**<The text in red colour is given as guideline to complete this document and remove them (including this line) before you submit>**

**Introduction**

<Provide a brief overview of the company and its operation, function of the system and the reasons for its development.>

1. Gap Analysis < Produce a gap analysis document for the case study company :>

Describe the current state of the Technology used and the state of technology when the upgrade is done (desired state) and mechanism to take the system from current sate to desired state. This can be done in tabular format. Add more rows as required. >

|  |  |  |
| --- | --- | --- |
| Current State | Gap Analysis | Desired State |
|  |  |  |
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**Network Design Option 1**

1. Server Installation Plan
2. Number of servers including specifications: <Describe how many servers and their specifications Processor, memory, Disk capacity, Network etc... and redundant components if configured >
3. Types of servers, OS and their Roles <Describe what type of servers (Physical, virtual, cloud etc.), what OS is going to be installed on each server and how you allocate severs for each of the network services and applications. Replicate the following tables for number of servers in your design.

|  |  |
| --- | --- |
| Server 1 | |
| Type of the server |  |
| OS |  |
| Roles and applications installed |  |
| Name |  |

1. How would you install the Operating systems of servers and workstations <Explain if this is a manual process or an automated process>
2. What are the compatibility concerns of your server integration, what will be the solution? <Compatibility issues that need to be identified between different server platforms and server technology used>
3. Network functionalities

<For each service below: describe what server is going to be used, what server is going to be used as a backup, the server roles that you are going to install and configure in Anzac network. Describe in detail what are the functionalities of each server role is. Refer to the guidelines given alongside the service>

1. DHCP <describe IP schema you are going to use and in scope and out of scope plan>
2. DNS <explain what name is going to be used for the domain, whether you are going to create sub domains>
3. Directory services including authentication (AD DS) <explain what OUs are going to be created and what resources are going to be included in each OU. what groups are going to be created and how users are allocated to each group>
4. Update services <explain how you plan to update servers (with different Oss) and workstations, how you automate the process, how frequently you plan to update machines>
5. Network installation of operating systems <explain how you are going to install operating systems on servers and workstations, how you plan to automate the process for some/all of the machines>
6. Email, FTP and WEB services <Explain what email/FTP/WEB software going to be used (Commercial or Open source) and name the software>
7. Print management <explain how you plan to deploy the printers to users>
8. Group Policies <explain what purposes you are going to use the group policies. Eg: security purposes, deploying applications, services etc.>
9. Proxy Server <what software will be used to implement Proxy>
10. NTP <what software will be used to implement NTP. How are you going to synchronise the servers and workstations?>
11. Network security

<Identify and describe at least four security technologies you are going to implement for Anzac Airport to secure the network infrastructure>

1. Server integration and authentication
2. Authentication <Explain the authentication model suggested in your network design. Is it a Windows based? What policies are used, What measures taken to protect Administrator account >
3. Authentication between different server platforms <Explain How you use the above model to authenticate users between different server platforms (OS) and what protocols are going to be used in your server integration that meets the organisation’s network requirements? >
4. High availability <Explain how redundancy and replication can be applied to the authentication model>
5. File sharing
6. File sharing including file sharing between different file systems <Explain what type of storage going to be used as shared file store. Describe your file sharing strategy and how file sharing can be done between different operating systems, for Anzac Airport including file permissions, consider the integrated server environment when you plan>

1. Folder structure <Produce a diagram that shows the partitions that need to be created, and the file and folder systems that are needed>
2. Data migration and back up
3. Data Migration Strategy <Explain how you are going to migrate data in existing network to the new shared file sore. Identify data migration and data backup and recovery requirements before new network installation>
4. Data backup plan < Explain the backup plan of the new network. (how often you back up the data and what type of backup) . Consider continuous confidentiality, integrity, and availability of Anzac Airport’s data during the network installation>
5. Fire walls and Virus protection
6. Identify Firewall options for network security
7. How do you implement virus protection?
8. Network prototype topology

<Draw a prototype of your suggested network using an industry accepted schematic designing tool>

**Network Design Option 2**

1. Server Installation Plan
2. Number of servers including specifications: <Describe how many servers and their specifications Processor, memory, Disk capacity, Network etc... and redundant components if configured >
3. Types of servers, OS and their Roles <Describe what type of servers (Physical, virtual, cloud etc.), what OS is going to be installed on each server and how you allocate severs for each of the network services and applications. Replicate the following tables for number of servers in your design.

|  |  |
| --- | --- |
| Server 1 | |
| Type of the server |  |
| OS |  |
| Roles and applications installed |  |
| Name |  |

1. How would you install the Operating systems of servers and workstations <Explain if this is a manual process or an automated process>
2. What are the compatibility concerns of your server integration, what will be the solution? <Compatibility issues that need to be identified between different server platforms and server technology used>
3. Network functionalities

<For each service below: describe what server is going to be used, what server is going to be used as a backup, the server roles that you are going to install and configure in Anzac network. Describe in detail what are the functionalities of each server role is. Refer to the guidelines given alongside the service>

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2. DNS <explain what name is going to be used for the domain, whether you are going to create sub domains>
3. Directory services including authentication (AD DS) <explain what OUs are going to be created and what resources are going to be included in each OU. what groups are going to be created and how users are allocated to each group>
4. Update services <explain how you plan to update servers (with different Oss) and workstations, how you automate the process, how frequently you plan to update machines>
5. Network installation of operating systems <explain how you are going to install operating systems on servers and workstations, how you plan to automate the process for some/all of the machines>
6. Email, FTP and WEB services <Explain what email/FTP/WEB software going to be used (Commercial or Open source) and name the software>
7. Print management <explain how you plan to deploy the printers to users>
8. Group Policies <explain what purposes you are going to use the group policies e.g. security purposes, deploying applications, services etc.>
9. Proxy Server <what software will be used to implement Proxy>
10. NTP <what software will be used to implement NTP. How are you going to synchronise the servers and workstations>
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<Draw a prototype of your suggested network using an industry accepted schematic designing tool>