

| Rec ID | Risk ID | Recommendation |
|---------|---------|--|
| REC-001 | R-001 | Deploy Multi-Factor Authentication (MFA) |
| REC-002 | R-004 | Develop Information Security Policy Framework |
| REC-003 | R-001 | Eliminate Shared Admin Accounts and Deploy PAM |
| REC-004 | R-007 | Establish Formal Vulnerability Management Program |
| REC-005 | R-012 | Implement Centralized Logging |
| REC-006 | R-003 | Deploy SIEM and Security Monitoring |
| REC-007 | R-008 | Develop and Implement Incident Response Plan |
| REC-008 | R-006 | Enhance Remote Access Security |
| REC-009 | R-011 | Enhance Security Awareness Training |
| REC-010 | R-012 | Implement Log Review and Monitoring Procedures |
| REC-011 | R-002 | Implement Data Classification and Governance Program |
| REC-012 | R-002 | Deploy Data Loss Prevention (DLP) Solution |
| REC-013 | R-005 | Establish Third-Party Risk Management Program |
| REC-014 | R-010 | Implement Change Management Process |
| REC-015 | R-009 | Implement Removable Media Controls |
| REC-016 | R-004 | Establish Cyber Risk Assessment Program |
| REC-017 | R-010 | Extend Asset Inventory to Complete CMDB |
| REC-018 | R-002 | Implement Encryption Key Management |
| REC-019 | R-003 | Establish SOC or MSSP Partnership |
| REC-020 | R-008 | Conduct Cyber Crisis Simulation Exercise |

| Description | NIST Controls | Priority |
|--|-----------------------|----------|
| Implement MFA for all users starting with privileged accounts, VPN, and cloud services (Azure AD, O365) | IA-2(1), AC-2 | Critical |
| Create comprehensive information security policy, define cybersecurity strategy, establish governance structure | PL-1, PL-2, PL-8 | Critical |
| Implement privileged access management solution, create individual admin accounts, establish privileged access reviews | AC-2, AC-6, IA-5 | Critical |
| Formalize Qualys usage, define scanning schedules, create remediation SLAs, prioritize critical vulnerabilities | RA-5, SI-2 | High |
| Deploy centralized logging solution, onboard critical systems, establish log retention policy | AU-2, AU-3, AU-12 | High |
| Implement SIEM solution (e.g., Microsoft Sentinel), onboard critical systems, create detection use cases | SI-4, AU-6, IR-5 | Critical |
| Create comprehensive IR plan, establish IR team, develop runbooks, conduct tabletop exercises | IR-1, IR-4, IR-8 | Critical |
| Implement MFA for VPN (if not in Phase 1), establish contractor access management, deploy network access control | AC-17, IA-2(1), AC-20 | High |
| Implement phishing simulation platform, create role-based training, establish quarterly awareness campaigns | AT-2, AT-3 | Medium |
| Establish log review schedules, create monitoring dashboards, define alerting thresholds | AU-6 | High |
| Conduct data discovery, implement classification scheme, label data, establish data governance policies | SI-12, MP-3 | Critical |
| Implement DLP for O365, email, and endpoints, configure policies based on data classification | SC-28, MP-6 | Critical |
| Create TPRM framework, develop vendor assessment questionnaires, update contracts with security clauses | SR-1, SR-2, SR-3 | High |
| Develop change management procedures, implement approval workflows, establish change advisory board | CM-3, CM-6 | Medium |
| Develop removable media policy, restrict USB usage, implement USB monitoring and DLP for removable media | MP-1, MP-7 | Medium |
| Develop risk assessment methodology, conduct organization-wide cyber risk assessment, establish annual cadence | RA-1, RA-3 | High |
| Inventory all software, SaaS applications, cloud resources, and third-party vendors in CMDB | CM-8 | Medium |
| Develop encryption policy, implement key management procedures, document encryption usage | SC-12, SC-13 | Medium |
| Evaluate build vs. buy for SOC, establish 24/7 monitoring capability, hire or partner for security operations | SI-4, IR-5, AU-6 | High |
| Plan and execute full-scale cyber crisis simulation, test IR plan, engage executive leadership | IR-3, CP-4 | Medium |

| Timeline | Phase | Est. Cost (USD) | Owner | Status |
|-------------|---------------------------------|-----------------|-------------------------|-------------|
| 0-3 months | Phase 1: Quick Wins | 75000 | IT Manager | Not Started |
| 0-3 months | Phase 1: Quick Wins | 50000 | CISO / IT Manager | Not Started |
| 0-3 months | Phase 1: Quick Wins | 100000 | IT Manager | Not Started |
| 0-3 months | Phase 1: Quick Wins | 25000 | IT Manager | Not Started |
| 0-3 months | Phase 1: Quick Wins | 50000 | IT Manager | Not Started |
| 3-6 months | Phase 2: Detection & Response | 200000 | IT Manager | Not Started |
| 3-6 months | Phase 2: Detection & Response | 75000 | CISO / IT Manager | Not Started |
| 3-6 months | Phase 2: Detection & Response | 80000 | Network Team Leader | Not Started |
| 3-6 months | Phase 2: Detection & Response | 40000 | HR Manager / CISO | Not Started |
| 3-6 months | Phase 2: Detection & Response | 30000 | IT Manager | Not Started |
| 6-9 months | Phase 3: Data Protection | 120000 | Data Protection Officer | Not Started |
| 6-9 months | Phase 3: Data Protection | 150000 | IT Manager | Not Started |
| 6-9 months | Phase 3: Data Protection | 60000 | Procurement Manager | Not Started |
| 6-9 months | Phase 3: Data Protection | 40000 | IT Manager | Not Started |
| 6-9 months | Phase 3: Data Protection | 35000 | IT Manager | Not Started |
| 9-12 months | Phase 4: Continuous Improvement | 80000 | CISO / Risk Manager | Not Started |
| 9-12 months | Phase 4: Continuous Improvement | 50000 | IT Manager | Not Started |
| 9-12 months | Phase 4: Continuous Improvement | 60000 | IT Manager | Not Started |
| 9-12 months | Phase 4: Continuous Improvement | 250000 | CISO / IT Manager | Not Started |
| 9-12 months | Phase 4: Continuous Improvement | 45000 | CISO | Not Started |

| Business Justification |
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| Immediate risk reduction for credential compromise |
| Foundation for entire security program |
| Accountability and control over privileged access |
| Reduce attack surface from known vulnerabilities |
| Foundation for monitoring and forensics |
| Visibility into security events and threat detection |
| Effective incident handling and containment |
| Secure remote access controls |
| Reduce human error and improve security culture |
| Proactive threat detection and compliance |
| Foundation for data protection and compliance |
| Prevent unauthorized data exfiltration |
| Manage supply chain security risks |
| Control configuration changes and reduce risk |
| Prevent data exfiltration via removable media |
| Risk-based decision making and resource allocation |
| Complete visibility into organizational assets |
| Proper cryptographic controls and key lifecycle |
| 24/7 threat detection and incident response |
| Validate readiness and improve response capability |