



Technical Infrastructure Plan for AVI Career Training

Introduction

Avi Career Training is committed to leveraging cloud-based solutions to support our institution's electronic student, financial, and IT information systems. This plan outlines the framework for our cloud infrastructure, ensuring the highest standards of security, reliability, and scalability to enhance student, faculty, and staff services, including the delivery of distance education.

Objectives

1. Scalability: Ensure the cloud infrastructure can scale to accommodate growing student enrollment and expanding program offerings.
2. Reliability: Provide a reliable and resilient system to minimize downtime and disruptions.
3. Security: Implement robust security measures to protect sensitive data and comply with regulatory requirements.
4. Usability: Enhance user experience for students, faculty, and staff through intuitive and efficient cloud-based systems.
5. Support Distance Education: Equip the institution with the necessary cloud tools and platforms to deliver high-quality distance education.

Infrastructure Components

1. Cloud-Based Services

- Student Information System (SIS): Deploy a comprehensive cloud-based SIS to manage student data, enrollment, grades, and attendance.
 - Recommended: PowerSchool, Ellucian Banner, or Jenzabar.
- Learning Management System (LMS): Implement a cloud-based LMS to support distance education and blended learning environments.
 - Recommended: Canvas, Blackboard, or Moodle.
- Financial Management System: Use a cloud-based financial management system to handle accounting, payroll, and budgeting.
 - Recommended: QuickBooks Online, Sage Intacct, or Oracle NetSuite.
- IT Management Tools: Deploy cloud-based IT management software for network monitoring, endpoint management, and helpdesk support.
 - Recommended: SolarWinds, ManageEngine, or ServiceNow.

- Collaboration Tools: Provide cloud-based tools for communication and collaboration among students, faculty, and staff.

- Recommended: Microsoft 365, Google Workspace, or Slack.

2. Security Measures

- Data Encryption: Ensure encryption for data at rest and in transit using cloud provider encryption tools.

- Recommended: AWS Key Management Service (KMS), Azure Key Vault, or Google Cloud Key Management.

- Access Control: Use multi-factor authentication (MFA) and role-based access control (RBAC) to secure access to cloud systems.

- Recommended: AWS Identity and Access Management (IAM), Azure Active Directory, or Google Cloud IAM.

- Regular Audits: Conduct regular security audits and vulnerability assessments using cloud-native tools.

- Recommended: AWS Inspector, Azure Security Center, or Google Cloud Security Command Center.

3. Distance Education Support

- Video Conferencing Tools: Equip the institution with cloud-based video conferencing software for live classes, meetings, and webinars.

- Recommended: Zoom, Microsoft Teams, or Google Meet.

- Content Delivery Network (CDN): Use a CDN to ensure fast and reliable access to online course materials and resources.

- Recommended: Cloudflare, Akamai, or Amazon CloudFront.

- Virtual Labs: Implement virtual lab environments in the cloud for hands-on practice in technical courses.

- Recommended: AWS Educate, Google Cloud Platform, or Microsoft Azure Labs.

4. Support and Maintenance

- Cloud Support Services: Utilize cloud provider support services for maintenance, updates, and troubleshooting.

- Recommended: AWS Support, Azure Support, or Google Cloud Support.

- Regular Updates: Ensure all cloud systems and software are regularly updated and patched by utilizing cloud provider services.

- Backup and Recovery: Implement robust cloud-based backup and disaster recovery plans to ensure data integrity and availability.

- Recommended: AWS Backup, Azure Backup, or Google Cloud Backup and DR.

Implementation Plan

1. Phase 1: Assessment and Planning

- Conduct a needs assessment to determine specific cloud-based service requirements.

- Develop a detailed implementation timeline and budget.

2. Phase 2: Procurement and Configuration

- Subscribe to necessary cloud services based on the assessment.

- Configure cloud services, including SIS, LMS, financial systems, and collaboration tools.

3. Phase 3: Security Implementation

- Set up data encryption, access controls, and security monitoring tools within the cloud environment.
- Conduct initial security audits and vulnerability assessments using cloud-native tools.

4. Phase 4: Training and Rollout

- Provide training sessions for faculty, staff, and students on using new cloud-based systems.
- Roll out the new cloud infrastructure in stages to ensure a smooth transition and minimize disruptions.

5. Phase 5: Monitoring and Evaluation

- Continuously monitor cloud system performance and security.
- Collect feedback from users to identify areas for improvement.
- Conduct regular reviews and updates to the cloud infrastructure plan.

Conclusion

By implementing this Cloud-Based Technical Infrastructure Plan, AVI Career Training will enhance its ability to support students, faculty, and staff, ensuring a secure, reliable, and scalable environment for institutional operations and distance education. This plan will also enable the school to adapt to future technological advancements and changing educational needs.