System Architect Essentials

The Pega Platform

# Introduction to the Pega Platform

In this lesson you will learn how the Pega Platform is used to design and run Pega applications.

After this lesson, you should be able to:

* Explain the benefits of using a model-driven application design and development approach.
* Describe the user roles of each role’s high-level responsibilities associated with the Pega Platform.
* Describe the purpose of the run-time user portals in the Pega Platform.
* Describe the purpose of the design time user portals in the Pega Platform.
* Describe when to use Pega Express vs. Designer Studio

# Pega application platform

The Pega Platform provides a single, unified platform with everything you need to build or modify enterprise applications.

Business and IT stakeholders work together, using visual models to capture business requirements.

With no coding required, Pega Platform automatically generates the application and its documentation.

## Transcript for: Pega application platform

* Pega 7 provides a unified application development platform for building business applications.
* Traditional application development tools focus on creating individual business applications that must then be integrated with each other.
* For example, a company may need to integrate a website application, a mobile application, and a customer relationship (CRM) application.
* Each application has its own requirements, analytics, and business policies.
* Existing business applications may be developed and maintained by separate groups that use different application development languages, tools, methods, and repositories.
* Or a company might have a business rule engine to provide business logic, a development environment to integrate with external systems, or a document management system to manage case data.
* Unifying existing business applications might be unobtainable for a company without outside help.
* As a result, sharing and reusing application components when building business applications is difficult.
* The Pega 7 Platform is unified.
* This means that all the functionality needed for business applications is configured using a consistent set of components that are defined and stored together in the company’s systems of record.
* Each business application built on top of the Pega 7 Platform uses a common set of tools, a common vocabulary, and a consistent model to communicate, implement, and validate requirements.
* Business processes and policies, integrations with external systems, mobile interfaces, business performance monitoring, and reporting are all defined using a consistent, model-based application development approach.
* This makes sharing and reusing artificats easier when building business applications.

## Knowledge Check

Q: What is the significance of a unified platform?

A: With a unified platform, you configure applications using a consistent set of components. The use of a consistent set of components reduces application development time.

# Model-based application design and development

The Pega Platform uses a model-based approach to application development.A screenshot of a social media post

Description generated with very high confidence

You use **visual, form-based definitions of application components** in a **model-based approach**.

No coding is required.

Application architects can see where application components are placed and how each piece is leveraged by the rest of the application.

By improving the visibility, architects can see the overall application design, all team members can communicate more effectively about the impact of new or modified requirements.

Team members can also identify potential gaps.

As a result, updating processes, user interfaces, and other business rules is easier.

## Knowledge Check

Q: To ensure visibility among all team members to an overall application design, which application development approach does Pega Platform use?

A: Pega Platform uses a model-based application approach.

# Pega Platform user roles

Building a successful business application requires collaboration between 2 parties: case participants and case designers.



## Case participants

**Case participants**

* Case participants are the business users of the application, processing, and closing cases.
* Case participants are usually organized by roles.
* For example, in a credit card dispute case, the roles might include a customer service representative, a dispute agent, and a fraud investigator.

There are 2 groups of case participants:

* **Case workers**
  + Case workers are responsible for creating, viewing, and working on their own cases and assignments.
  + A case worker cannot monitor or manage work among other case workers, or view work statistics.
* **Case managers**
  + Case managers are responsible for working on cases and monitoring work group status, goals, and deadlines.
  + Case managers are also responsible for generating work manager reports.

Each case participant group uses a Pega run-time Pega portal specific to the group.

Case workers use the Case Worker portal.

Case managers use the Case Manager portal.

## Knowledge Check

Q: If a case manager oversees the efforts of a case worker, what does a case worker do?

A: Case workers are responsible for creating, viewing, and working on their own cases and assignments.

## Case designers

**Case designers**

* Case designers are part of the delivery team responsible designing and building business applications.
* Case designers use Pega’s design time portals, Pega Express and Designer Studio.

There are two groups of case designers:

* **Business architects** (BAs)
  + Business Architects are the first group of case designers, that work with case participants and other stakeholders to define business objectives and application requirements.
  + BAs plan application behavior to address the business objectives and requirements with specifications.
  + These specifications describe how the application manages and automates work.
* **System architects** (SAs)
  + System Architects are the second group of case designers, provide the technical skills needed to complete the application.
  + SAs configure application assets such as User Interface (UI) forms, automated decisions, and correspondence. SAs then review the application with business stakeholders for approval.

The SAs and BAs work together to ensure the new application reflects business needs.

SAs often prototype application features to help refine the specifications captured by the BAs.

These prototypes help align the application with the business needs.

## Knowledge Check

Q: If business architects (BAs) gather business objectives and application requirements, for which tasks are the system architects (SAs) responsible?

A: SAs provide the technical skills needed to complete the application. They configure application assets such as User Interface (UI) forms, automated decisions, and correspondence. SAs then review the application with business stakeholders for approval.

# Pega Platform User Portals

Pega Platform includes four user portals that provide intuitive, results-focused work spaces.

* Design time portals
  + Pega Express
  + Designer Studio
* Run-time portals
  + Case Worker portal
  + Case Manager portal

## Design time portals

* Application designers can use either of two design time portals, Pega Express or Designer Studio, to build applications that support a wide range of business objectives at all levels of complexity.

### Pega Express

* Pega Express is an accelerated application development environment that exposes key elements and features of the Pega Platform.
* Use Pega Express to quickly build the case structure and process steps. Streamlined capabilities let you create a basic application that you can demonstrate to stakeholders and get their feedback.

A screenshot of a cell phone

Description generated with very high confidence

### Designer Studio

* Designer Studio is a robust application development environment that exposes more advanced features of the Pega Platform.
* Use Designer Studio to refine the case life cycle design.
* For example, you can add predefined utilities used to automatically send an email.

A screenshot of a social media post

Description generated with very high confidence

Design time users can toggle between Pega Express and Designer Studio.

## Run-time portals

* Case participants are assigned run-time portal access based upon each participant's role. Run-time portals users do not have design privileges.

### Case Worker portal

* An end user with case worker privileges can access to the Case Worker portal.
* Case worker privileges enable the user to work on assigned cases.

A screenshot of a cell phone

Description generated with very high confidence

### Case Manager portal

* An end user may be assigned case manager privileges.

A screenshot of a cell phone

Description generated with very high confidence

* Case manager privileges enable the user to manage their assigned cases and view the status of the cases assigned to all their direct reports.

# Pega Express

Pega Express is a design time portal that enables you to quickly create and run applications that model processes business users follow.

Pega Express allows you to:

* Create cases
* Create user views and fields
* Add or remove existing users from your application
* Define settings for theme, mobile apps, and other tools.

In addition to the portal’s design capabilities, you may also use the portal to run an application in **simulation mode**.

This features allows you to test your design as a user would experience it.

For example, you may add fields to a form that is presented to the business user.

To test your update, run Pega Express in simulation mode.

This displays the form as a user would see it while working on a case.

As a user, you enter information in the fields to ensure that your design works as expected.

## Designing with Pega Express

To create an application in Pega Express, start by building out the high-level case structure and processes.

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Description generated with very high confidence

You define the phases in the life cycle of a case type, and the processes or work flows that users follow.

By incorporating stages, processes, and steps into your case-type designs, you build robust business solutions in your application.

Next, you create forms that are associated with assignments or approval steps in the life cycle of a case.

A screenshot of a cell phone

Description generated with very high confidence

By defining the fields that are displayed at run time, you can collect information from users or present case information for review.

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This allows you to build the data model in the context of the life cycle of the case.

Pega Express is ideal for initial Grooming/Elaboration sessions where business and IT stakeholders collaboratively define the primary case type life cycle.

This may include importing existing specifications and linking them to process steps as you go, or defining the new specifications in the context of the case life cycle.

## Knowledge Check

Q: Pega Express allows you to run an application in \_\_\_\_\_\_\_\_\_\_\_ so that you can test your design as a user would experience using the application.

A: simulation mode

Using Pega Express, you can easily define the high-level case structure and steps of a case.

# Designer Studio

Designer Studio provides development teams with the tools and information they need to build and extend business applications.

Designer Studio user portal consists of a:

1. Work area
2. Header
3. Explorer area
4. Developer toolbar

A screenshot of a computer

Description generated with very high confidence

## Designer Studio work area

Use the work area to open, review, and edit application artifacts such as requirements, case types, use reviews, data models, and reports.

Multiple items open in the work area display in separate tabs.

## Designer Studio header

The Designer Studio header provides tools to create and manage application assets.

Use the header to create cases, search for records, and launch secondary portals.

A picture containing screenshot

Description generated with very high confidence

## Designer Studio explorer area

The Explorer area appears as a panel on the left side of the Designer Studio and provides navigation to specific record types.

| **Icon** | **Explorer** | **Purpose** |
| --- | --- | --- |
| https://pdn.pega.com/sites/pdn.pega.com/files/images/te-content/designer_studio/ExplorerIcons_recent_abstract_50x50.png | Recent | Display and access up to the last 20 recently opened records, wizard items, instance lists, landing pages. |
| https://pdn.pega.com/sites/pdn.pega.com/files/images/te-content/designer_studio/ExplorerIcons_cases_abstract.png | Cases | Open and review case types in the current application. The tree structure helps you identify parent-child relationships. Advanced options allow you to edit case types and create new ones. |
| https://pdn.pega.com/sites/pdn.pega.com/files/images/te-content/designer_studio/ExplorerIcons_abstract_data.png | Data | Review data types in the current application and the data pages associated with them. You can filter the results by application or applies to class. |
| https://pdn.pega.com/sites/pdn.pega.com/files/images/te-content/designer_studio/ExplorerIcons_abstract_app.png | App | Review or open the records that belong to the current and built-on applications. The tree structure organizes rules by class, category, rule type, and instance. |
| https://pdn.pega.com/sites/pdn.pega.com/files/images/te-content/designer_studio/ExplorerIcons_records_abstract.png | Records | Open a list of records in the system organized by category and type. |
| https://pdn.pega.com/sites/pdn.pega.com/files/images/te-content/designer_studio/ExplorerIcons_private_abstract.png | Private | Review your checked-out rules. |
| https://pdn.pega.com/sites/pdn.pega.com/files/images/te-content/designer_studio/ExplorerIcons_favorite_abstract.png | Favorite | Review and update your personal or access group favorites. |

## Designer Studio developer toolbar

A close up of a device

Description generated with high confidence

The Developer toolbar helps users debug applications, tune performance and quickly analyze the composition of UI components.

Use the:

* Tracer tool to debug rule execution.
* Clipboard tool to view data in memory.
* Live UI tool to identify user interface elements.
* Performance tool to analyze application performance.
* Alerts tool to view system alerts generated by Pega.

## GLOSSARY

* artifact
  + An artifact is an element of the application development process, such as a design document, requirement, specification, or UI mock-up.
* customer
  + A customer is a work party, and typically, a case is initiated by or on behalf of a customer.
  + In many applications, only one customer can be associated with a case.
* form
  + A form displays information or collects input from users as they create, update, and resolve cases in your application.
  + Use **Case Designer** to define the visual presentation of a form.