



Public Key Infrastructure Services (PKI)

Introduction

Public Key Infrastructure (PKI) is a combination of people, processes, and technology used to manage infrastructure for the provisioning, distribution, revocation & management of digital certificates & their associated encryption keys. These digital certificates form the root of trust and provide authentication and authorization for systems, applications, people, data & transactions by establishing a common root of trust by the certification Authority (CA). In the present digital, IoT & cloud transformation era, PKI is important in establishing trust between various entities involved. The demand for PKI is growing rapidly as it has become an essential part of security in our digital world. At Encryption Consulting, we have accumulated years of experience and expertise in managing, designing, implementing, and migrating PKI systems and providing consulting to organizations in various industries, such as banking, manufacturing, retail, energy, health, and life science. The demand for PKI expertise has also driven a shortage of specially trained professionals. Encryption consulting also provides PKI training and certification classes for enterprise customers to mitigate the shortage of trained professionals.

Enterprise PKI Assessment Service

Organizations must constantly maintain, secure, and enhance their PKI setup. This ensures the organization has a fully functioning PKI set up to meet business demands now and in the future. It must be designed for utmost stability and security. At Encryption Consulting, we help our customers determine their PKI operations' viability, sustainability, and security to support current digital certificate management processes and future demand growth for these services by new and existing subscribers. The assessment report will consist of gaps & recommendations by performing a comparative study of the current and future state of your PKI, the health status of the existing PKI setup, risks and challenges, establishing PKI best practices, validating your existing policies, workflows & approval processes, and providing optimization recommendations.

Enterprise PKI Assessment Service provides:

- Gap Assessment in terms of people, process & technology
- Custom recommendations for improving the health of PKI
- Risk analysis and recommendations of best practices
- Establishing a custom PKI roadmap for your organization
- CP/CPS document development

Enterprise PKI Deployment Service

With enterprises adopting the cloud in a customer digital journey, they experience a huge demand for digital certificates for internal and external facing apps and systems. Most applications and systems rely heavily on digital certificates for authentication and establishing trusted identities. As organizations are implementing and expanding their PKI setup, our skilled consultants can help your organizations better understand how to approach the best PKI and Digital certificate processes, such as multi-hierarchy PKI setup, configuring and creating different policies, designing CP & CPS, setting up an HSM, performing key ceremony, optimizing workflows and approval processes, and adding some level of automation.

- A wide variety of PKI options to meet the business needs
- Development of CP/CPS document
- On-prem/Cloud/Hybrid PKI design and implementation (Primary Issuing CA)
 1. Develop PKI Trust Model design document
 2. Develop production PKI build document for Primary issuing CA
 3. Develop root CA key generation ceremony script
 4. PKI Production Setup and Configuration of Offline Root CA
 5. PKI Production Setup and Configuration of Primary issuing CA
 6. PKI Production Setup and Configuration of Secondary issuing CA
 7. Option to build CDP/AIA points with Blob storage on cloud
 8. NDES Implementation on Primary Issuing CA
 9. Develop Acceptance Test Plan/Cases
 10. Perform Functional Test & Rework
- Build a business continuity planning guide
- Development of PKI Operations Guide document
- Assessment of existing infrastructures
- Providing PKI health check to ensure that the PKI is deployed securely and that it is optimally configured as per business needs.

PKI - CP/CPS Development

Certificate Policy (CP) and Certificate Practice Statement (CPS) documents play a fundamental role in defining the working and operations of your PKI. These documents provide a blueprint for your organization's PKI architecture, covering all the essential aspects. We adopt a collaborative approach, engaging with stakeholders to build CP/CPS documents that align with your needs. Following the guidelines outlined in Request for Comment (RFC) #3647, our team of expert consultants ensures meticulous attention to detail in every CP/CPS development aspect, fostering transparency, compliance, and effective management of your PKI infrastructure.

Our service offering includes:

- Preparation of CPS document templates in line with RFC #3647 standards.
- Collaborative assistance in drafting the content of CP/CPS documents.
- Identification of additional operational practices required for inclusion in CP/CPS.
- Review of final CP/CPS drafts with key stakeholders to ensure accuracy and compliance.
- Provision of responsive and knowledgeable support throughout the documentation development process.
- Professional delivery on time, even in the face of obstacles, as testified by satisfied clients.

PKI Support Services

Maintaining Microsoft PKI can be complex, requiring expertise and resources to ensure seamless operation, but navigating the intricacies of Microsoft PKI demands expertise and resources. Our services provide assistance and expertise to ensure PKI systems' seamless operation and continuous security. Our Microsoft PKI experts are available round the clock to provide tailored support for various needs, including PKI restoration, troubleshooting, and ad-hoc assistance. We offer guidance on enhancing security measures and achieving regulatory compliance, bolstering the overall integrity of the PKI infrastructure. Rapid restoration strategies are implemented in instances of disruptions to minimize downtime and maintain business continuity.

PKI Support Services Delivers:

- Managing PKI Certificate Request Generation and Submission
- Addressing Queries Regarding Microsoft AD CS Certificate Templates
- PKI Operational Support and Guidance
- Maintaining HSMs and Ensuring Secure Operations
- Overseeing PKI Certificate Authority Operations and Efficient Management
- Certificate Renewals and Best Practices
- Creating and Publishing Certificate Revocation Lists (CRL) for Enhanced Security
- Ensuring Compliance with Cryptographic Key and Hashing Algorithm Standards
- Configuring Trust Chains and Maintaining Secure Stores
- Assisting with Secure Certificate Authority Renewals
- PKI Policy and Governance Consultation

Implementation Services of Windows Hello for Business

We provide technical expertise and support for organizations seeking to deploy and integrate Windows Hello for Business (WHfB) within their enterprise environments. These services focus on the technical aspects of configuring, deploying, and managing WHfB to enhance security and streamline authentication processes.

Our Implementation Services Includes:

- Thoroughly assess existing IT infrastructure, Azure licensing, and Multi-Factor Authentication (MFA) requirements to determine the most suitable deployment approach.
- Developing detailed deployment plans and setup configurations based on assessment findings and organizational needs.
- Rolling out a pilot deployment of WHfB to test its functionality and compatibility with existing infrastructure.
- Gathering feedback from users and operational teams to identify potential challenges and areas for improvement.
- Expanding WHfB capabilities based on insights gathered from the pilot phase and refining deployment configurations accordingly.
- Optimizing WHfB deployment to ensure seamless integration with existing enterprise infrastructure and future scalability.
- Integrating WHfB with existing enterprise infrastructure, including Active Directory (AD), Azure Active Directory (AAD), and on-premises domain controllers.
- Ensuring compatibility with organizational systems and applications to facilitate smooth authentication processes.
- Integrating WHfB with Azure Multi-Factor Authentication (MFA) for enhanced security.
- Configuring MFA policies and settings to align with organizational security requirements and compliance standards.
- Collaboratively finalizing phased rollout plans based on assessment findings, pilot deployment results, and organizational objectives.
- Planning and coordinating deployment activities to minimize disruption to business operations and ensure successful implementation.

Implementation Services of Microsoft PKI with Intune

Our services integrate Microsoft PKI with Intune for enhanced security and easy device management. Through meticulous deployment and configuration, we establish PKI components and automate certificate lifecycle management processes. Intune policies are tailored to enforce strict security measures and device compliance standards. End-user education and ongoing support ensure proficient utilization, while continuous optimization sustains resilience and alignment with organizational objectives.

Our Service Offerings Include:

- Design and configuration of PKI components, including Certificate Authorities (CAs) and certificate templates.
- Establish automated processes for certificate issuance, renewal, revocation, and monitoring.
- Configure Intune policies and profiles for stringent security measures, compliance standards, and application management.
- Enforce security policies and compliance standards across all managed devices to mitigate the risk of unauthorized access and data breaches.
- Provide training sessions, user documentation, and ongoing support channels to support end-users with Intune knowledge.
- Proactively monitor, tune performance, and conduct periodic assessments to optimize the integrated PKI and Intune environment.
- Ensure seamless integration with Configuration Manager, Windows Autopilot, Microsoft Defender for Endpoint, Windows Autopatch, Endpoint Analytics and Microsoft 365.

PKI Essentials Training

This module is designed for individuals and teams who want to start working on PKI technology. This training will cover the basic and essential part of PKI technology such as PKI concepts, high level architecture design, setup and configuration, use cases and PKI operations. This training module will help individuals and staff gain knowledge and confidence to manage all of the essential aspect of PKI technology.

PKI Essentials Training Delivers

- ◆ PKI Concepts
- ◆ PKI Design and Architectures
- ◆ Lab Exercise
- ◆ PKI Use Cases
- ◆ PKI Operations

See it in action

Encryption Consulting LLC is a customer-focused cyber security consulting firm providing an array of services in all aspects of data protection.

Contact Us

