**Future Communication Needs**

The network applications that are part of the current network are IP phones, corporate computers, server farm, and video conferencing. The risk of having one switch or router within the Memphis office is a single point of failure. There is no backup to mitigate the situation until it is fixed. This means the business is losing money every second it is down. The applications for the Memphis employees and users would be inaccessible to Dallas employees and end users as well. This will help offices communicate with one another in the case of a hardware malfunction or broken equipment such as routers and switches.

For communication needs to get better for the company soon the company should investigate using Microsoft Teams as this can help handle problems faster by jumping on a live call in the event of a crisis. All employees would have their own department chat rooms and instant messaging to give continuous updates to coworkers in the HR, accounting, and payroll departments that need to be improved upon in the organization. Microsoft teams would help by being a solution to all communication problems across the organization. Also, allowing security as according to (Houssier, 2023) Microsoft teams use “Transport Layer Security and other industry-standard technologies to prevent eavesdropping. TLS helps to encrypt data (including messages, files, meetings, and other content) both at rest and in transit.” This would increase the security of IP phones, corporate computers, server farm, and video conferencing calls for the organization. Another added benefit is how simple Microsoft teams are to onboard new employees and offboard them by simply creating an email for the employee that correlates to the organizations name. You can then easily delete that account when the employee leaves the organization.

**Network Architecture**

To improve upon the communication across the company you would use Microsoft teams to help for security reasons, easy to use features such as live video conferencing, calling, and instant messaging all in one place, also the added benefit of easy onboarding and offboarding future employees. For the network architecture for the organization, you would want to use cloud native networking because this would help scale the company for the rapid increase in growth over each of the next two years. Cloud native networking according to (Cloud Native Networking, 2024) “can easily extend your network functions to new locations or regions.” Also, cloud native networking helps with efficiency by allowing you to update or upgrade a network function without affecting others in your organization (Cloud Native Networking, 2024). Finally, cloud native networking can help with Multitenancy for the organization. This means that resources can be fully utilized throughout the organization. Cloud native networking does this by sharing resources among multiple tenants, as you can reduce waste and improve cost efficiency according to (Cloud Native Networking, 2024). According to (Cloud Native Networking, 2024) you can separate these tenants and monitor network performance for each department and enforce policies for each department.

**References**

Houssier, E. (2023, February 28). *Microsoft Teams Security: Is Your Data Secure?* Powell Software. <https://powell-software.com/resources/blog/microsoft-teams-security/>

Nile. (2024). *What Is Network Scalability? How to Optimize for Growth*. Nile. <https://nilesecure.com/network-design/network-scalability>

*Cloud Native Networking*. (2024, May 5). Tigera - Creator of Calico. <https://www.tigera.io/learn/guides/cloud-native-security/cloud-native-networking/>