
- Referencing Other Worksheets
- Using Absolute and Relative Cell References
- Using Absolute Cell References
- Using Formulas
- Using Functions
- Using Mixed Absolute and Relative Cell References
- References

Lesson 4: Formatting the Worksheet

- Applying Cell Borders
- Applying Themes
- Changing Cell Alignment
- Changing Fonts and Sizes
- Clearing Cell Contents and Formatting
- Conditional Formatting
- Formatting a Cell

- Formatting Numbers and Decimal Digits
- Lesson Objectives
- Modifying Themes
- Paste with Live Preview
- Themes
- Using Cell Styles
- Using Colors and Patterns
- Using Conditional Formatting with IF Function
- Using the Format Painter
- Using the Ribbon
- Using the Rules Manager

Lesson 5: Viewing and Printing Workbooks

- Adding a Header or Footer
- Changing Excel Default Settings
- Changing the Workbook Views
- Changing the Zoom
- Changing Worksheet Views
- Creating and Arranging Worksheet
- Windows
- Customizing the Page Layout
- Freezing Panes
- Lesson Objectives
- Page Formatting
- Printing and Previewing the Workbook
- Printing Selected Worksheets
- Printing Titles or Range of Cells
- Setting Page Breaks
- Splitting Panes

Lesson 6: Working with Charts

- Changing Chart Types
- Changing the Chart Layout and Location
- Creating a Basic Chart
- Lesson Objectives
- Moving and Resizing Charts
- Printing Charts
- Using Sparklines
- Working with Pie Charts

Lesson 7: Working with Graphics

- Drawing Shapes
- Formatting Shapes
- Inserting Pictures and Clip Art
- Inserting Screenshots
- Lesson Objectives
- Modifying Graphics Objects
- Moving and Resizing Shapes
- Resizing, Reshaping and Scaling Objects
- Rotating Objects
- Table of Contents Preface
- Using SmartArt Graphics
- Using the Image Editor
- Using WordArt

Lesson 8: Analyzing, Organizing and

- Sharing Workbooks
- Changing Workbook Properties
- Creating Named Ranges
- Exporting Data from Excel
- Filtering Information
- Importing and Exporting Data
- Importing Data Files
- Inserting Hyperlinks
- Modifying and Deleting Hyperlinks
- Modifying and Deleting Named Ranges
- Save to Web
- Sharing Workbooks
- Sorting by Multi-Level Data
- Sorting by Single-Level Data
- Sorting Data
- Using Comments
- Using E-mail
- Using Hyperlinks
- Using SharePoint
- Working with Named Ranges

Lesson 9: Pivot Table & Macro

- Editing Macro in VBA
- Insert Slicer
- Insert Timeline
- Pivot Table
- Recording Macro
- Relationship

- Run Macro

PowerPoint 2016

Duration: 2 Days

Lesson 1: Getting Started

- Adding a Slide Header or Footer
- Changing the Presentation Page Setup
- Changing the Slide Layout
- Closing a Presentation
- Creating and Formatting Slides
- Creating New Presentations
- Deleting Slides
- Duplicating Slides
- Inserting New Slides
- Inserting Slides from an Outline
- Inserting Slides from Existing Presentations
- Looking at the Screen
- Managing Presentations
- Modifying Slide Backgrounds
- Moving Around in Presentations
- Opening a Presentation
- Organizing Slides
- Saving Presentations
- Switching Between Presentations
- Using Sections
- Using Themes
- Using the Quick Access Toolbar
- Using the Ribbon
- Using the Slide Sorter
- Viewing Screen Tips
- Working with the Compatibility Mode
- Cutting, Copying and Pasting Text
- Formatting Text
- Formatting WordArt
- Inserting Hyperlinks
- Inserting Media Clips
- Inserting Pictures from Files
- Modifying Illustrations and Shapes
- Modifying Pictures
- Modifying SmartArt Diagrams
- Preface Table of Contents
- Selecting Illustrations and Shapes
- Sizing, Scaling, and Rotating Content
- Using Gridlines and Guides
- Using Movies
- Using Pictures
- Using SmartArt Styles
- Using Sounds
- Using the Ruler
- Using the Text Pane
- Working with SmartArt

Lesson 2: Working with Text

- Adding Text
- Applying Bullets
- Applying Numbering
- Changing the Order, Alignment, Orientation and Rotation
- Changing the WordArt Shape
- Clearing Formatting
- Creating Columns

Lesson 3: Working with Illustrations and

- Other Media
- Adding or Removing Shapes
- Aligning Content
- Applying Quick Styles
- Arranging Illustrations and Shapes
- Change a Picture
- Changing the Orientation
- Changing the Diagram Type
- Changing the Order of Content
- Compressing Pictures
- Converting SmartArt to Text or Shapes
- Converting Text to SmartArt
- Crop a Picture
- Grouping and Ungrouping Content

- Inserting Shapes
- Inserting a Photo Album
- Inserting Clip Art
- Inserting and Modifying Action Buttons
- Removing Animations
- Using Animation
- Using Slide Masters
- Using Slide Transitions
- Using the Animation Painter

Lesson 4: Working with Charts and Tables

- Adding Chart Elements
- Changing Row and Column Size
- Changing the Chart Style
- Changing the Chart Type
- Changing the Alignment or Orientation
- Changing the Size and Position of a Chart
- Drawing Tables
- Formatting a Table
- Formatting Chart Elements
- Formatting the Chart Shape
- Inserting Charts
- Inserting Tables
- Inserting Tables from Microsoft Word or Microsoft Excel
- Lesson Objectives
- Selecting and Editing Chart Data
- Using Table Styles
- Using Tables
- Working with Text in Tables

Lesson 5: Enhancing Presentations

- Adding Presenter Notes
- Applying, Changing, or Removing Animations
- Changing Animation Settings
- Formatting a Notes or Handout Master
- Formatting a Slide Master
- Using Presenter View
- Formatting Paragraphs
- Formatting Placeholders

- Formatting Text Boxes
- Formatting Text Characters
- Indenting Text
- Inserting, Modifying, and Deleting WordArt
- Lesson Objectives
- Promoting and Demoting Lists
- Reusing Formatting
- Rotating a Text Box
- Setting Tabs Inside a Text Box
- Sizing and Positioning Text Boxes
- Using Bullets and Numbering
- Using Drag and Drop
- Using Text Boxes
- Using the Format Painter
- Using the Office Clipboard
- Using the Selection Pane
- Using the Spelling Checker
- Using the Thesaurus
- Using WordArt

Lesson 6: Reviewing Presentations

- Compare and Combine Presentations
- Inserting Comments
- Marking a Presentation as Final
- Modifying Comments
- Printing Presentation Items
- Protecting a Presentation
- Reviewing Presentations
- Sending a Presentation to Microsoft Word
- Setting Passwords
- Using Document Properties
- Using the Document Inspector

Lesson 7: Delivering a Presentation

- Broadcasting a Presentation
- Creating PowerPoint Shows
- Customizing Rehearsed Timings
- Customizing the Slide Show
- Hiding One or More Slides
- Packaging Presentations for a CD
- Publishing Presentations

- Recording a Presentation
- Rehearsing a Presentation
- Running the Slide Show
- Save a Presentation as a PDF or XP S File
- Save a Presentation as a Video
- Save a Presentation as an
- OpenDocument
- Save a Presentation as an Outline
- Save a Presentation as Images
- Save in an Earlier PowerPoint Format
- Saving in Other Formats
- Saving to the Web
- Setting Slide Show Options
- Sharing a Presentation
- Using Custom Shows
- Using E-mail
- Using Presentation Tools
- Using SharePoint

Outlook 2016

Duration: 2 Days

Lesson 1: Getting Started

- Addressing a New Message
- Assigning Categories
- Changing the Current Reading View
- Changing the View Settings
- Checking for New Messages
- Creating an E-mail Message
- Entering and Formatting Message Text
- Flagging Messages
- Forwarding a Message
- Inserting Items in Messages
- Lesson Summary
- Looking at the Screen
- Marking Messages as Read or Unread
- Reading and Viewing Messages
- Replying to a Message
- Responding to Messages
- Using Message Options
- Using the Navigation Pane and To Do Bar
- Using the People Pane
- Using the Quick Access Toolbar
- Using the Reading Pane
- Using the Ribbon

Lesson 2: Managing E-mail

- Applying Themes
- Creating a Quick Step
- Creating a Style
- Creating Folders

- Customizing Messages
- Ignoring Conversations
- Managing the Mailbox
- Opening Attachments
- Organizing Messages
- Previewing Attachments
- Printing Messages
- Saving Attachments
- Saving Messages in Different Formats
- Sending Attachments
- Table of Contents Preface
- Using Quick Steps

Lesson 3: Using the Calendar

- Changing the Meeting Time
- Changing Views
- Creating a Recurring Appointment
- Creating an Appointment
- Creating an Appointment from an E-mail
- Customizing the Calendar Options
- Deleting a Meeting
- Making Changes to Meetings
- Printing the Calendar
- Scheduling a Meeting
- Scheduling Events
- Scheduling Items
- Sending Meeting Requests
- Tracking Responses to Meeting Requests

- Updating Meeting Attendees
- Using the Appointment Window
- Using the Calendar Directly
- Using the Date Navigator
- Working with Other Calendars

Lesson 4: Working with Contacts

- Adding Notes for the Contact Group
- Associating Activities with a Contact
- Creating a New Contact
- Creating a New Contact Group
- Customizing the Contacts Module
- Deleting a Contact
- Editing a Contact
- Lesson Summary
- Printing Contacts
- Review Questions
- Updating a Contact
- Using the Contact Group
- Using the Contacts Module
- Working with Contact Groups

Lesson 5: Using Tasks & Notes

- Accepting/Declining Tasks
- Assigning a Status to Tasks
- Assigning a Task
- Creating Tasks
- Customizing Notes
- Customizing Tasks
- Setting the Default Displays
- Setting the Language
- Using Rules
- Using Search
- Using the Search Feature

- Marking a Task Complete
- Printing Notes
- Printing Tasks
- Tracking the Status of a Task
- Updating Tasks and Sending Status
- Reports
- Using Notes
- Using the Journal
- Working with Tasks
- Using Signatures
- Using Stationery
- Working with Attachments
- Working with Conversations
- Working with Styles

Lesson 6: Organizing Information

- Cleaning Up Conversations
- Cleaning Up Your Mail
- Creating a Search Folder
- Creating Rules
- Emptying Folders
- Emptying the Junk E-mail Folder
- Looking at the General Outlook Setup
- Managing Junk E-mail
- Marking Messages as Junk
- Modifying Rules
- Organizing Outlook
- Saving Sent Messages

b. Senior Government official training on Microsoft Office Tips and Tricks

Word 2016

Duration: to be proposed by the bidder

Topics to be covered

- Getting started word
- Ribbon enhancements
- Save document in cloud and one drive
- Read mode
- Object zoom
- How to use styles and create new styles
- Use template
- Applying, modifying quick parts and quick text
- Smart art graphics
- Add video and image from web
- Bookmark
- Tab setting and indenting
- Bullet and numbering
- Pdf open and edit
- Mail merge with database and data from excel
- Table of content and table of figures
- Use water marks and create water marks
- Endnote and footnote
- Usage of tracking and how to use
- Customize headers and footers
- Page layout and printing

Excel 2016

Duration: to be proposed by the bidder

Topics to be covered

- Office new look
- Formula and functions (40 functions)
- New function (Roman/Arabic)
- Why we need to use flash fill
- Data tab features (data validation, remove duplicate, text to columns, what if analysis, Subtotal, advanced filter, and sort)
- Advanced filter options
- Chart and recommended chart
- Sparkline chart
- Recommended pivot table and chart
- Timeline and slicer feature with pivot table
- Quick analysis
- Imports data from other sources
- Power bi tools (power query, power map, power pivot, power view)
- Page layout and printing

PowerPoint 2016

Duration: to be proposed by the bidder

Topics to be covered

- How to Use Template
- New Animations and usage
- New Transitions
- Smart Arts Editing
- Artistic effects
- Embed, edit, and play a video in your Presentation
- Add Audio
- Slide Master Page and Usage
- Custom Slide Show
- Recode Slide Show
- Rehearse Timings
- Broadcast Slide Show
- How to Use Presentation View

- How to use Mix

Outlook 2016 Duration: to be proposed by the bidder

Topics to be covered

- | | |
|--|-----------------------------------|
| • Introduction to Outlook Web App Office 365 | • Out of Office Automatic Replies |
| • Send Receive mail. | • Retention Policy |
| • Recalling E mails | • Scheduling Meetings |
| • Conversation View | • Voting |
| • Categorize Items | • Contact List maintenance |
| • Quick Steps | • Weather App |
| • How to set Rules | • Tasks |
| | • Skype for Business with Outlook |

2. Training on Administration staff

Windows Server 2012 Duration: 5 Days

Installing and Configuring Windows Server 2012 (Course MS 20410D)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Install and configure Windows Server 2012
- Describe AD DS
- Manage Active Directory objects
- Automate Active Directory administration
- Implement IPv4
- Implement Dynamic Host Configuration Protocol (DHCP)
- Implement Domain Name System (DNS)
- Implement IPv6
- Implement local storage
- Implement file and print services
- Implement Group Policy
- Secure Windows servers by using Group Policy Objects (GPOs)
- Implement server virtualization by using Hyper-V

Windows Server 2012 Duration: 5 Days

Administering Windows Server 2012 (Course MS 20411D)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Configure and Troubleshoot Domain Name System
- Maintain Active Directory Domain Services
- Manage User and Service Accounts
- Implement Group Policy Infrastructure
- Manage User Desktops using Group Policy
- Install, Configure and Troubleshoot Network Policy Server
- Implement Network Access Protection
- Implement Remote Access
- Optimize File Services
- Configure Encryption and Advanced Auditing
- Deploy and Maintain Server Images
- Implement Update Managements
- Monitor Windows Server 2012

Exchange Server 2013/16 Duration: 5 Days

Core Solutions of Microsoft Exchange Server 2013 (Course MS 20341B)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Deploy and manage Exchange Server 2013
- Plan and configure the Mailbox server role
- Manage recipient objects, address policies, and address lists in Exchange Server 2013
- Plan and implement the Client Access server role in Exchange Server 2013
- Securely plan and configure Microsoft Outlook Web App and mobile messaging using the Client access server
- Understand and manage highly available Client Access servers in Exchange Server 2013
- Plan for disaster mitigation, implement backup and recovery for Exchange Server 2013
- Plan and configure message transport in an Exchange Server 2013 organization
- Plan message security options, implement an antivirus solutions, and implement an anti-spam solution
- Configure permissions and secure Exchange Server 2013

- Monitor, maintain, and troubleshoot an Exchange Server 2013 environment

Exchange Server 2013/16

Duration: 5 Days

Advanced Solutions of Microsoft Exchange Server 2013 (Course MS 20342B)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Design and implement Exchange Server 2013 Unified Messaging
- Design and implement site resiliency for Exchange Server 2013
- Plan a virtualization strategy for Exchange Server 2013 roles
- Design and implement message transport security
- Design and implement message retention in Exchange Server 2013
- Design and implement messaging compliance
- Design and implement administrative security in an Exchange Server 2013 environment
- Use the Windows PowerShell 3.0 command-line interface to manage Exchange Server 2013
- Design and implement integration with Exchange Online
- Design and implement messaging coexistence
- Design and implement Exchange Server migrations from non-Exchange messaging systems, and upgrades from previous Exchange Server versions

System Center 2012 Configuration Manager or latest

Duration: 5 Days

Administering System Center 2012 Configuration Manager (Course MS 10747D)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Describe the System Center 2012 R2 Configuration Manager Feature set and manage and troubleshoot sites by using the Configuration Manager Console and associated toolset
- Configure boundaries and boundary groups, configure discovery methods, manage user and device collections, and implement role-based administration
- Describe the client deployment process, configure client deployment methods, configure the client agent settings, and monitor client status
- Describe the inventory collection process, configure and manage hardware and software inventory, monitor inventory data flow, and use Asset Intelligence and Software Metering.
- Analyze data by creating queries and running reports
- Create, deploy, and manage software packages and programs

- Create and deploy applications by using the System Center 2012 R2 Configuration Manager application model
- Configure multiple deployment types
- Deploy and manage software updates
- Integrate and implement Endpoint Protection by using System Center 2012 R2 Configuration Manager
- Deploy operating systems by using the Configuration Manager infrastructure
- Manage configuration items, baselines, and profiles to assess and configure settings for devices
- Manage mobile devices by using System Center 2012 R2 Configuration Manager
- Configure Wake on LAN, Power Management policies, and Remote Control

System Center 2012 Configuration Manager or latest

Duration: 5 Days

Deploying System Center 2012 Configuration Manager (Course MS 10748A)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Describe the Configuration Manager 2012 infrastructure and describe typical deployment scenarios
- Plan and deploy a single primary site
- Plan and configure administrative roles
- Plan and deploy a multiple-site hierarchy including the central administration site, primary sites, and secondary sites
- Describe replication and data types, and monitor the replication of data throughout the hierarchy
- Use various methods to plan and deploy Configuration Manager 2012 clients
- Perform maintenance tasks and monitor site systems
- Perform migration of objects from Configuration Manager 2007 to Configuration Manager 2012

Skype for Business 2015 or latest

Duration: 5 Days

Core Solutions of Microsoft Skype for Business 2015 (MS 20334A)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Describe the architecture of Skype for Business 2015 and design a Skype for Business 2015 topology

- Install and implement Skype for Business Server 2015
- Administer and manage Skype for Business Server 2015 by using the various available tools
- Design and implement clients and users in Skype for Business 2015
- Implement conferencing in Skype for Business 2015
- Design and implement additional conferencing options
- Design and implement monitoring and archiving in Skype for Business 2015
- Design and implement connectivity for external users and organizations
- Design and implement Persistent Chat in Skype for Business 2015
- Design and implement high availability in Skype for Business 2015
- Design and implement disaster recovery scenarios for Skype for Business 2015
- Design and deploy Skype for Business hybrid
- Design and implement an upgrade from Lync to Skype for Business 2015

SharePoint Server 2013 or latest

Duration: 5 Days

Core Solutions of Microsoft SharePoint Server 2013 (Course MS 20331B)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Describe the key features of SharePoint 2013
- Design an information architecture
- Design logical and physical architectures
- Install and configure SharePoint Server 2013
- Create web applications and site collections
- Plan and configure service applications
- Manage users and permissions
- Configure authentication for SharePoint 2013
- Secure a SharePoint 2013 deployment
- Manage taxonomy
- Configure user profiles
- Configure enterprise search
- Monitor and maintain a SharePoint 2013 environment

SharePoint Server 2013 or latest

Duration: 5 Days

Advanced Solutions of Microsoft SharePoint Server 2013 (Course MS 20332B)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Describe the core features of SharePoint 2013
- Plan and design a SharePoint 2013 environment to meet requirements for high availability and disaster recovery
- Plan and implement a service application architecture for a SharePoint 2013 deployment
- Configure and manage Business Connectivity Services features in a SharePoint 2013 deployment
- Plan and configure social computing features
- Plan and configure productivity and collaboration platforms and features
- Plan and configure Business Intelligence solutions
- Optimize the search experience for an enterprise environment
- Plan and configure enterprise content management in a SharePoint 2013 deployment
- Plan and configure a web content management infrastructure to meet business requirements
- Manage solutions in a SharePoint 2013 deployment
- Configure and manage apps in a SharePoint Server 2013 environment
- Develop and implement a governance plan for SharePoint Server 2013
- Perform an upgrade or migration to SharePoint Server 2013

3. Training on Development staff

SharePoint Server 2013 or latest

Duration: 5 Days

Developing Microsoft SharePoint Server 2013 Core Solutions (Course MS 20488B)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Design and manage features and solutions
- Develop code for custom server-side components
- Manage and customize authentication and authorization
- Create custom sites and lists and manage the site lifecycle
- Explain the capabilities and design choices for SharePoint apps
- Use the client-side object model and the REST API
- Develop provider-hosted and auto-hosted SharePoint apps
- Distribute and deploy SharePoint apps
- Create custom workflows to automate business processes
- Use fields and content types to manage taxonomy
- Customize the appearance and behavior of user interface elements
- Customize navigation and site branding

SharePoint Server 2013 or latest

Duration: 5 Days

Developing Microsoft SharePoint Server 2013 Advanced Solutions (Course MS 20489B)

Note: When conducting this Certification Training, all Microsoft recommended Modules, Labs and Lessons must be covered. Upon completion the applicant must sit for the Microsoft certification exam. Certification fee must be included in the offer.

Topics to be covered

- Describe the apps for SharePoint development platform
- Use the client-side object models and the REST API to communicate with SharePoint
- Configure security for apps for SharePoint
- Optimize the performance of apps for SharePoint
- Explain the capabilities and applications of managed metadata in SharePoint 2013
- Automate the creation and configuration of managed metadata term sets
- Interact with managed metadata term sets and fields from client-side and server-side code
- Describe the SharePoint 2013 Search Architecture
- Build simple and advanced KQL Queries
- Describe the SharePoint Search Index
- Describe and work with crawled and managed properties
- Describe the levels and security of the SharePoint Search Schema
- Create various types of result sources
- Create basic and complex query transforms
- Configure query rule conditions and actions to target query intent
- Create and modify result types
- Create and modify display templates
- Utilize display templates with various search web parts
- Add managed properties as refiners with counts
- Utilize entity extraction in your crawls
- Extend content processing with Content Enrichment
- Describe how to utilize the Publishing API to access publishing settings and content
- Describe how to use and customize page content controls in publishing sites
- Configure website structure and navigation
- Describe the difference between structured and metadata navigation
- Utilize basic publishing features of SharePoint
- Use the new cross-site publishing features of SharePoint 2013
- Configure and implement variations for multilingual sites
- Configure search engine optimization settings
- Add SEO Properties to publishing pages and Managed Navigation terms
- Configure caching to improve site rendering performance
- Optimize site assets and resources to maximize performance
- Describe the key components of Business Connectivity Services in SharePoint Server 2013
- Create and configure BDC models by using SharePoint Designer
- Create and configure BDC models by using Visual Studio 2012

- Describe BCS Connector Framework scenarios
- Design and Develop BCS Connector stereotyped operations
- Design and Configure BDC model security
- Optimize Search Connector crawl performance
- Use Visual Studio to build BDC Models for Search
- Deploy BDC Search connectors
- Debug and troubleshoot your search connectors
- Design and deploy BDC event subscriber methods
- Describe how to format event notification messages
- Configure alerts and event receivers on external lists
- Explain how user profile data is used in SharePoint
- Describe the options and restrictions for accessing user profile data
- Use client-side code to access and server-side code to access and update user profile data
- Configure and manage user profile properties
- Describe how to identify, diagnose, and remove bugs in SharePoint apps during development
- Describe how to record information about issues that arise in deployed SharePoint apps
- Describe how developers optimize the performance of SharePoint apps by implementing best practices, measuring performance, and load testing

Enterprise Content Management – ECM Practitioner (3-5 Days)

Course Objectives

Enterprise Content Management combines analytics, collaboration, governance and processes with anywhere, anytime access to deliver value to all your stakeholders. When used effectively, even complex content becomes greatest business asset. Bidder must train the applicant to develop or choose a systematic approach to manage their content across the respective government enterprise. The course information/content must independent of any particular technology or vendor solution.

ECM Practitioner Certification (3-5 Days)

The ECM Practitioner course provides a firm foundation in the technologies, business drivers, and implementation strategy of managing content; including the key roles of information architecture, metadata, and taxonomy.

Topics to be covered

- How to Get Started with ECM

Identify key ECM concepts; describe business drivers for ECM; and, identify business benefits of ECM

- How to Organize Enterprise Content

Identify the benefits of formal classification; compare and contrast different classification schemes; and, describe key steps required to create classification schemes

- How to Ensure Digital Preservation

Identify preservation risk factors; describe approaches to digital preservation; and, describe steps required to perform a migration

- How to Manage ECM throughout Content Lifecycle

Describe how to manage content through the various steps in the content lifecycle; and, describe how to dispose of content at the end of the lifecycle

- How to Improve Collaboration on Enterprise Content

Identify the need to improve document collaboration; compare and contrast different types of collaboration solutions; and, describe the benefits and impact of social business

- How to Improve Access to Enterprise Content

Identify and describe key search-related concepts; describe approaches to searching for enterprise content; and, explain how to improve findability of enterprise content

- How to Secure Enterprise Content

Describe controls required for effective security; understand redaction and identify redaction-related issues for enterprise content; and, identify the significance of audit trails, encryption, and digital rights management

- How to Capture Enterprise Content

Describe different sources of content to be captured; compare and contrast different types of content and the issues they present to a capture process; and, describe how to capture paper-based documents through scanning and image processing

- How to Create and Manage Metadata

Explain what metadata is and its uses; identify sources of metadata; and, describe methods for collecting and applying metadata

- How to Improve Content-Centric Processes

Identify key business process management (BPM) and workflow concepts; understand key business analysis concepts including flowcharting and process modeling; and, compare and contrast BPM and ECM capabilities and limitations

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ANNEXURE -1

TRAINING CURRICULUM

NATIONAL CENTRE FOR INFORMATION & TECHNOLOGY

VERSION 1.0
DATED 08-03-16

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ANNEXURE -2

TECHNICAL COMPLIANCE

NATIONAL CENTRE FOR INFORMATION & TECHNOLOGY

VERSION 1.0
DATED 08-03-16

Annexure 2

Technical Compliance

5.1	Active Directory		
	Requirements	Complied(Y/N)	Remarks
	Proponents should provide the following documentation Design Plan, implementation procedure and Project management guide		
	Proponents should create Design and implementation of logical structure of AD DS		
	Proponents should create Design and implementation of physical structure of AD DS		
	Proponents should design and migrate of the FSMO roles and Global Catalog placement.		
	Proponents should design and migrate the DNS (Name resolution) structure.		
	Proponents should design the Windows Time service hierarchy.		
	Proponents should design the Windows Time service hierarchy.		
	Proponents should design of basic Group Policy Objects for AD DS.		
	Proponents should design AD DS objects naming convention for users, groups, hosts, sites and site links).		
	Proponents should design and migrate the OU structure.		
	Proponents should design Windows Server 2012R2 Hyper-v machines to host the workloads both at the central Location and zonal office.		
	Proponents should harden the Operating System before the installation of applications if any as per NCIT security policy.		
	Proponents should deploy the AD DS infrastructure according to the recommended server configuration and architecture.		
	Proponents should design and migrate the DHCP layout.		
	Proponents should provide Strategy of joining/migrating of MS Windows desktops/laptops to the domain (total ~500 approx.).		
	Proponents should design and Providing Storage sizing to accommodate all proposed solution requirements both at the central location and zonal locations.		
	Proponents should deploy one Domain controllers in Physical environment and two more additional Domain Controller in Virtualized Environment at Head Office		
	Proponents should deploy all domain controllers as Windows 2012 Full installation		
	Proponents should configure all the domain controllers as Global Catalog and the AD site design will be based on Hub and spoke topology with appropriate subnet definition.		
	Proponents should create Site Link configuration and the Site link naming should follow the best recommended Microsoft Windows 2012 R2 AD Architecture.		
	Proponents should create Schedule for replication as per the default configurations such as 24hrs/day, 7 days/week. There is no requirement to change this setting and hence this default should remain on all site links.		

Proponents to follow this configuration Frequency for replication: For site links that associate remote sites hosting domain controllers with the combined Central site, the replication frequency should be configured to replicate every 30 minutes. For all site links that associate the remote sites without domain controllers, the default value of 180 minutes should remain.		
Loss of a single directory server should not affect ability for users to logon.		
Proponents to follow this configuration Replication Configuration: By default the replication topology is created, managed and maintained by the Knowledge.		
Consistency Checker (KCC) and the Inter-site Topology Generator (ISTG). In this environment there is no need to modify this behavior and therefore the default settings shall remain.		
Proponents to follow this configuration Flexible Single master Operations (FSMO) placement: FSMO roles are Schema master, Domain naming master, PDC emulator, RID master, Infrastructure master. The PDC Emulator and RID Master should be located on a single domain controller. The Infrastructure Master, Domain Naming.		
Master and Schema Master should also be located on a single machine (different to the server in the point above).		
Proponents should create and implement Group policy as per The NCIT specifications. The NCIT Domain policy should be applied at the domain level for all the User accounts.		
The design should provide centralized Administration capability in a distributed deployment scenario Password reset capabilities for a given group or groups of users can be delegated to any nominated user.		
User account creation/deletion rights within a group or groups can be delegated to any nominated user Group membership management within a		
Department/workgroup can be delegated to any nominated user.		
Design should allow for the implementation of Role Based Access Control (RBAC) in the future.		
Proponents create and implement Naming conventions for the User accounts/OU's/Groups, computers and Servers which will be standardized as per The NCIT specifications.		

5.2	Email solution – Exchange Server 2013/2016		
	Requirements	Complied (Y/ N)	Remarks
Email Solution Summary	The solution should provide access to the emails from rich client, web interface and mobile devices.		
	The solution should be accessible from the LAN, WAN, VPN and Internet.		
	The solution should provide access to emails in offline mode.		
	The solution should be integrated with the active directory services.		
	The solution should provide features supporting multilingual messaging in should be provided as an option.		
	The solution should have support for integrated authentication mechanism and should be configured for single sign on with email and instant messaging.		
	The solution should be compatible with Digital Certificates.		

	The solution should enable configuration of Deleted item recovery for end-user mail management based on retention policy.		
	The solution should enable enforcement of email retention settings on users so that emails can be retained, archived and deleted as per CUSTOMER policies.		
	The solution should support standard protocols for mail access and relay. (SMTP, POP3, HTTPS, RPC over HTTP, IMAP)		
	The solution should support features for Mail delivery commands to setup "Forward to host", push mail to another account on same/ different server, etc.		
	The solution should natively support Push based emails to mobile devices.		
	The Solution should provide Notification (Warning) to users if they are sending emails outside of the trusted domain		
	The Solution should have capability to display Address Book in alphabetical order. Address Book should be user friendly i.e. Addresses should be searched through display name, last name, etc.		
administrative features	Provide management from single console. It should also support remote management.		
	Provide graphical user interface based administration and command line based administration and scripting interface for all administrative tasks.		
	Provide administrative groups for granular delegation of messaging administration across the organization.		
	Support activity and error logging, mail delivery statistics and message tracking.		
	Support health monitoring to generate periodic reports about the health of the system, security status, etc.		
	Provide email moderation functionality		
	Capability to create restricted group and user as per given policy		
Calendar Features	The solution must have Administrator audit logging to log when a user or administrator makes a change in your organization. By keeping a log of the changes, you can trace changes to the person who made the change, augment your change logs with detailed records of the change as it was implemented, comply with regulatory requirements and requests for discovery		
	Ability to have an integrated or separate organization specific calendar of events.		
	Ability to create recurring appointments or events.		
	Ability to schedule multiple items in the same time period.		
	Provide for users to share their calendar with others.		
	Ability to import and export calendar items to portable devices		
	Ability to produce invitations to other users for events		
	Integration between calendar and email.		
Compliances	It should be able to suggest best timing for meetings based on participants' availability by using Scheduling Assistant, Attendance Confirmation		
	The solution should provide litigation hold capability.		
	The solution should provide multiple mailbox search via eDiscovery.		
	The solution should provide journaling feature.		
	The solution should provide facility to view and perform all normal e-mail functions on archives by an e-mail administrator without having to restore the same.		

	The solution should provide Native Compression.		
	The solution should provide restore from backup.		
	The solution should support real-time replication for disaster recovery.		
	The solution should be configured for defining retention policies based on CUSTOMER requirement.		
	The Solution must have Integrated Mail Archiving solution		
	The solution should have a provision for restricting users from access to the choice for archiving.		
	The solution should not allow users to delete their references and access to an archived item.		
	The solution should allow the user to archive, restore and search from within the messaging client.		
	The solution must have the Audit logging Capability to log mailbox access by mailbox owners, delegates (including administrators with full mailbox access permissions), and administrators.		
	The solution must have Mailbox audit logging to records whenever a mailbox is accessed by someone other than the person who owns the mailbox.to help determine who has accessed a mailbox and what they've done		
	The solution must have Native Data loss prevention (DLP) In order to enforce compliance requirements for such data, and manage its use in email, without hindering the productivity of workers		
Security Features	The E-Mail Solutions should be configured for Security Policy (Password Policies, etc.) enforcement and Remote Erase capability for Smartphone to protect data.		
	The E-Mail solution should support end to end encryption of data; i.e. Client-Server and Server-Server Encryption features for confidential messaging over all the mail transactions. The encryption features should be able to prevent spoofing, various malpractices, etc.		
	It solution also support Start TLS encryption at gateway level. Messaging Client and Server should support Secure/Multipurpose Internet Mail Extensions (S/MIME), enabling users to digitally sign and encrypt emails and attachments.		
	The software of the solution must have built in malware filtering capabilities which will help to protect our network from malicious software transferred through email messages.		
	All messages sent or received by Email server are scanned for malware (viruses and spyware). If malware is detected, the message is deleted.		
	Must have capability of Notifications which, once configured, will be sent to senders or administrators when an infected message is deleted and not delivered. Administrator also can choose to replace infected attachments with either default or custom messages that notify the recipients of the malware detection.		
	The solution must have extremely precise permissions models based on the roles of administrators and users.		
	The solution should provide native Integration with IRM software for sensitive data protection in Near Future		
	The solution must have the capability for automatic IRM Protection		
	Must have the capability to create protection rule		
	Different predicates to automatically apply IRM Protection.		
High Availability and Business Continuality	The solution must have high available capability inside the Datacenter as well site resiliency capability between one or More two Datacenter		

	Messaging Solution should provide log shipping and replay capabilities for email database for database replication and redundancy		
	Solution Should support High availability with automated failover in a cluster, Messaging Solution should support up to sixteen-node clustering with Active/Passive Technology inside Datacenter and In between Datacenter		
	High Availability of the email services should have capability to provide Maximum 99.999% uptime inside Primary Data center		
	The message store should support menu-driven options for moving of mail-boxes from one mail server to another over the network. This should be scriptable through command line also.		
	The message store should support menu-driven options for moving of mail-boxes from one mail server to another over the network. This should be scriptable through command line also.		
	The solution must have capability for load balancing traffic at the time of request coming from different client(outlook/WEB Mail)		

5.3	Skype for Business Server 2015		
	Requirements	Complied(Yes/No)	Remarks
Clients for Skype for Business Online	Skype for Business		
	Lync 2013 Basic		
	Lync Windows Store app		
	Lync for Mac 2011		
	Lync mobile clients		
	Skype for Business Web App		
Instant Messaging, Presence, and Contacts	PC-to-PC IM and Presence		
	Multiparty IM and Presence		
	Contact Card Configuration		
	My Picture Configuration		
	My Picture: URL Photo Experience		
	Contact List Configuration		
	Unified Contact Store		
	Address Book Search		
	Persistent Chat		
	Photos of Sender/Receiver		
Skype-to-Skype Audio, Video, and Media	Desktop Sharing		
	Application Sharing		
	File Transfers		
	Voice		
	Video		
	Network Quality of Service (QoS) - Differentiated Services Code Point (DSCP)		
Federation and Public IM Connectivity	Skype federation		

Skype for Business Online Meetings	Ad Hoc and Schedule Audio Conferencing		
	Ad Hoc and Schedule Video Conferencing		
	Active Speaker Video		
	H.264 Encoding and Decoding		
	Multiparty Video		
	High Definition Video or Pictures of All Attendees		
	Presenter Controls		
	Participant Selected View		
	Ad Hoc and Schedule Web Conferencing		
	Skype for Business meeting dial-in via PSTN Conferencing		
	Skype for Business meeting dial-in via Certified Audio Conferencing Provider		
	Desktop Sharing		
	Application Sharing		
	PowerPoint Sharing		
	File Transfer		
	Whiteboard and Annotations		
	PowerPoint Upload		
	Polling		
	Client-Side Recording and Playback		
	Server-Side Recording and Playback		
	Meeting Lobby		
	Guest Access to Skype Meetings with Skype for Business Web App		
	Schedule Skype for Business Meetings in Outlook		
	Schedule Skype for Business Meetings in Outlook on Behalf of Others (Delegation)		
	Schedule Skype for Business Meetings with Web Scheduler		
	Schedule Online Meetings in Outlook Web App		
	Outlook Delegation for Scheduling Meetings		
Security and Archiving	IM and Media Encryption		
	IM and File Filtering		
	Client Version Control		
	IM Content Archiving		
	Conference Content Archiving		
	Application Sharing, and Desktop Sharing Archiving		
	User Level Archiving Configuration		
Exchange and SharePoint Interoperability	Presence Interoperability with Exchange Server		
	Unified Messaging interoperability with Exchange Server		
	Outlook Web App interoperability		
	Archiving interoperability with Exchange Server		
	Skill Search with SharePoint Server		
	Skype for Business admin center		

Skype for Business Administration and Management	Windows PowerShell		
	Skype for Business reporting		

5.4	System Center Configuration Manager		
	Requirements	Complied(Yes/No)	Remarks
Asset Management	Collects Full Inventory on first scan & subsequent on Delta Changes		
(Hardware Inventory)	Create Queries that return devices based on a specific hardware configurations		
	Create query-based collections based on specific hardware configurations		
	Run reports that display specific details about hardware configurations		
	Use Resource Explorer to view detail information		
Asset Management	Collects Full Inventory on first scan & subsequent on Delta Changes		
(Software Inventory)	Create Queries that return devices based on a specific hardware configurations		
	Create query-based collections based on specific hardware configurations		
	Run reports that display specific details about hardware configurations		
	Use Resource Explorer to view detail information		
Asset Intelligence	Catalog		
	Asset Intelligence Home Page (Summary Dashboard views of Asset Intelligence Catalog)		
	Hardware (Present information about USB devices, hardware that must be upgraded, and even computers that are not ready for a specific software upgrade.)		
	License Management (Provide data about licenses in use)		
	Software (Reports can be used to identify adware, spyware, and other malware, and identify software redundancy to help streamline software purchasing and support)		
Software Metering	How many copies of a particular software program have been deployed to the computers in the organization? Among those computers, you can determine how many users actually run the program.		
	Whether users are still running a particular software program. If the program is not being used, retire the program.		
	Which times of the day a software program is most frequently used.		
Remote Management	Power Management (Monitor & reduce Power Consumption)		
	Remote Control (remotely administer, provide assistance, or view any client computer)		
	sending the CTRL+ALT+DEL command to computers		
	Apply different remote control settings to collections of computers by using client settings		
	Lock the keyboard and mouse of the computer that is being administered during a remote control session.		

	Copy and paste functionality between the host computer and the computer		
	If the remote control network connection is disconnected, the desktop of the computer that is being administered will be locked		
	Remote control client settings can automatically configure the Windows Firewall on client computers to allow remote control to operate		
	Connecting to computers with multiple monitors		
	High visibility notification bar is visible on client computers to inform the user that a remote control session is active		
	The account name of the administrative user who starts the remote control session is automatically displayed to users during the remote control session.		
	Responsiveness for low-bandwidth connections		
Application Management	Creating Applications in Configuration Manager		
	Deploying Applications in Configuration Manager		
	Monitoring Application Deployments in Configuration Manager		
	Web-Based Software Catalog (Search, Install or Request)		
Software Update Management	Software Updates		
	Auto-Deployment Rules (Auto deploy)		
	State-based Update Groups (Deploy to particular group)		
Operating System Deployment	Operating System Deployment		
	Task Sequence		
Content Management	Distribution Points		
	Preferred Distribution Points		
	Bandwidth Throttling & Scheduling		
Monitoring Activity, Health & Auto Remediate	Server-Side		
	Policy Request		
	Hardware & Software Inventory		
	Alerts – Near Real-Time Awareness for Changes		
	Monitor – Status of your DB replication		
Security	Role-Based Administration		
	Network Access Protection		
	Endpoint Protection (Manage antimalware policies and Windows Firewall security)		
	Integration with Active Directory		

5.5	System Center Operations Managers		
	Requirements	Complied(Yes/No)	Remarks
	The system should be able to allow system administrator to login, and authenticated with the Active Directory login and password. If the user resigned from the company, the authentication will immediately forbid access to the system.		
	The system should have the capability to identify different user roles of login.		

	The system should logout after system admin click sign out or after a specific timeout period.		
	System should able to integrate with NCIT internal application systems. (E.g.: Active Directory, Exchange Server, and SCCM....etc.)		
	The system should be able to allow system administrator to login, and authenticated with the Active Directory login and password. If the user resigned from the company, the authentication will immediately forbid access to the system.		
	The system should have the capability to identify different user roles of login.		
	The system should logout after system admin click sign out or after a specific timeout period.		
	The system should be able to monitor the health state & performance of hardware which includes CPU, memory, temperature, power supply status, fans status, hard disk status, and network device includes router, firewall, switches and etc.		
	Network Device monitoring in following areas should be supported by the proposed systems,		
	Monitor Device Availability		
	Monitor Network Device CPU		
	Monitor Network Device Interface Status		
	Monitor Network Device Interface Statistics		
	Monitor Network Bandwidth Utilization		
	Monitor Connection Health		
	Monitor VLAN health		
	Monitor HSRP group health		
	The system parameters should be updated on a periodic basis to reflect the current state of the system health.		
	The system should able to monitor the health state & performance Server Operating System which include Window OS (Window Server 2003 and above), others non-window servers which include but not limited to the		
	The system should be able to provide the alert to system administrator via SMS upon detection of critical issue on the monitored hardware/OS/Virtualization platform. For instance, CPU failure, server non responsive, etc.		
	The system should able to integrate to IT service request system & auto create a ticket and assign to predefined group of technician when there is a hardware/OS/virtualization platform failure. An email notification about the ticket details (unique ticket no, ticket description, hardware details, SLA of the ticket and etc.) will be sent to the group of technician for further action.		
	The system should able to integrate to IT service request system & auto close a ticket upon hardware resume or in a running state.		
	The system should able to monitor the health state & performance of application stack which covers the various aspects of the applications ranging from Database, Web Server Application Server and Application Services & Process. It should include the following but not limited the list below:		
	Windows Active Directory & DNS Services		
	- Ability to monitor AD Database/Log Free Space		
	- Ability to monitor AD operation Master (FSMO) Roles Performance		
	- Ability to monitor DC Response Time		

- Ability to monitor Global Catalogue Response Time		
- Ability to monitor AD Replication & Latency		
- Ability to monitor DNS availability		
- Ability to monitor DNS query response time		
- Ability to alert on DNS Errors		
Microsoft Exchange Messaging Services		
- Ability to monitor health of key Exchange services (IS, SA etc.)		
- Ability to monitor Exchange Mail Flow Performances		
- Ability to monitor Exchange SMTP Server Performance		
- Ability to monitor Exchange MAPI Logon Latency		
- Ability to monitor Exchange Database/Storage		
- Ability to monitor running Processes in Exchange servers		
- Ability to monitor MTA Stack/Queues Performance		
- Ability to alert on Exchange errors		
- Ability to monitor Exchange availability relationship to Active Directory/DNS		
Windows Internet Information Services (IIS)		
- Ability to monitor the health & performance of Web		
Windows DHCP Services		
- Ability to monitor the health & performance of Windows DHCP services		
Windows File Server		
- Ability to monitor the health & performance of Windows File services		
Windows Print Server		
- Ability to monitor the health & performance of Windows Print services		
Windows FTP Server		
- Ability to monitor the health & performance of Windows FTP services		
Microsoft Lync Server		
- Monitor Dynamics Lync Server Application Availability		
- Monitor Dynamics Lync Server Critical Services		
- Monitor Dynamics Lync Server Application performance		
Microsoft SharePoint Services		
- Monitor SharePoint Application Availability		
- Monitor SharePoint Application Critical Services		
- Monitor SharePoint Application Connection to SQL		
- Monitor SharePoint Application performance		
- Monitor SharePoint Application Web Services Performance		
The system should able to leverage the historical system usage data, and notify system administrator when available capacity falls below a specific threshold.		
The system should able to perform a trending analysis, report generation and provide a gauge on the anticipated capacity usage and growth.		

	The system should able to provide a rich dashboard solution by producing rich and user friendly dashboard which simplifies the monitoring data into simple dashboards that can be easily understood. For example: Service Level Dashboard, Application Monitor Dashboard and etc.		
	The information of health data such as network connectivity details, server details, application details, process/ service details can be present in a various graphical format like Pie chart, histogram, Bar Chart, Line Chart, Table Format, Network Diagram, Maps, Server& Network Topology Diagram, System Network Relationship & Dependency Diagram and etc.		
	The dashboard layout can be customized by the system administrator.		
	The system should able to shows the real time data about the link connectivity, health & performance for all hardware, network device, application, process or services of a system. Any changes to a connection/device, the data will immediately reflect in the dashboard/Live Map.		
	System able to provide automate function for reporting, and report can be prepared either in chart, diagram, or table format.		
	System administrator should able to generate the report and export the report into the excel format, words format and etc.,		
	System able to schedule reporting in daily, weekly and monthly basis. System should allow user to define the frequency of reports based on report type or name		
	System administrator able to configure security access control to delegate access rights to specific administrators that will be able to monitor and managed the application services.		
	The system administrator should able to edit/remove the access rights of a specific administrators in future.		

5.6	Virtualization		
	Requirements	Complied (Yes/No)	Remarks
Max Consolidation Ratio	Solution Must have capability of maximum supported number of virtual machines or virtual CPUs (vCPU) per physical host or logical CPU		
Max CPU – Host	Solution Must have capability of Maximum supported/recognized CPU configuration in the physical host (through technology or license restriction)		
Max Cores- per CPU	Solution Must have capability to provide Maximum supported number of cores per CPU (as restricted by the license)		
Max Memory – Host	Solution Must have capability to provide Maximum supported/recognized RAM size in the physical host (through technology or license restriction)		
Max vCPU per VM	Solution Must have capability to provide Maximum number of virtual CPUs configurable in a Windows/Linux virtual machine - achievable numbers vary greatly with guest OS version		
Max RAM per VM	Solution Must have capability to provide Maximum amount of RAM configurable for a virtual machine - achievable amount can vary greatly with guest OS version		
Serial Ports	Solution Must have Support Serial Port capability of the vm (to physical host port, named pipes or network and port concentrators)		
Hot Add/Plug	Solution Must have to add virtual machine components while vm is running		

Dynamic / Over-Commit	Solution Must have Ability to present more memory to virtual machines than physically available by dynamically (re)allocating memory to virtual machines when needed/reclaiming it when not needed in order to maximize consolidation ratios		
HW Memory Translation	Solution Must have Support for CPU hardware assist functions that reduce the virtualization overhead associated with page-table virtualization (AMD-V Rapid Virtualization Indexing (RVI) and Intel VT Nested/Extended Page Tables (EPT))		
OVF Support	Solution Must have Support for the Open Virtualization Format - an open (vendor independent) standard for packaging and distributing virtual appliances		
Guest OS Support	Solution must have to the vendor guest OS support		
Scripting / APIs	Solution Must have Support for Programming Interfaces allowing automation and integration with 3rd party products		
Cloud API	Solution Must have APIs to interface with cloud management layers		

5.7	Network and storage Capabilities		
	Requirements	Complied (Yes/No)	Remarks
Supported Storage	Solution Must have Supported types of Storage (DAS: Direct Attached Storage, NAS: Network Attached Storage, FC: Fiber Channel, iSCSI, FCoE - Fiber Channel over Ethernet)		
Virtual Disk Format	Solution must have different Supported format(s) of the virtual disks for the virtual machines		
Linked Images	Solution must have Ability to run multiple virtual Servers off a single base image for quick cloning and/or space saving purposes using snapshot provided with the virtualization software		
SW Storage Replication	Solution must have Ability provide software-based integrated storage replication		
Virtual SAN	Solution must have Enhanced storage capability e.g. providing a virtual SAN through virtualized 'local' storage		
Storage QoS	Solution must have Ability to control Quality of Service for Storage I/O for virtual machines		
NIC Teaming	Solution must have built-in NIC teaming on virtual switch level with various failover and load balancing policies		
VLAN	Solution must have Ability to create virtual LAN segments in order to isolate network traffic on the same physical network		
PVLAN	Solution must have Support for private virtual local area networks (PVLAN) allowing to 'sub-partition' a VLAN by restricting switch ports to only communicate with a given 'uplink' - avoiding 'per-to per' communication (extension to the VLAN standard).		
IPv6	Solution must have Support for IPv6		
Network QOS	Solution must have Ability to control Quality of Service for Network I/O of virtual machines		

5.8	SharePoint Server 2016		
	Requirements	Complied (Yes/No)	Remarks
Enterprise Content Management & Collaboration	System should be device independent		
	System should be accessible through Web browse		
	Must allow navigational security, with multiple layers of user and roles based definable security to limit access at department, user, system, function, and file levels.		
	Must have role based security model including ability to establish exceptions.		
	Must be able to fully integrate with the applications on the Microsoft platform		
	Must be fully integrated with Microsoft Office applications (Word, Excel, PowerPoint, OneNote, Visio) and e-mail Outlook		
	The system must have a document management system, site building feature, collaboration feature, search feature and integration capabilities		
	The system must have the ability to process e-forms and track progress of the process at each level		
	The system must have the ability to automatically increase the version number of the document		
	The system must have Check in/out features for documents		
	Has the ability to create bookmarks or Dashboard to documents frequently accessed such as a My Favorite list.		
	Provides the ability to personalize user preferences, the views, alerts, workflow preferences and others.		
	Records a detailed permanent audit log of all actions performed on a document including user and time stamp.		
	System is a highly available, scalable, redundant platform on which to support a library containing millions of files and documents.		
	Must provide 3 tier architecture for the application		
	All Administrative functionality can be accessed remotely using a Web browser over the Internet or through the companies LAN or WAN. SSL and VPN support further secure remote user and administrator access		
	The system administrator and developer must have drag and drop facilities in building the system		
	Allows for enterprise licensing model.		
	Can export search results and import them into an analysis tool, such as Excel.		
	Users can quickly create staging and collaboration areas for documents as they are being worked on. Once reviewed and approved, documents can be moved or linked to publishing folders for wider spread distribution.		
	Provides a document review and approval workflow for documents needing to pass through several authors, reviewers and approvers before being ready for general distribution.		
	The Document Approval workflow allows documents to be sent to one or many users for sign off. Approvers are able to approve (or reject) the document providing comments and feedback where required.		
	Users participating in review or approval workflows are provided with a personalized task list for all tasks assigned to them. Users can see at a glance their tasks, a description of the work to be done, who assigned the task and it needs to be completed.		
	Workflow features integrate through Microsoft Outlook email.		

	Workflow can be automated for a specific document type and workflow template.		
	Workflow creates an audit trail including electronic signature capture capabilities		
	Company has its own branded intranet with News and bulletin board, Document library , Wikis/Knowledge base, People search , FAQ corner, Calendar, Photo gallery, Polling, Survey, What's new, Like/Rating and Idea box		
	System synchronizes users or groups from objects in Active Directory. Once integrated, both users and groups can then be assigned to functional roles.		
	Allows for the expansion of document repositories while remaining seamless to the user.		
	System can be customized so that appearance resembles that of an organization's own look and feel.		
	System can be used to prepare company sites - intra/extra/intranet		
	System can search through communities, content, people, or sites. Search can be based on keywords, refinement, and content analysis		
	System allows no-code integration of data, documents and processes to provide composite applications		

5.9	Document management system		
	Requirements	Complied (Yes/No)	Remarks
General requirements	System should be device independent		
	Document management solution should be web base solution which will run on Microsoft platform		
	Ability to support all web browsers like IE 9.0 and onwards, Firebox, Safari, Google Chrome etc.		
	Inter-operability - The systems must seamlessly integrate with Core Network of NCIT and functioning Application and shall support interface with other open-standard systems.		
	Scalability should be high. The systems shall be designed for 24x7 operations.		
	System shall contain proper security system to protect secure information of the NCIT		
Administration panel/Management Interface	The system shall support web-based administration module for the complete management of system.		
	The Admin module shall provide easy to use interface for Index structure definition, that can be used by different users		
	System shall provide with selective logging as select the system features for, which the audit trails have to be generated i.e. for different functions.		
	Diagnostics monitoring activities of different components. E.g. Logs consolidation and capturing, missing indexes, audit log size etc.		
	Batch mode support for administrative operations e.g. change ownership, user deletion		
	Admin module should support creating separate document libraries, assign indexing & permission when required without doing additional customization		
User Management	Should support definition of Users, Groups and Roles relation in the system		
	Should be able to grant and revoke Access Rights based on Users and Groups		
	Should be able to grant and revoke Access Rights based on User's location without modifying user groups.		
	Should be able to set user password policies such as passwords length, complexity, locking of user-ID after certain un-successful attempts, password expiry, password history, etc.		
	Should be able to integrate with Active Directory for user management.		
Backup	The Admin module shall provide facility to take complete and incremental backups and shall be able to integrate with third party backup solutions.		
	The system shall support Disaster recovery by replicating the data at remote locations		
Auditing	The system should support Extensive Audit-trails at document and folder levels for each action done by particular user with user name, date and time		
	Should have interface for purging old audit trail and do selective logging i.e. select the system or application features for which the audit trails need to be generated.		
	The system shall support facility to export results in excel or any other format		
	Should be able to generate security related reports such like document viewed, downloaded, printed, etc. by user wise and date wise.		
Retrieval	Ability to support taking print, email or downloading outs with or without annotations		

Search capabilities	Ability to provide multilevel search facilities such like tag search, global search and advance search.		
	Ability to support searching of text documents based on user-input character strings, keywords, etc.		
	Ability to allow a search of OCR Documents by text string.		
	Ability Upon completion of search, immediately to display all selected images and support quick navigation through documents.		
	Ability to provide for view search values for custom fields before searching		
	Ability to provide for rapid search and retrieval on multiple very large document repositories (25 million pages or more).		
	Ability to provide facility to add keywords with documents to act as quick reference for the documents		
	Search Criteria should be configurable		
	Ability to support automatic stamping of annotations with user name, date and time of putting annotations. The system shall store annotations as separate file and at no time, the original image shall be changed.		
	The system shall provide facility of taking print outs with or without annotations		
	The Document management system shall support definition of Users, Groups and Roles relation in the system		
	The system shall support access permissions on Folders, documents and object level		
	The system shall support multiple levels of access rights (Delete/ Edit/ View/ Print/ Copy or Download)		
	The system shall support system privileges like Create/Delete Users, Define indexes etc.		
	The system shall support secure login id and passwords for each user and passwords shall be stored in encrypted format in database		
	The system shall support extensive password validations like passwords must be of minimum 8 characters, shall be alphanumeric, locking of user-id after three un-successful attempts, password expiry, password history so that passwords are not same as previous passwords etc.		
	The system shall support provide support for HTTP/SSL for secured data transfer		
	The system shall provide LDAP support for integrating with directory services and shall support single sign on		
	System should support the entire user level and group level operations take place with the dual authentication, by involving two users viz. Maker and Checker		
	Support for rule and roles based rights		
	Support for rights on administrative reports		
	The system should have high level of reliability with particular emphasis on data integrity and security. Support for password encryption and data encryption should be available. Transfer of documents / information should be encrypted.		
	Ability to restrict part of the document from selected users.		
	Ability to classify the document under multiple level of security levels and restrict document access through security levels		
	Ability to provide item wise permission if required		
	Ability to restrict document viewing, printing, downloading and etc....		
	Ability to Support Auto bulk uploading with indexing or import from other applications		

	Ability to Support email integration for document uploading		
Uploading	Ability to encrypt the document while uploading to the document management solution		
	Ability to support web interface for viewing image documents		
Document Viewing	DMS will support the mobile devices and should be able to provide tag base search instead of keyword search.		
	Ability to support for viewing documents in native application without having to open it with different application.		
	Ability to facilitate zoom-in/zoom-out, zoom percentage and Zoom lens to zoom in on a part of image and other image operations like Invert, rotate etc.		
	Ability to support for Thumbnails on image documents and viewing of the same.		

5.10	Document Capturing & Indexing		
	Requirements	Complied (Yes/No)	Remarks
	Document management solution should have its own capturing application		
	Virtual rescanning facility should be available with the scanning software		
	The document imaging and indexing application should have the following key features		
	1. Image quality Control		
	2. Indexing		
	3. Index Quality control		
	4. Release/Upload		
	The document imaging and indexing application should have a user friendly graphical user interface		
	A ribbon type menu bar would be an added advantage		
	The application should be capable of disabling or enabling features		
	The application should have a workflow mode operation (Scanning-Indexing-Release)		
	The application must be capable of creating multiple number of capture profiles or batch profiles depending on the requirement and there should not be a limitation on that.		
	The application must retain the temporary images in B & W , Grayscale and Color formats and the user should have the rights to disable or enable this during the operation		
	The application should be capable of connecting major brands of scanners including,		
	1. Fujitsu		
	2. Kodak		
	3. Canon		
	4. Xerox		
	5. Panasonic		
	The application should support the TWIN drivers which comes with the scanners.		
	The application should support from 75 dpi to 500 dpi settings.		

	Virtual rescanning facility should be available with the scanning software		
	At any time the application should be capable of loading the default scanning setting if something goes wrong with the current setting		
	The scanning setting interface should allow users to set the default image color as B & W , Grayscale or Color and at any time user should be able to change it.		
	The scanning interface should have a Virtual rescanning or similar feature which cutoff the most of the re scanning time.		
	Scanning user should be able to access the following setting by right clicking on the image.		
	1. Rotation and rotating images to keep text upright.		
	2. Setting up output color (B & W, Grayscale or color depending on scanned page).		
	3. Access virtual rescanning or similar feature.		
	4. Saving the images out from the application.		
	5. Send to indexing.		
	The image import option should support for following file types		
	1.PDF 2.TIFF 3.JPG 4.BMP		
	The image import option should support the following features		
	1. Watch folder		
	2. Email integration		
	3. integration with other application		
	The scanning and indexing application should allow to create any number of indexes without any limitation.		
	The indexed information should be able to visible on top of the scanned images.		
	Should be able to load default value for specific indexes		
	The application should be capable of associating pre-defined values list for indexes.		
	The application should be capable of releasing the images based on dynamic folder structure using indexes or predefined values.		
	The application should have mechanism to prevent duplicate file names.		
	The application should support for background export without user involvement.		
	The document management application should be capable of installing in following architectures.		
	1. 2 tier or 3 tier architecture		
	2. Cloud based deployment architecture		