# Linux Deployment Proposal for PromisedLand.com Data Center

## Executive Summary

PromisedLand.com is expanding its operations and requires a new data center to support its growing workforce. This proposal outlines the plan for deploying a secure, efficient, and scalable Linux-based server at a new cloud-hosted facility in Independence, Missouri. Designed to support 38 employees, the system will enhance productivity across multiple departments, including Infrastructure, Operations, Applications, and CRM.

The proposed solution focuses on centralized file storage, user management, departmental access control, and robust security strategies. The deployment will ensure seamless collaboration, maintain data integrity, and support future scalability. With this Linux-based setup, PromisedLand.com will achieve a reliable foundation for internal operations, improved system performance, and greater operational continuity.

## 1. Server Roles & Design

To support PromisedLand.com's new data center in Independence, Missouri, a cloud-hosted Linux server will be deployed. This system is designed to support the daily operational needs of 38 employees across various departments, including Infrastructure, Operations, Applications, and CRM.

The primary role of the server is to function as a centralized file and user management system, enabling shared access to documentation and resources across teams. It also ensures administrative oversight, departmental data separation, and a secure, scalable foundation for internal operations.

This server will operate within the company’s IT structure as the central internal access point for documents, user profiles, and inter-departmental communication. Its deployment will enhance productivity and collaboration while providing a stable, secure platform to scale with future needs.

## 2. Disk Partition Layout

The server’s storage will be logically organized into partitions to promote performance, security, and ease of maintenance. Each partition is designed with the specific workload in mind:

- Root (/) Partition (20 GB): Houses core operating system files.
- Home (/home) Partition (40 GB): Stores user-specific files and configurations.
- Shared Storage (/srv/shared) Partition (60 GB): Dedicated to departmental shared folders. Placed on a separate volume to simplify future expansion.
- Logs (/var/log) Partition (10 GB): Holds system logs and monitoring data.
- Temporary Files (/tmp) Partition (5 GB): Isolated to prevent temporary data from impacting system performance.

The filesystem used will be ext4, which is known for its stability and reliability in production environments. The /srv/shared partition, in particular, is designed to support future expansion as the data center grows.

## 3. Users and Groups

User accounts will be created based on department and job roles, grouped accordingly to simplify permission management. Each user will be assigned to a specific group depending on their team:

- infra_admins: Infrastructure Team
- ops_team: Operations Team
- app_team: Applications Team
- crm_team: CRM Team

Each department will only be able to access its respective files and resources. For example, members of the Operations Team will have access only to the Operations folder. Special considerations will be made for high-level personnel such as Carrie Shumaker, the CIO. She will have read-only access to all group-shared files to allow oversight without the ability to alter data. System administration privileges such as performing updates or managing users will be restricted to the Infrastructure Team only, reinforcing a principle of least privilege.

## 4. Shared File Storage & Permissions

Shared files will be stored in a structured directory layout within a dedicated partition. Each department will have its own folder under a common parent directory, such as:

- /srv/shared/infra
- /srv/shared/ops
- /srv/shared/app
- /srv/shared/crm

Access control will ensure that only members of a specific department can read and modify files in their respective folders. This protects sensitive information and supports efficient team collaboration. The CIO, Carrie Shumaker, will have read-only visibility into all these folders, giving her the oversight she needs without compromising the integrity of the files. This structure ensures data is both accessible and protected, promoting internal transparency while maintaining departmental security.

## 5. Security Measures

Security is a top priority in this deployment. The following measures will be implemented to protect the server and its data:

- Firewall: A software firewall will be configured to allow only necessary services like SSH for administrative access.
- User Access Control: Only approved administrators will have elevated privileges. Access will be logged and monitored.
- Regular Updates: System updates will be automated where possible to ensure vulnerabilities are promptly patched.
- Login Notifications: A Message of the Day (MOTD) will be displayed upon login, warning unauthorized users.
- Audit & Logs: System activity will be logged to help detect suspicious activity.

Together, these measures create a hardened environment for managing internal IT operations securely and efficiently.

## Conclusion

This proposal outlines a focused, secure, and scalable Linux deployment that addresses the operational needs of PromisedLand.com's new data center. By using a single, cloud-hosted Linux server, the organization gains a cost-effective, flexible, and robust foundation to support its growing workforce and maintain high standards of collaboration, access control, and security.

Approval of this proposal will enable immediate implementation and prepare PromisedLand's IT infrastructure for continued success.