

# Public Key Infrastructure

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## Public Key Infrastructure Introduction

Public Key Infrastructure (PKI) is combination of people, process and technology used to manage infrastructure for provisioning, distribution, revocation & management of digital certificates & their associated encryption keys. These digital certificates form the basis of trust and provide authentication and authorization for systems, applications, people, data & transactions by establishing a common root of trust by the certificate authority.

In present era of digital, IOT & cloud transformation, PKI plays an important part of establishing trust between various entities involved. The demand for PKI is growing rapidly as becomes an essential part of security in our digital world.

At Encryption Consulting, we have years of experience in consulting, designing, implementing & migrating PKI solutions for enterprises across the country. We have clients in the following industry sectors: banking, manufacturing, retail, energy, health and life science. Additionally, the demand for PKI solutions has driven a shortage of specially trained people. We now provide enterprise customers on-site PKI training and certification classes.



## 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
- ◆ PKI Use Cases
- ◆ PKI Operations
- ◆ Lab Exercise



## Enterprise PKI Deployment Service

With enterprises adopting cloud and a customer digital journey, they experience a huge demand for digital certificates both for internal and external facing apps and systems. Most of the applications and systems rely heavily on the use of 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 best approach PKI and Digital certificates 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.

### Enterprise PKI Deployment Service Delivers:

- ◆ A wide variety of PKI options to meet the business needs
- ◆ Development of CP/CPS document
- ◆ On-prem/Cloud PKI design and implementation (Primary Issuing CA)
  - Root CA platform and HSM should be available
  - Develop PKI Trust Model design document
  - Develop production PKI build document for Primary issuing CA
  - Develop root CA key generation ceremony script
  - PKI Production Setup and Configuration of Offline Root CA
  - PKI Production Setup and Configuration of Primary issuing CA
  - PKI Production Setup and Configuration of Secondary issuing CA
  - NDES Implementation on Primary issuing CA
  - Develop Acceptance Test Plan/Cases
  - 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.

## Enterprise PKI Assessment Service

Organizations must constantly maintain, secure and enhance their PKI setup. This assures 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 the viability, sustainability, and security of their PKI operations to support both 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, health status of the existing PKI setup, risks and challenges, establishing PKI best practice, 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 health of PKI
- ◆ Risks and Best practice
- ◆ Establishing custom PKI roadmap for your organization
- ◆ CP/CPS document development





## Encryption Advisory Services

Encryption is used for securely protecting data from unauthorized access. Data encrypted can only be seen by those that possess the key to change the data back to plain text. Encryption is now one of the oldest yet still most effective technology solutions able to have data security for organizations.



## Public Key Infrastructure

PKI is a security ecosystem that has stood the test of time for achieving secure Internet-based transactions by the use of digital certificates. Digital certificates have provided security to servers and routers from the very early stages of the Internet through Public Key Infrastructure



## Hardware Security Module - HSM

Hardware Security Modules provides protection and strong authentication with cryptographic processing by the use of digital keys inside a physical computing device. This device offers an isolated tamperproof environment which can create and secure cryptographic keys, protecting critical cryptographic operations, all while enforcing self-implemented policies over the keys.



## Certificate Lifecycle Management

Certificates typically have a 4-phase lifecycle - Discovery, Enrollment, Provisioning, and End-of-life. To make your PKI mature and reliable, you must have more control over all the phases



## Enterprise Encryption Platforms

Does your business have the need to encrypt large amounts of data-at-rest found in structured databases or in unstructured files across physical, cloud, or both types of environments? Do you want to protect data without disruptive changes to applications or business practices?



## Cloud Data Protection Services

The transition towards uploading data on the public cloud is now becoming the normal standard. With relying on the cloud for data storage, cloud security must now become the number one priority for organizations

## 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**