

KICS - System Overview

KICS is a web form entry system that allows customers to build custom forms that are used by employees, contractors or the general public.

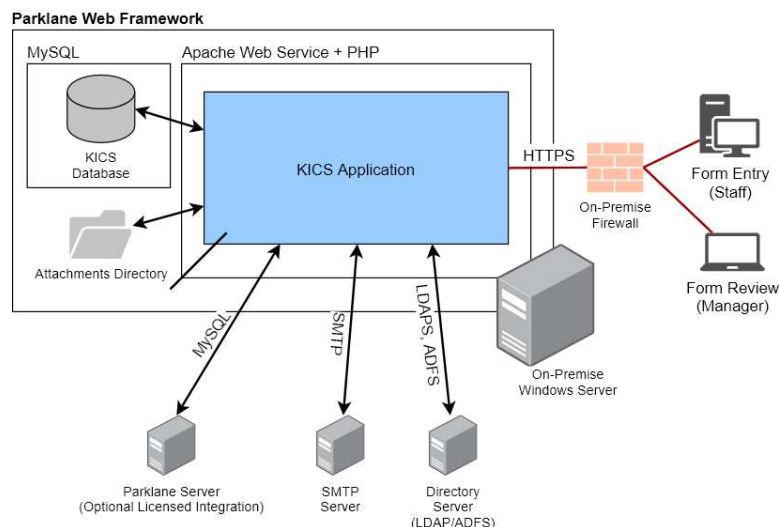
With KICS, users create forms (called Templates) where each template can be made of multiple sections, called pages. Each page may have different role-based permissions, allowing multiple people to fill out a KICS response in multiple stages. Once all pages are complete, the form is marked complete, indicating no further modifications can be made to the form.

On a KICS page, the user can set a variety of different questions types. This includes: Short Answer, Comment, Date / Time, Select / Option lists, File Uploads, Signatures, GPS Coordinates, etc. KICS can also set up conditional expressions to allow questions to be shown / hidden / made mandatory based on the answers provided. KICS can also perform calculations based on the answers provided.

KICS forms can be retrieved and exported based on submission date times, or filtered based on answers provided. Individual PDFs for forms can be generated and emailed; as well forms can be exported into an Excel (.xls) file for further analysis.

KICS is deployed in two methods: on-site or hosted. This architecture document focuses on on-premise deployments, where form access, storage and processing of KICS responses reside on a central server. For a comparison of on-premise vs hosted deployments, please see the [KICS - Hosting vs On-Premise Deployments](#) technical document.

System Architecture Diagram (On-Premise)



System Requirements

KICS uses the Parklane Web Framework, which is a suite of Web and Database Services (Apache, PHP, MySQL) designed to serve the Web Forms.



A copy of the Parklane Web Framework is already installed if the customer uses Parklane Web Forms, and that copy of the Web Framework can be utilized to host KICS.

If the customer chooses to install KICS on a standalone server, the server will require a separate copy of the Parklane Web Framework for hosting KICS.

Please see the [**Parklane Web Framework Overview**](#) technical document for more information.

KICS utilizes the MySQL Database server for storing data. This database service is included with the Web Framework and can reside on the same server or be split out (see the [**KICS Database**](#) Section below). Capacity requirements depend on the number of templates and responses stored, however 1GB of database storage space is adequate for most installations.

KICS requires storage space for file attachments to KICS responses. Capacity Requirements are dependent on the types of files allowed to be uploaded to a KICS response (see [**Additional Data Storage**](#) section below).

KICS may utilize other on-premise services, such as an SMTP server for email notifications and a Directory server via LDAP or ADFS for user authentication (see [**Authentication**](#) below).

If Parklane Integration is requested for employee lookup, KICS will require a MySQL connection to the Parklane Extension database. This may reside in the same Web Framework Service, or on a separate Server.

Clients will connect to KICS using a HTTPS web browser session. A signed certificate is required for the Parklane Web Framework. This certificate can be standalone or wildcard.

Depending on your environment, clients may directly access KICS through a local or VPN connection, or publicly via a Port Forward, or Front-End proxy.

Authentication

KICS allows access by either authenticated or unauthenticated (public) users. Those completing forms may be authenticated locally, or via a directory server using LDAP or ADFS/SAML. KICS also allows for role-based security. Roles are statically set, or tied to directory groups (which are provided when a user logs in).

Roles are used to assign permissions to each KICS template. The following permissions are available:

- Form Entry
- Partial Response Retrieval
- Complete Response Retrieval
- Search Response Form

- Delete Response
- Export Responses and Analytics

Role permissions are assigned to each page on the template. These permissions include:

- View Page
- Edit Page
- Save page as incomplete.

When users authenticate, their role assignments are used to determine templates they are allowed to access, as well as the permitted methods of access for each template.

A Non-Authenticated (public) role is also available to allow users access to templates without needing to log in. This Public Role is typically assigned for form entry.

System Permissions are also available to roles, such as

- Account and Role Manager
- Template Manager
- System Administration Manager

As mentioned, the above assignments can be statically set in KICS, or they can be assigned based on Group Membership

When using Directory Accounts, KICS requires the following elements from the directory server

- First Name
- Last Name
- Account Name
- Email Address
- Directory Serial Number
- Group Membership (optional)

For more Information, see the [**KICS - Authentication Methods**](#) and [**KICS - SAML, ADFS, Federated Services Setup**](#) Technical Documents

KICS Database

KICS uses the MySQL Database server for storage of templates and responses. The MySQL server can reside on the same system (using the Web Framework) or elsewhere.

The KICS schema stores static tables for templates, questions, accounts and roles. Each template also has a separate table for the storage of partial form and complete form responses.



For on-premise deployments, the response tables are not encrypted at-rest. We are currently investigating methods of encrypting at-rest (including Transparent Data Encryption). However if encryption is required, we suggest encrypting the data files using EFS and running the MySQL Service using credentials with EFS rights.

Additional Data Storage

KICS also requires disk storage for certain components. This includes:

- Response File Uploads
- Signatures (encrypted through KICS)
- Audit Logs
- Generated Reports

KICS stores this data in an 'Attachments' folder. This folder is not encrypted, however if encryption is required at this time, we suggest encrypting the attachment folder using EFS and running the Apache Service using credentials with EFS rights.

KICS can also be configured to require File Uploads to be scanned using a configured malware scanner.

Note: The attachments folder is not publicly accessible through the web server, although the Apache Service requires permissions to access this folder.

Email Notifications

KICS sends email notifications to recipients based on conditions on a KICS template. This can be generic conditions (such as a completed page), or can be based on a user's provided answers (such as answering yes to a question). Emails can be sent out to static addresses, a KICS user's email account, or based on an email question on the KICS template.

Email Notifications have the ability to attach a copy of the response PDF, as well as provide a link for response retrieval.

KICS will require access to an SMTP server. KICS is compatible with TLS encryption and setting up outbound SMTP credentials.

Client Access

Clients access KICS through a Web Browser using an HTTPS session. This includes Form Entry, Form Retrieval and Report Generation.

Backups

The two required components to be backed up on a KICS installation is the KICS Database and KICS attachments directory. If these two components are backed up, KICS can be restored on an alternate



server using a fresh installation. Parklane can provide scripts to automate the backup process using a scheduled task.