Sequence 8.1 Release Notes

Date: 20th June 2016

PNMSOFT
Business Processes in Motion™

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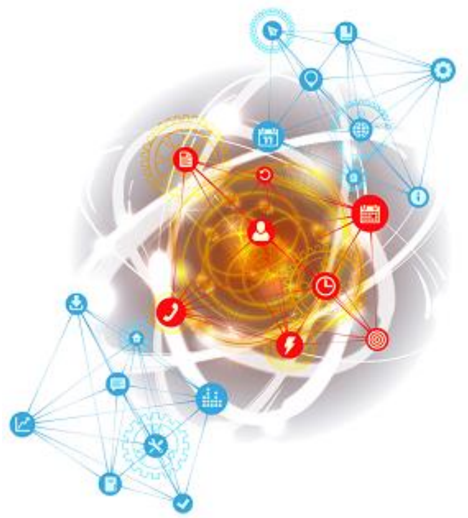
Contents

Introduction

Sequence 8 introduces powerful and practical BPM, Case Management and Work Optimization capabilities.

In Sequence 8, organizations can create **Case Management** solutions powered by intelligent BPM capabilities. This is made possible with a set of new features that include Solutions, Case Templates, Shared Data, a Case Management portal and more.



Intelligent Work Optimization and enterprise-level Case Management is made possible with **HotOperations™**, a new product that can be included with Sequence 8 with an additional license. Operations centers can optimize real-time work management with HotOperations, using features such as HotOperations Solution, Smart Allocation Plan, Work Allocation Dashboard and more.

These Release Notes outline major Sequence 8 features. For full documentation, please read Getting Started with Sequence 8 on our Knowledge Center.

Release Date: June 20th, 2016

Installation

You can download the installation files from the Download Center. See the Sequence Installation Guide for software and hardware requirements and detailed installation instructions.

New Sequence 8.1 Installation

1. Unzip the file *8.1.0.0Installation/Setup Or Upgrade/8.1.0_Installation.zip*.
2. Run *8.1.0_Setup.exe* (it is in the zip file). Note: Run as Administrator.
3. Follow the instructions in the Sequence Installation Guide in the Knowledge Center.

Upgrading from Sequence v7.10.5 OR Sequence 8.0

1. Verify that version 7.10.5 or later is installed on your server.
2. Backup the configuration files and your database.
3. Free up system resources:
   a) Use the IISReset command-line utility to reset the IIS.
   b) Stop the Sequence Windows services (ADSS, BRS, JES).

4. Download and run the file:
   8.1.0.0Installation/Setup Or Upgrade/8.1.0_Installation.zip (Run as administrator)
5. Run IISReset.
6. Start the Sequence Windows services (ADSS, BRS, JES).

   Note: Any earlier version must be upgraded to v7.10.5 first. See details in the v7.10.4 Release Notes and the v7.10.5 Update Readme.

   Note: If you are updating your Database using scripts, use the scripts located in the "Upgrade" folder.

7. To enable the new look and feel of Sequence 8, additional configuration is required:
   - For Flowtime: refer to the 'New Look and Layout' section on page 8.
   - For Sequence forms (UX controls skin): refer to the 'Controls New Skin' section on page 29.

Case Management Features

Elements of a Case Management Solution

A Case Management solution provides knowledge workers with the following elements to facilitate work:

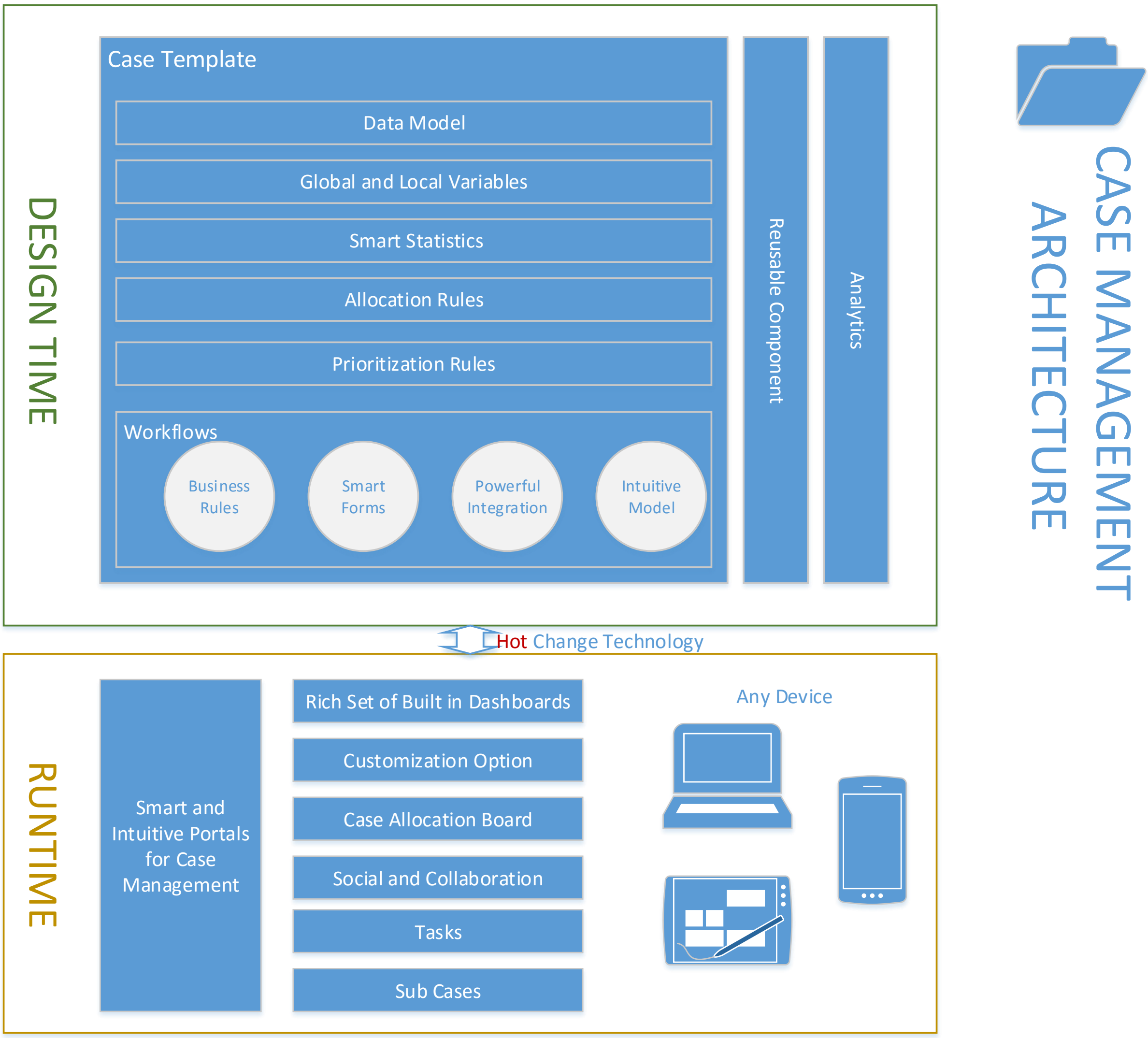
- Case data and metadata
- Sub-processes, Tasks or Actions that can be applied ad hoc
- Case dashboards and analytics
- Communications with teams on case work
- Documentation related to the case

An effective Case Management solution surfaces the relevant case data, and gives the Knowledge Worker the ability to manage the case smoothly using the elements above.

Sequence 8 provides these capabilities, in addition to providing unique Work Optimization features, as you will see in the following sections.

Architecture of Case Management in Sequence

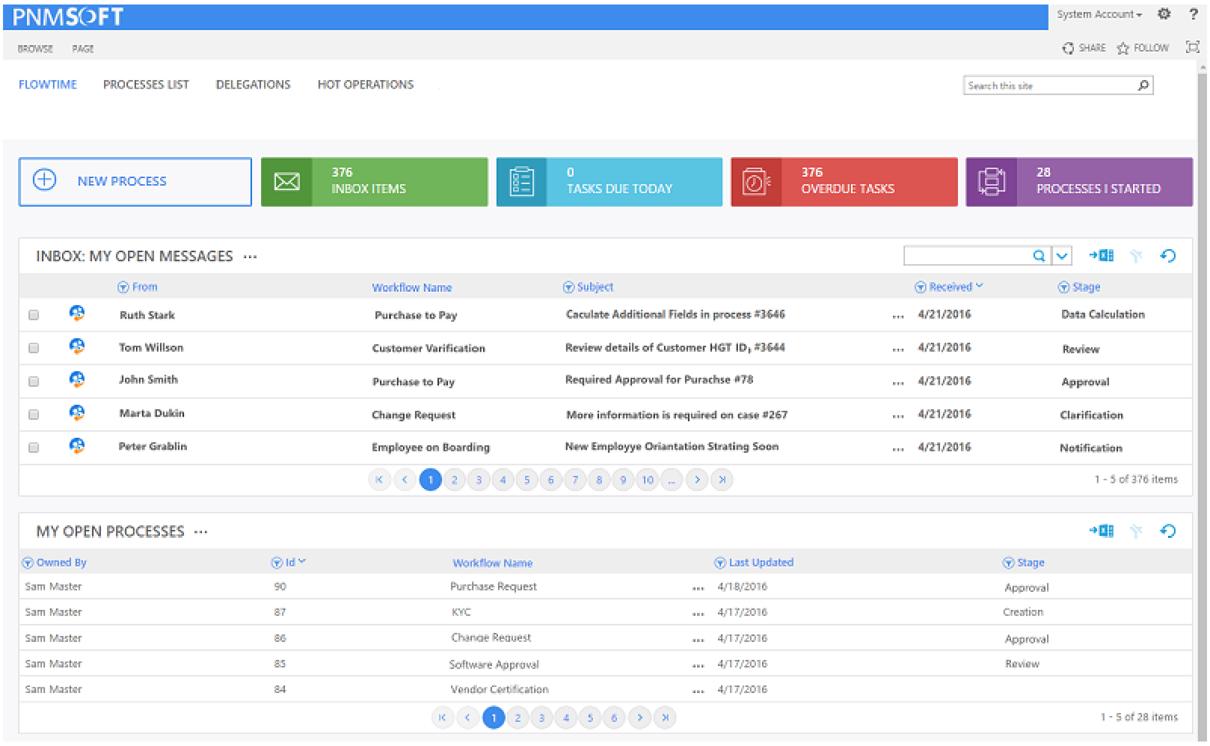
The following diagram illustrates Sequence Case Management architecture:



Case Management Architecture

Case Management Portal

Sequence 8 includes several built-in portals and dashboards for Case Management. Every component can be changed and extended to meet the Case Management solution's needs. These portals enable managers and employees to focus on their tasks while giving them the appropriate tools required to manage their work.



Case Management Portal - Homepage

New Look and Layout

Flowtime (Sequence's runtime environment) has been elevated to a new and refreshed look and feel.

To control the Flowtime site theme, use this key in the web.config file:

```
<appSettings>
   <add key="PNMsoft.Sequence.Flowtime.Theme" value="Sequence8" />
</appSettings>
```

New Version of Kendo UI Controls

Kendo UI controls which are used to display the grids in Flowtime have been upgraded to the latest version.

Form Viewer Web Part

We have enhanced the Form Viewer web part and it is now very easy to expose data from different sources in Flowtime. The developer can build the view in the UX studio, including binding to REST services and/or other systems, and expose the view as a flexible component in the portal.

> ***Note: The Form Viewer web part was available in previous versions of the product but is re-mentioned here, as it is very useful when building a Case Management portal.***

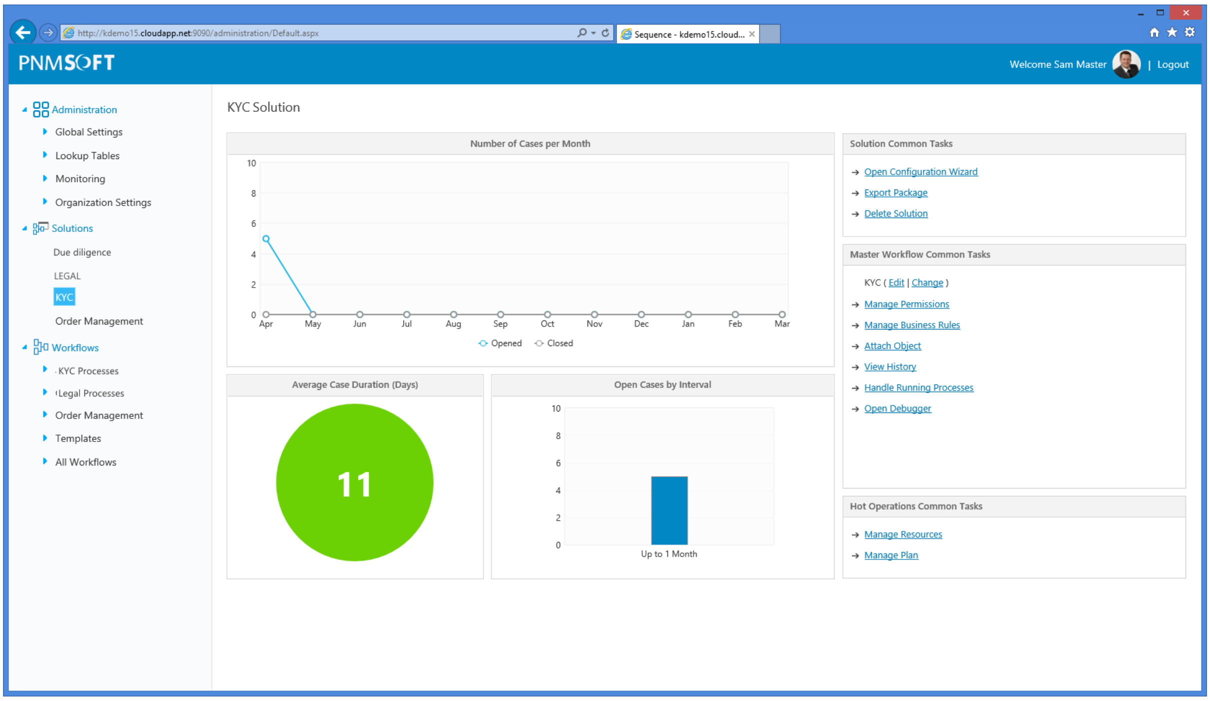
Solutions

In this version we have introduced a new concept called a Solution. A Solution enables the designer to group together all the workflows and artefacts related to a Case.

The Solution is available from the Administration tree and holds a pointer to the Master Workflow (referred to as the Case Template).

There are two types of solutions:

1. **HotOperations Solution** which enables smart, real-time allocation of cases and tasks, as part of the HotOperations product (described in more detail below).
2. **Generic Solution** which is appropriate for basic Case Management applications.



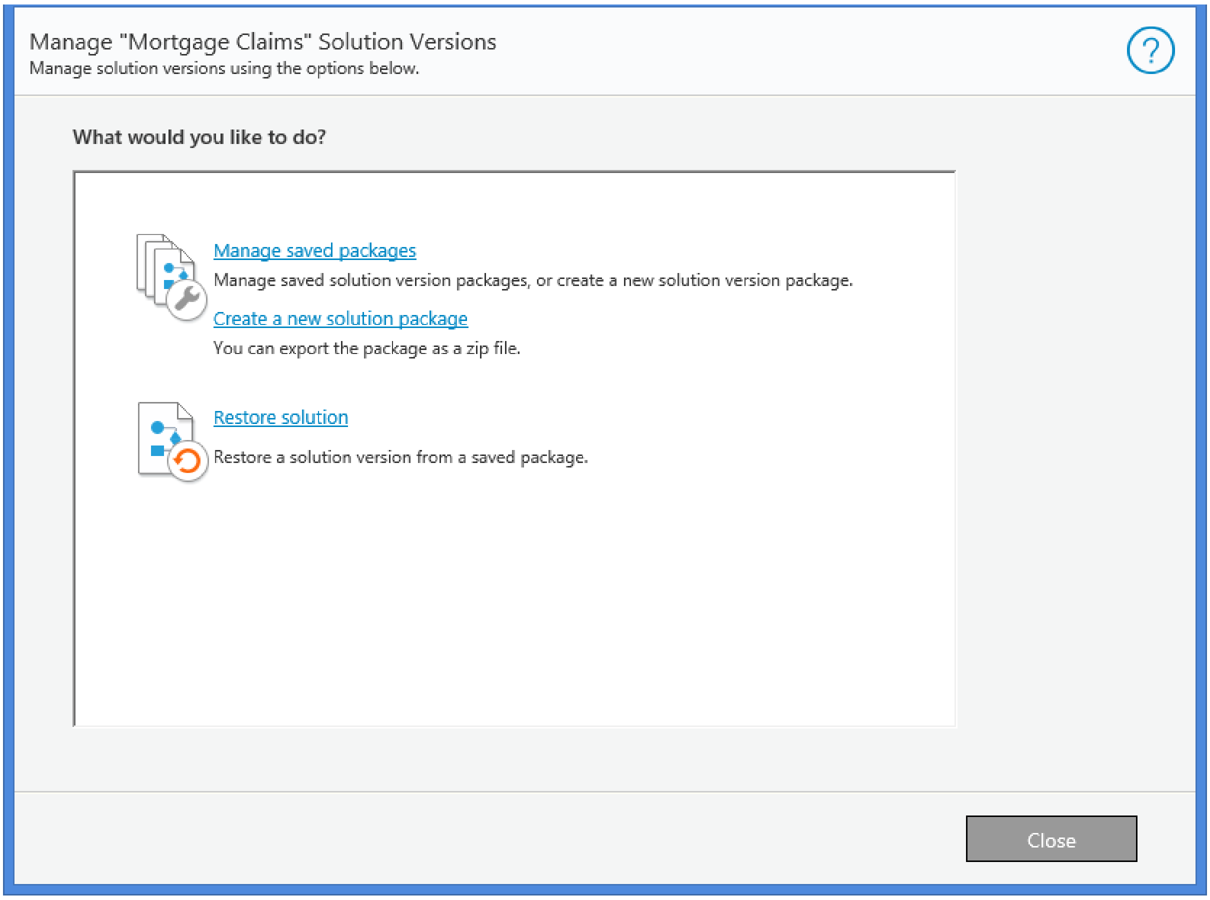
Solution

[Learn more about creating Solutions]

Solution Version Management

Sequence includes powerful version management features for solutions and workflows. Starting from the following screen, you can perform these solution version management actions:

- Manage saved packages
- Create a new solution package
- Download solution packages
- Restore a solution version



Solution Version Management

[Learn more about Solution version management](#)

Master Workflow (Case Template)

The Master Workflow is the root of the Solution and represents the Case Template. From this workflow, the application can be divided into many branches and sub-workflows according to the user's decisions. The system tracks the Case ID (fldMasterIwfId) and stores it in all the relevant tables. This key is used to correlate between the different re-usable workflows. You can use an external key as your Case ID but this will require management within the view level.

Note: The Master Workflow can be defined as the root of one solution only.

Master Workflow Context

The Task and Social features (such as Q&A Comments and Wall) can be opened in the Case context. This enables users to view information in a wider context.

Sub Workflow Enhancements

This version introduces a new property of the sub workflow activity:

Hierarchy Visibility (formerly known as Show in Tree)

This property can have the following values:

- Root Hidden – No indication on sub workflow node. Enables seamless execution of multiple sub-workflows as one integrated case (effects Flowtime only, not the Debugger).
- Hidden – Do not display the sub workflow activities.
- Visible – The sub workflow root is displayed in the tree to indicate that the process has been divided into sub workflows.

A new property was added to the workflow which controls the scope (context) of how tasks of this workflow will be opened: **Scope**.

Scope controls whether to open tasks in the context of the Master Workflow (Case) or as a standalone task. When selecting the MasterWorkflow option, the tasks and messages will open in the context of the Master Workflow.

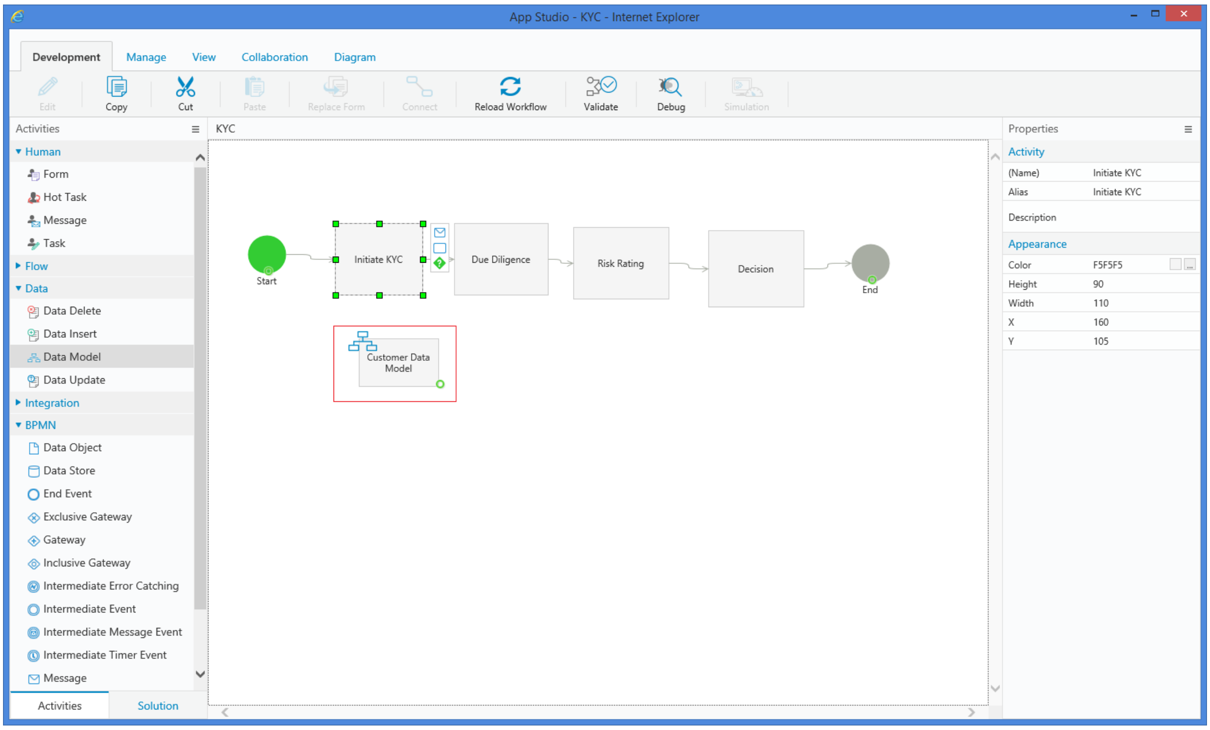
Shared Data Model

It is now very easy to create and share a Data Model between workflows which are related to the same Case Template.

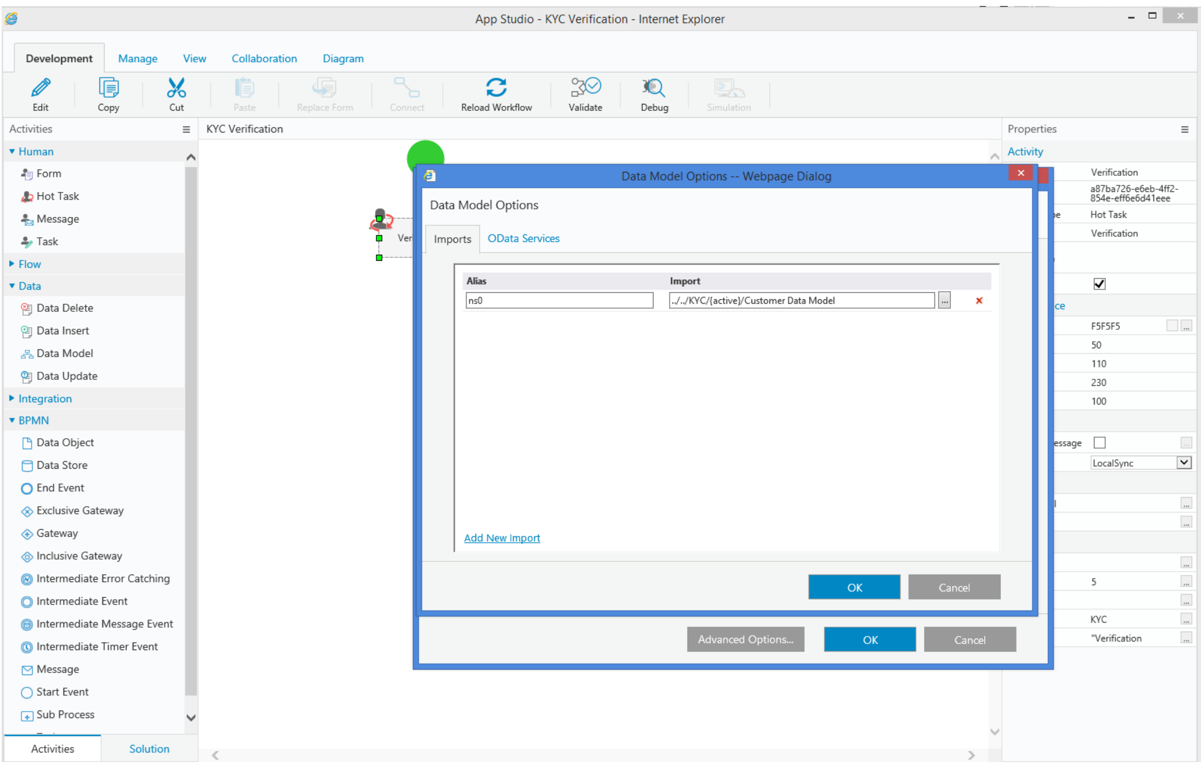
A new activity was introduced in the App Studio: **Data Model activity**. This activity enables the developer to define a rich Data Model including queries and associations, which is independent of the UI definition. The Data Model can be used in any Form/Task activity related to the Case using the Import Data Model option.

Once the Data Model has been imported, the developer can use the imported queries in our friendly WYSIWYG UX Studio. The result will be a complex and intuitive view of the Case and Case details, for example Case summary, Case history and more.

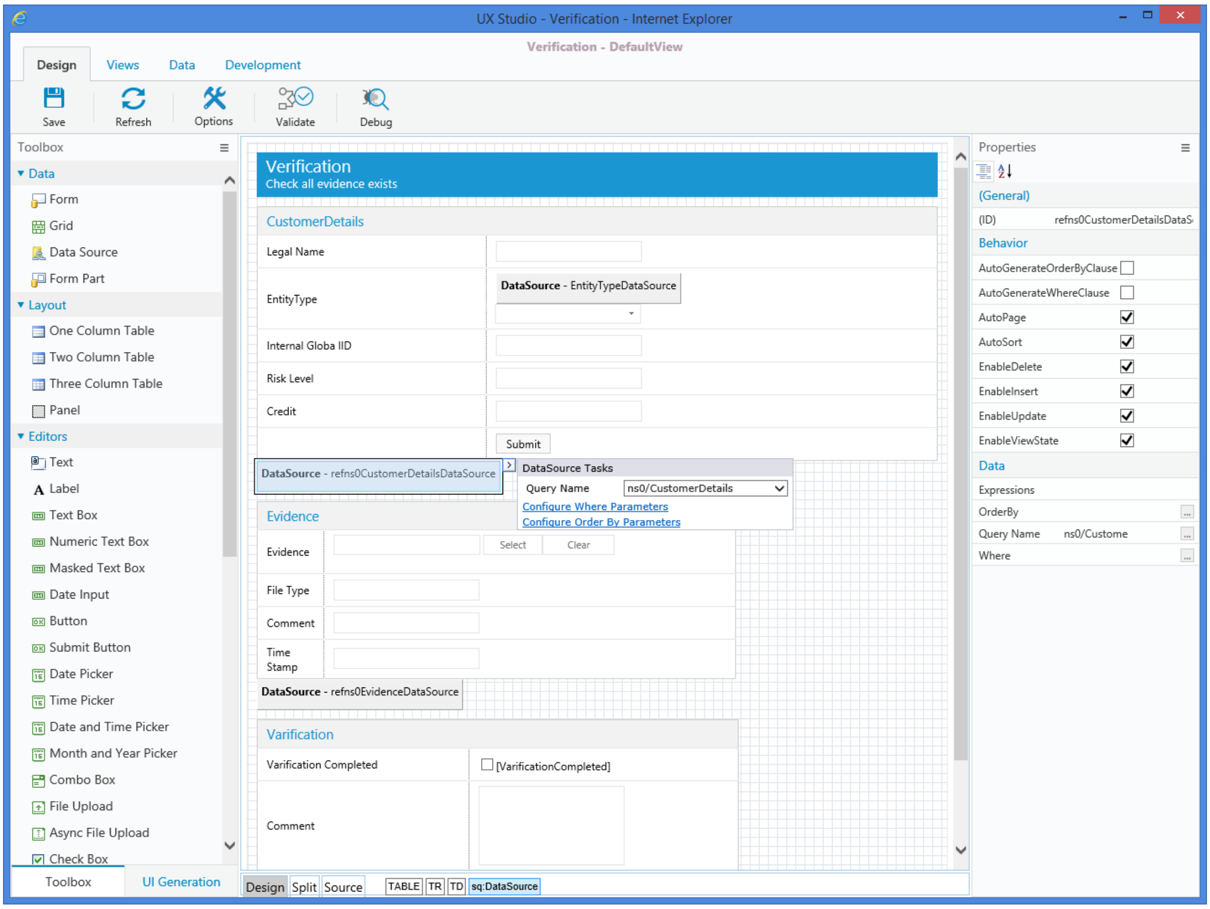
To easily share Case details between tasks in different workflows in the solution, use the Case ID (fldMasteriwfid) as the query key or any external Case ID such as Global ID.



App Studio – Data Model Activity



Import Data Model



UX Studio – A Form Based on the Data Model

[Learn more about the Data Model activity](#)

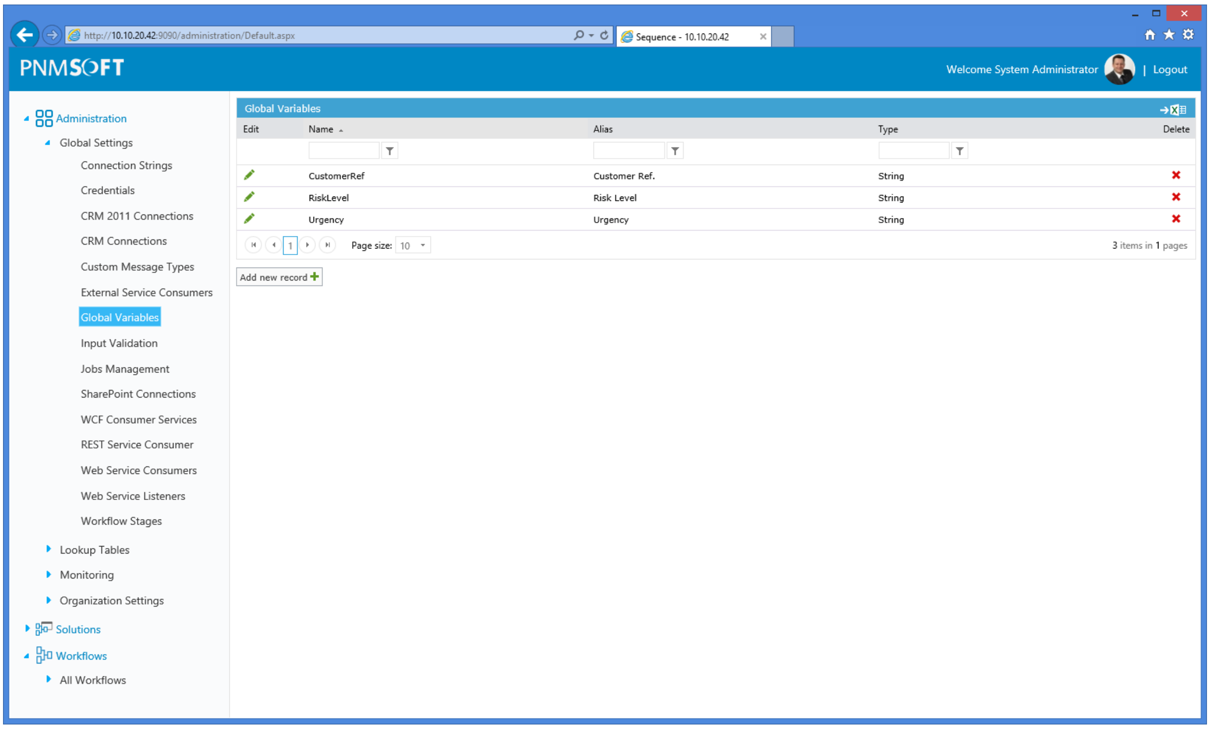
Shared Variables

Variables are a powerful feature which enable you to expose data to the end user easily and manage dynamic flow using gateway conditions. We have enhanced the variables to include a Global Section and a Local Section. The global variables are managed from one central location and can be consumed by any workflow.

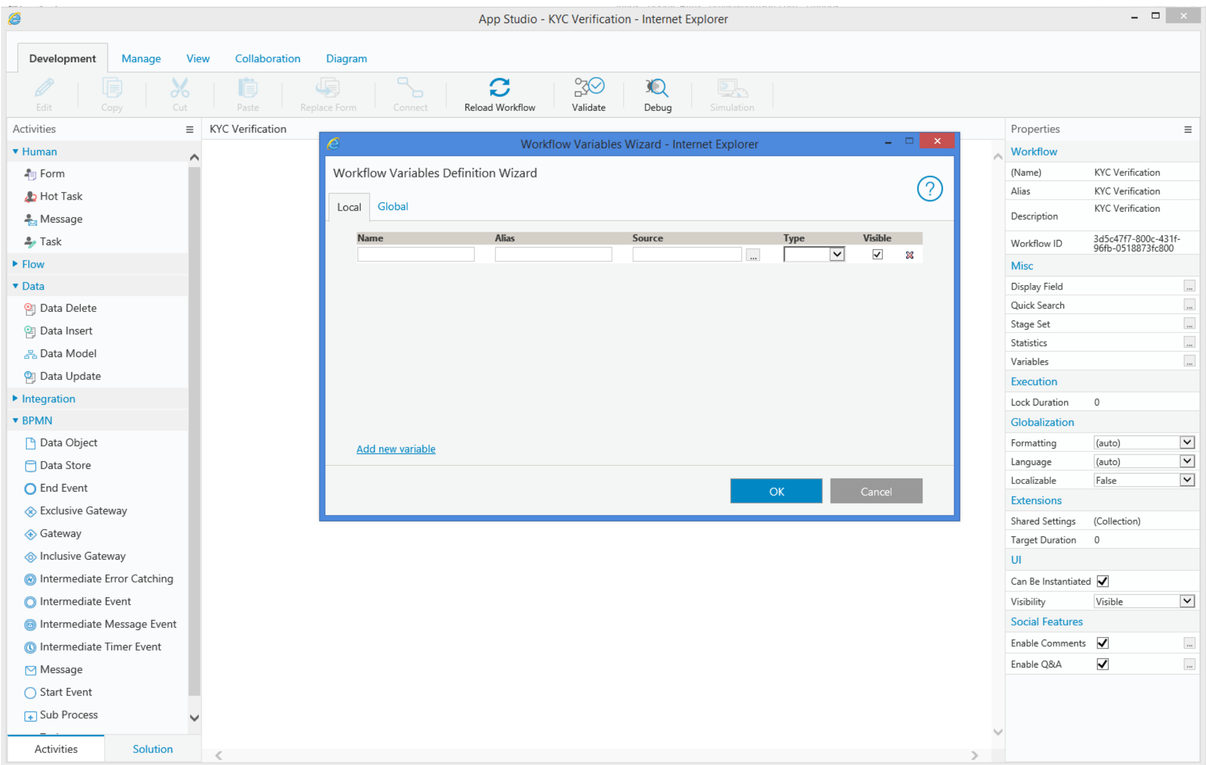
Each workflow in the Case can update the global variables using the Built-in Command Activity, enabling an up-to-date view of the Case details.

The developer defines the important details of the Case as the global variables of the Solution. This provides the end user with enhanced list management features such as sort, filter and more, on the Case and Sub-cases list.

Variables also enable the developer to manage the execution path of a case and determine on-the-fly which sub-workflows can be executed on the Case and which cannot.



Global Variables

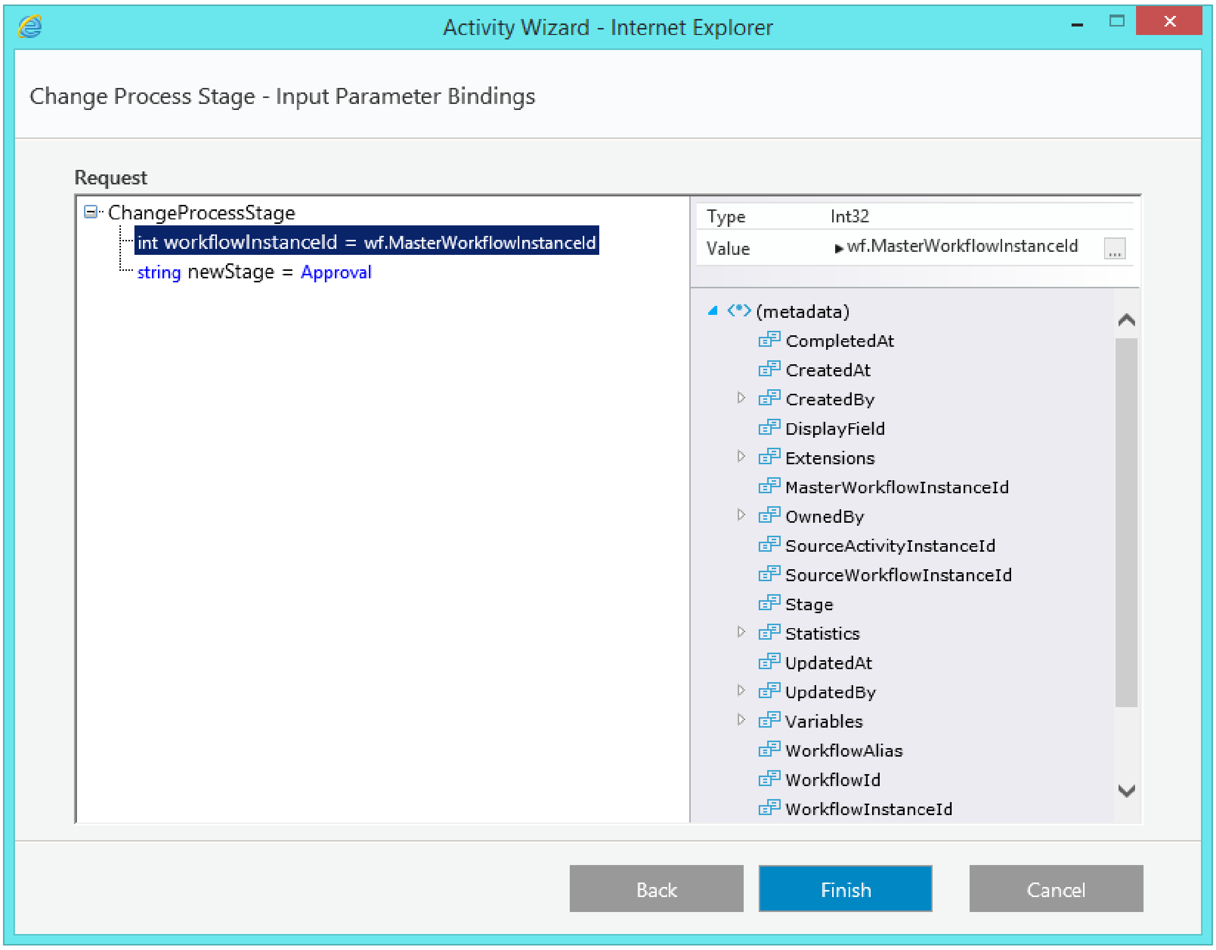


Local Variables

[Learn more about adding Variables]

Set Stage of Master Workflow

You can easily set the stage of the Master Workflow from any of the sub workflows, using the Built-in Command activity. This is useful in Case Management, to update the stage of the case from any sub process. Simply select the **Change Process Stage** command, and set workflowInstanceId = wf.MasterWorkflowInstanceId.



Set Stage of Master Workflow

HotOperations

HotOperations™ is a PNMsoft product which enables you to achieve enterprise-level Case Management and Work Optimization. HotOperations is based on Sequence BPM suite, and it includes several additional features and modules which help organizations with large operations centers manage work optimally. HotOperations requires an additional license, and must be selected as a component during Sequence 8.x installation.

HotOperations enables operations managers to allocate work optimally. It includes tools which enable real-time allocation, along with information on the impact of each allocation. This helps operations managers decide where to allocate each piece of work in order to optimize the outcome.

HotOperations facilitates optimal allocation as follows:

- Automatically allocating the bulk of work to optimize the outcome.
- Displaying the impact of manual allocations to operation managers and team leaders.

Who is Involved in HotOperations?

HotOperations involves several people within an operation. The major roles are:

- **Operations Manager:** allocates cases between several teams.
- **Team Leader:** assigns tasks to members of his/her team.
- **Team Members:** individual members of a team who perform work.

Read our Getting Started with HotOperations guide

HotOperations Solution

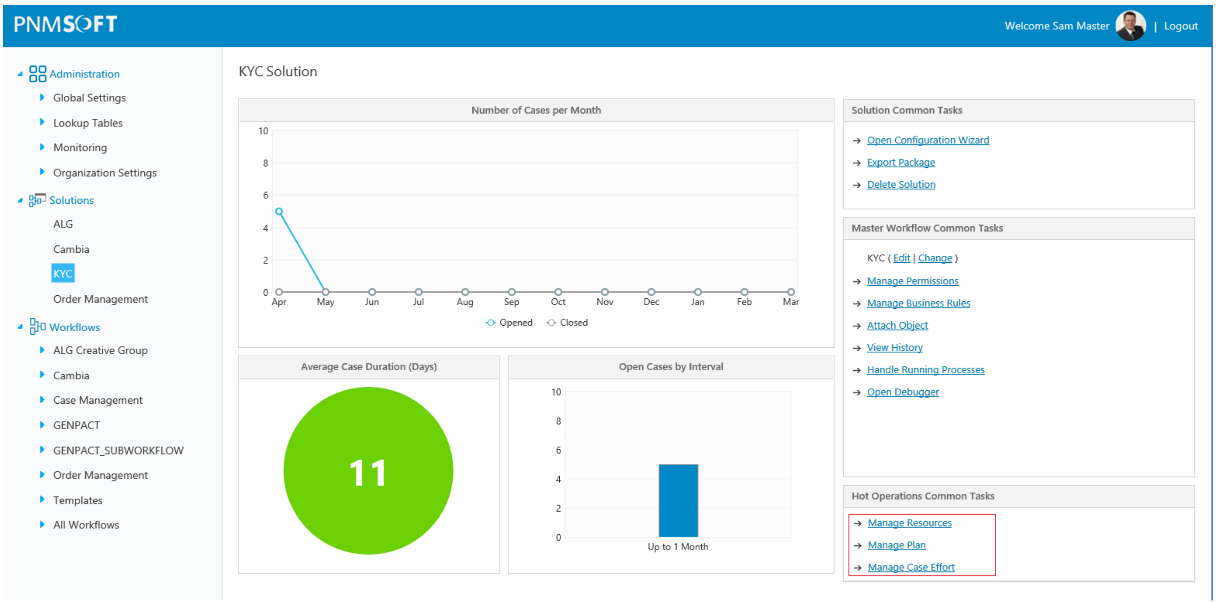
A HotOperations Solution is a special type of solution that includes additional elements. As mentioned in our Solutions overview above, a solution enables you to group together all the workflows and artefacts related to a Case. A solution can include:

- A Master Workflow (all solutions have one)
- Sub workflows
- Shared Data Model
- Shared Variables

A HotOperations Solution includes the following additional elements:

- **Resource Management:** A reference to a group in the organization structure. This is the group that can be allocated cases and tasks of this solution. Sub-groups of this group can also be allocated cases and tasks.
- **Smart Allocation Plan:** A set of rules for automatic work allocation. See the next section for more details.
- **Case Effort:** The effort it should take (in working hours) to complete each case.

These elements enable Operations Managers and Team Leaders to allocate work optimally in their HotOperations portal.

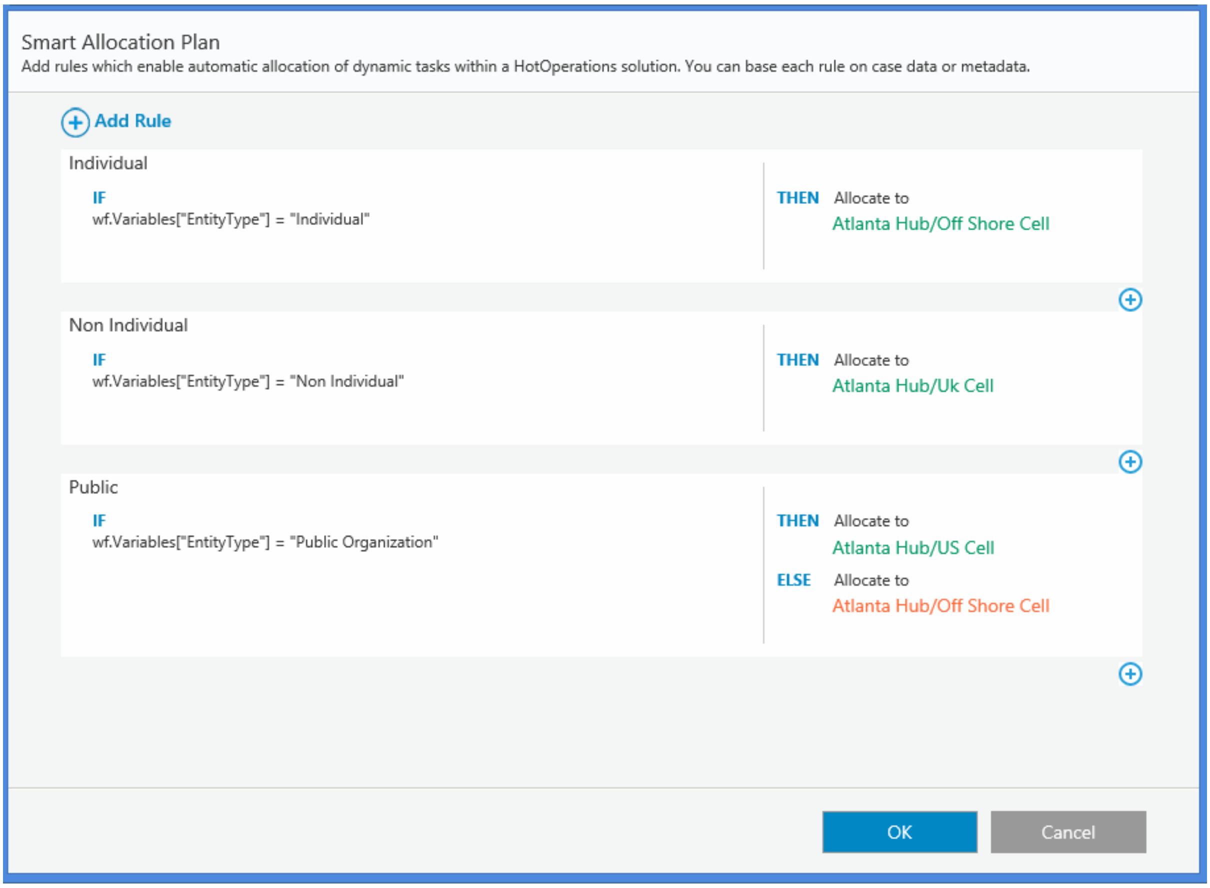


HotOperations Solution

Smart Allocation Plan

Case workers can manually allocate cases and case-related tasks to teams. Alternatively, Cases can be allocated and assigned by the system in a more structured manner by using a Plan.

A Plan is a set of rules which determine how the system will allocate Cases automatically to different groups based on case data.

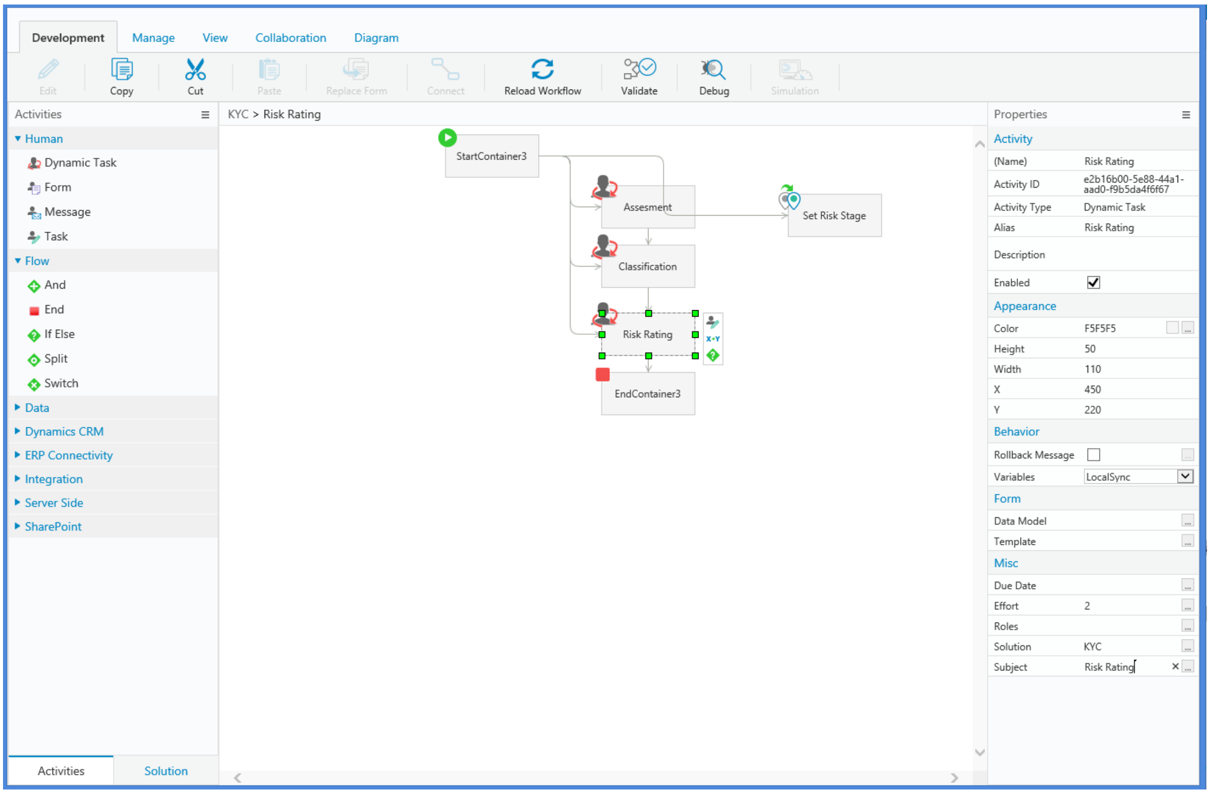


Smart Allocation Plan

Dynamic Tasks

A Dynamic Task is a new Task type which enables Smart Allocation and flexible assignment of work. The Task includes a form which users can complete. It also includes a set of additional properties, including:

- **Effort** – The effort in working hours it takes to complete this task (an integer value).
- **Due Date** – The date when the task should be ready.
- **Roles** – The roles which are authorized to perform this task. This will affect the task assignment during case execution.
- **Subject** – Enables the developer to expose more details about the case.



Dynamic Tasks in a Case Solution

[Learn more about Dynamic Tasks](#)

[Learn more about Creating a HotOperations Solution](#)

HotOperations Portals

HotOperations includes three additional portals within Flowtime for each role in the operation:

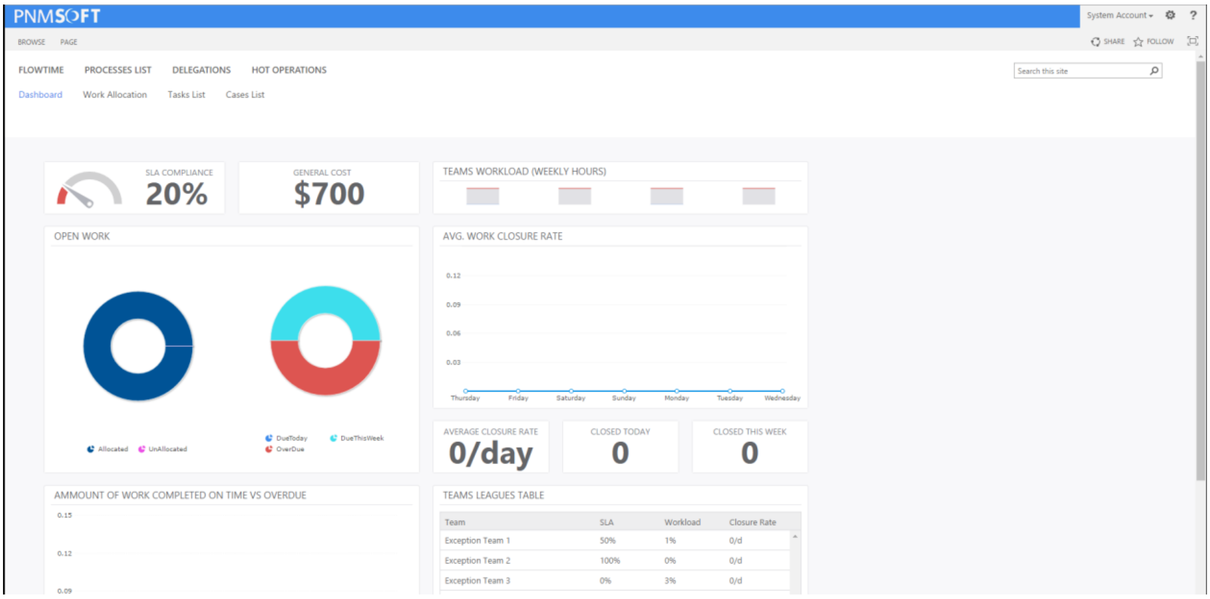
- Operations Manager
- Team Leader
- Team Member

These portals enable teams to manage high volumes of work and allocate work optimally between teams and users.

Note: HotOperations Flowtime components do not support SharePoint 2010.

Installations that include HotOperations have an additional HOT OPERATIONS link in the Flowtime top menu, which leads to the HotOperations portal.

The user is navigated to the correct portal based on his role in the operation.



Operations Manager Portal

Operations Manager Portal

The Operations Manager portal includes the following dashboards:

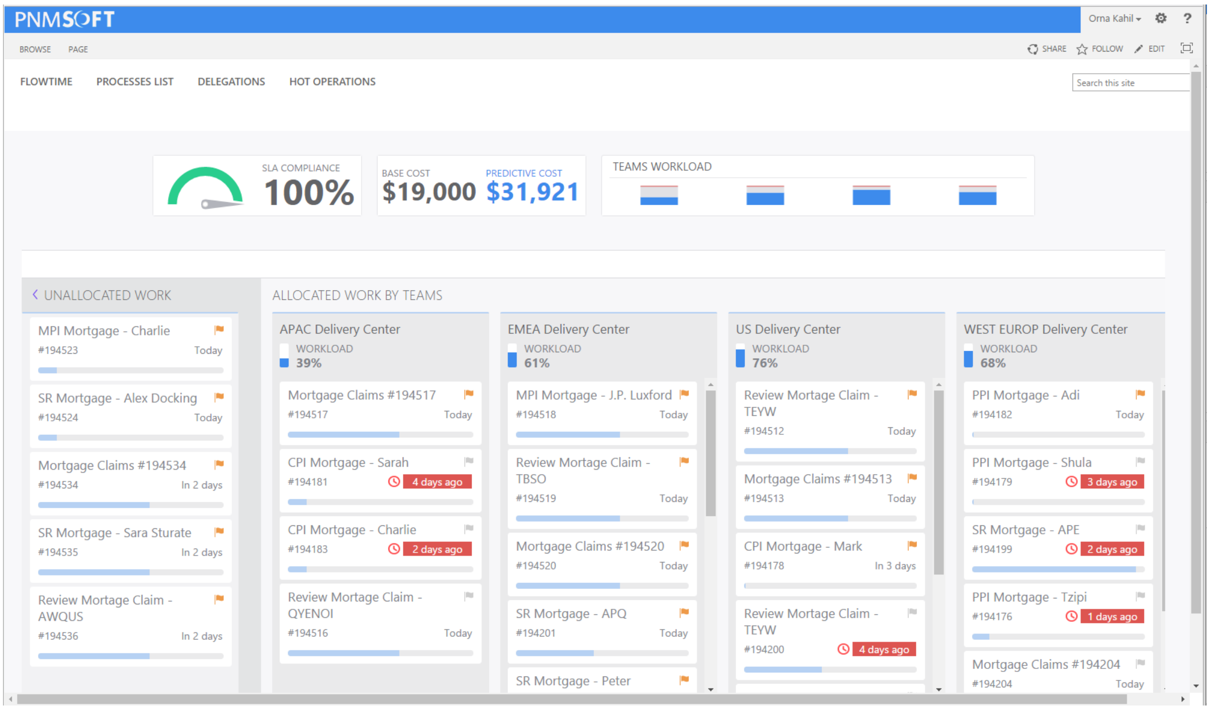
Operations Manager Dashboard

This dashboard is a set of visual charts that provide the Operations Manager with a clear view of the operation's current status.

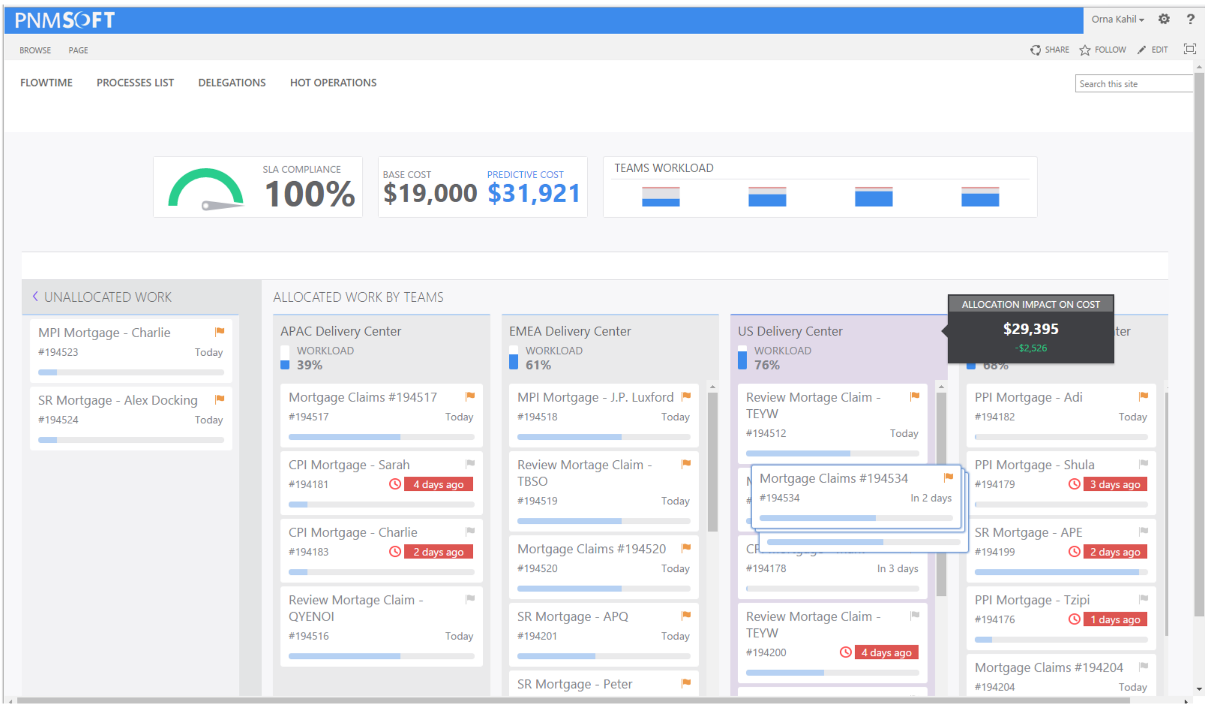
Work Allocation Board

This version includes a powerful new module – the Work Allocation Board. This board enables Operations Managers to allocate cases to teams and individual users in real-time. The board includes predictive analytics, which provide the manager with details about the impact of different allocations. It shows each team's workload (utilization), and the total cost and SLA compliance of the operation.

In this manner, the Operations Manager can make informed decisions on how to allocate case work between teams and people, in order to reduce cost of work and improve business outcome.



Case Allocation Dashboard

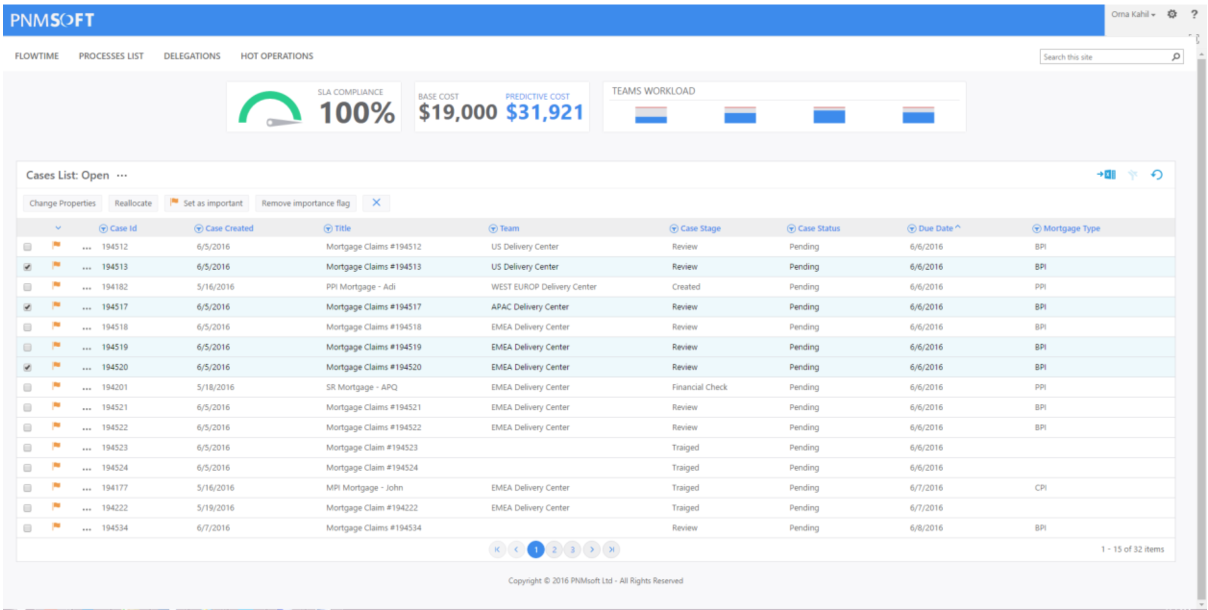


Allocation board - Allocation Impact on Cost

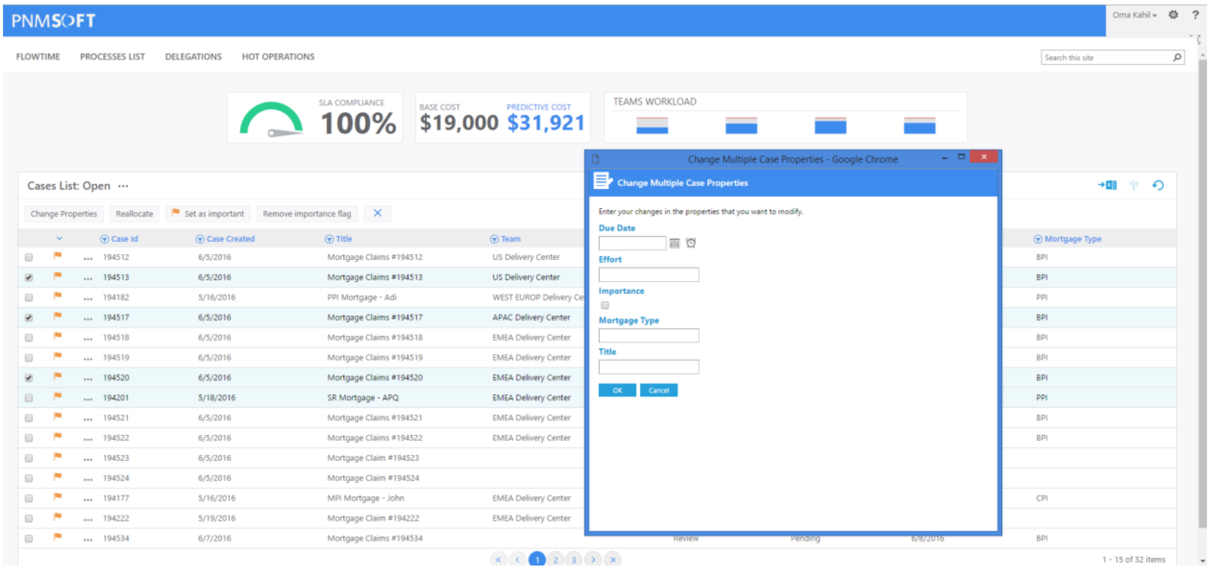
Cases List

To enable easy management of Active and Inactive Cases, we have introduced the Cases List web part. This web part enables the end user to:

- See all the cases with their unique properties. You can sort the list by Multiple Columns (e.g. Stage and Due Date).
- Edit the case properties for single or multiple cases using a friendly form.
- Set cases as important.
- Reallocate cases to different teams.



Cases List Web Part

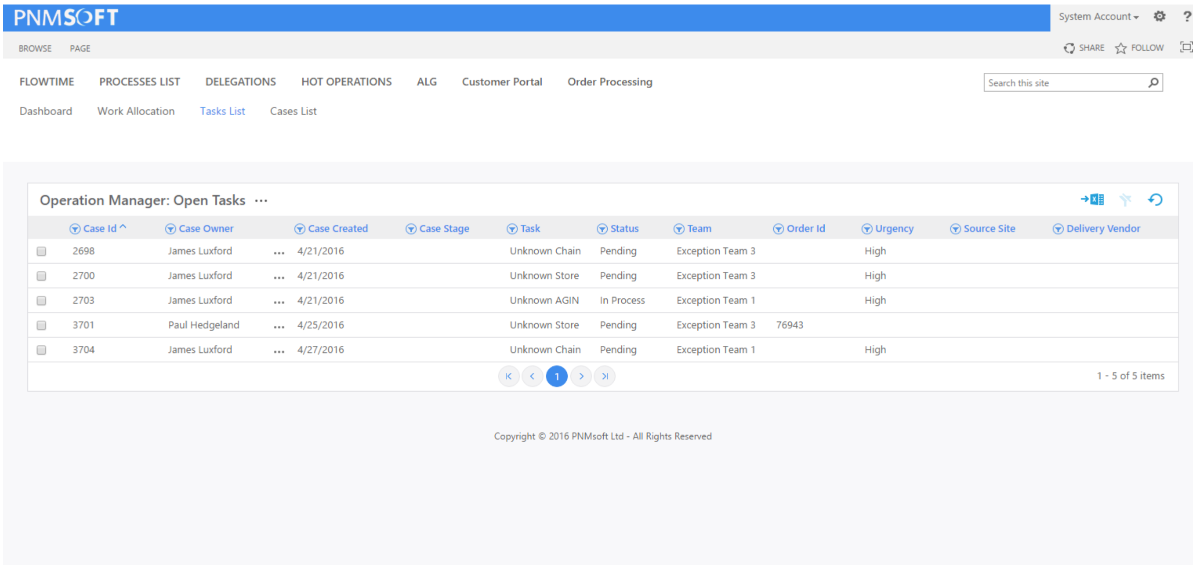


Change Multiple Case Properties

This edit form displays the variables which are defined for the Master Workflow (see the Master Workflow (Case Template) section).

Tasks List

The Tasks List web part includes a list of Dynamic Tasks for a Solution. The Operations Manager can allocate one or more tasks to teams in the operation. The grid provides managers with an easy and powerful method of sorting and filtering the data when managing a high volume of tasks.



Operations Manager Tasks List

Note: The Operations Manager must be placed in the root of the operation's organization branch.

Team Leader Portal

The Team Leader portal includes the following dashboards:

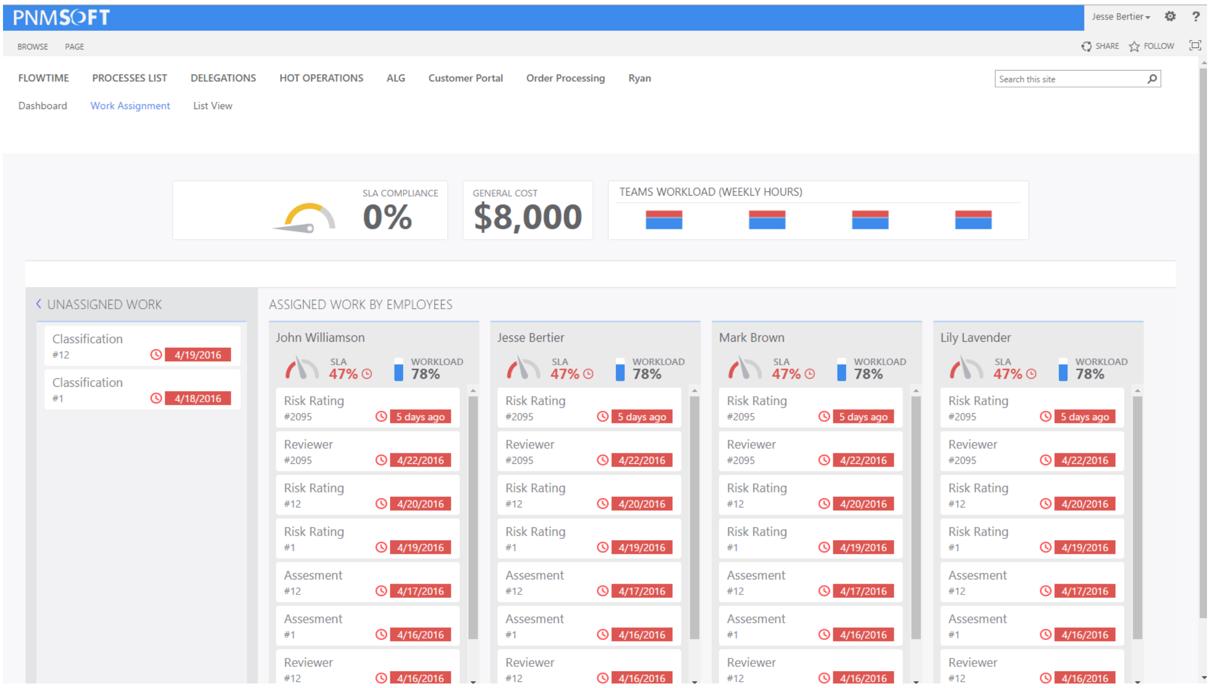
Team Leader Dashboard

This dashboard is a set of visual charts that provide the Team Leader with a clear view of his team's performance.

Task Assignment Board

This version includes a powerful new module – the Task Assignment Board. This board enables the Team Leader to assign tasks to teams and individual users in real-time. The dashboard includes predictive analytics, which provide the Team Leader with details about the impact of assignments.

In this way, Team Leaders can make informed decisions on how to assign case work between people, in order to improve business outcome.

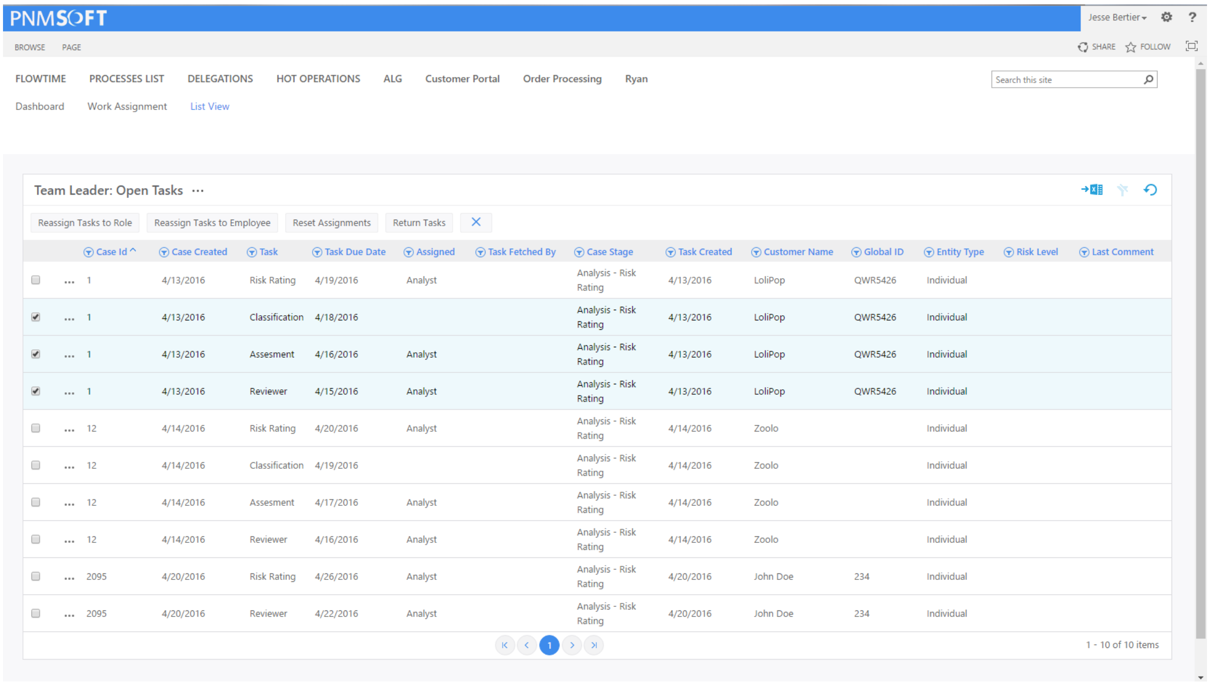


Task Assignment Board

Tasks List

The Tasks Grid web part includes a list of dynamic tasks for a Solution for which are allocated to a team. (If the Team Leader has many teams, the board will show his first team.)

The Team Leader can assign one or more tasks to team members by role or member name. The Team Leader can also return work to the queue that was previously fetched by team members. The grid provides the Team Leader with an easy and powerful way to sort and filter the data when managing a high volume of tasks.



Team Leader Task List

Team Member Portal

Team members can view and action their operation tasks in the Team Member portal. Team members can fetch and open any task and action it based on the form attached to it.

> ***Note: HotOperations tasks are listed separately in a dedicated grid.***

[Learn more about using HotOperations Portals]()

Responsive Forms

Sequence 8 introduces a new framework for designing and rendering responsive forms.

Within minutes you can build powerful, friendly forms which display very well on any device, i.e. Desktop, Mobile, Tablet.

This framework enables you to craft forms that provide an optimal viewing and interaction experience—easy reading and navigation with a minimum of resizing, panning, and scrolling, across a wide range of devices (from desktop computer monitors to mobile phones).

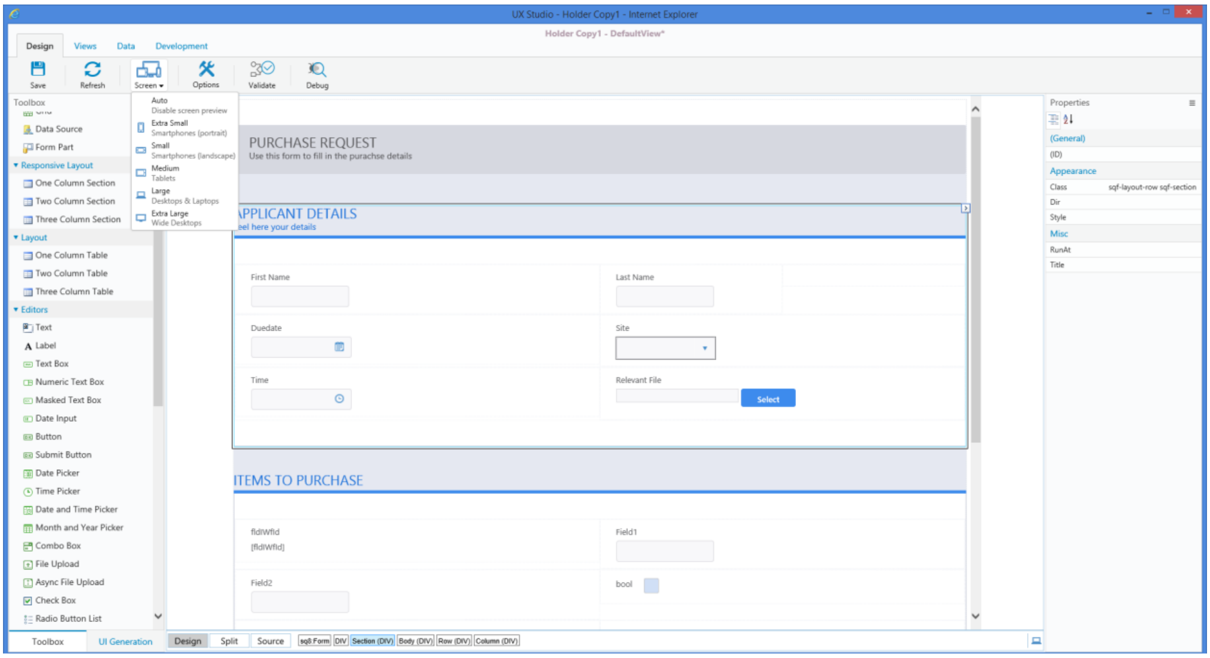
Layout

The new forms layout is composed from Divs and classes. The main Div is the Layout. Inside the Layout there are sections and placeholders.

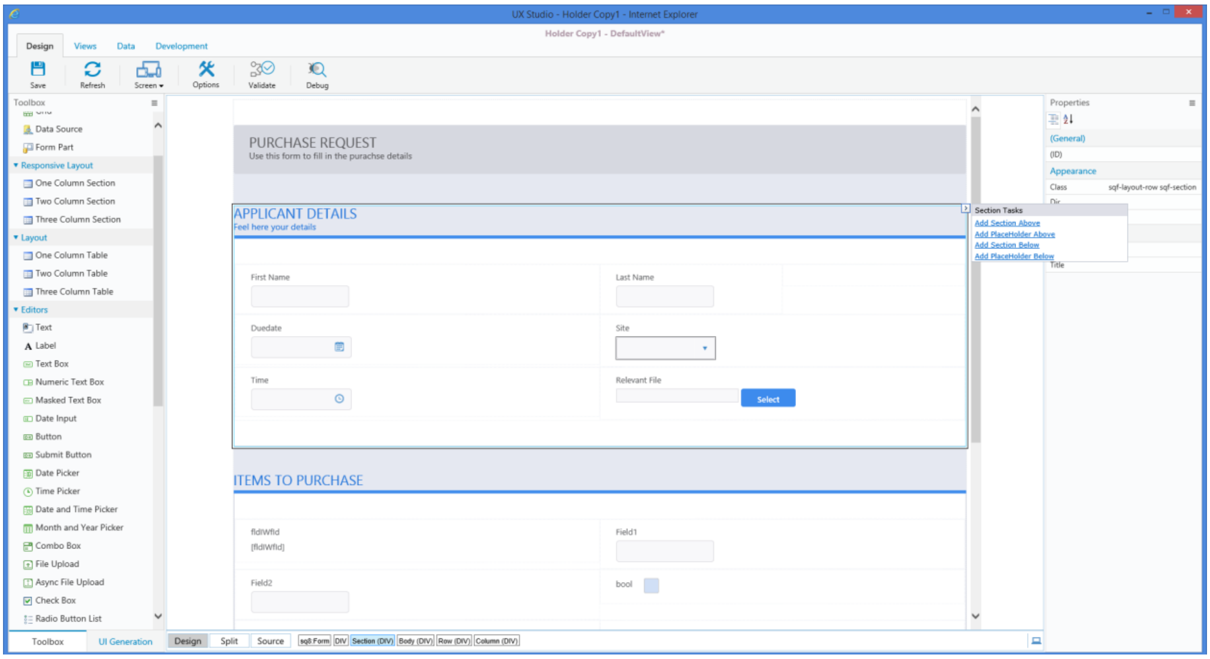
Responsive Form Layout

UX Developer Experience

Developers can create responsive forms very easily using a WYSIWYG designer. Actions such as adding sections, rows or columns are available from the easy menu. You can also easily split columns or move items up and down the form.



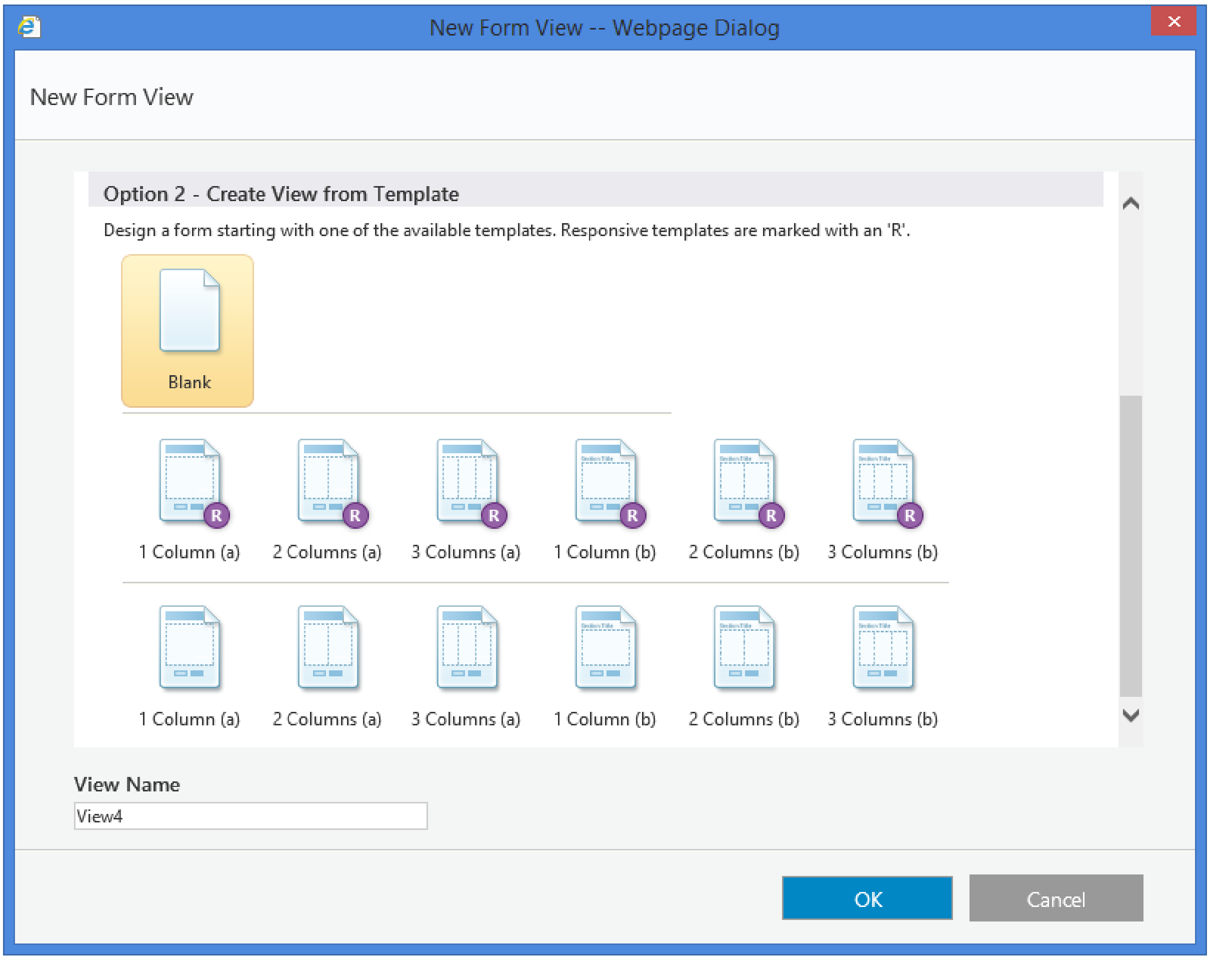
WYSIWYG in Different Screen Resolutions



Easy Menu Helps You Create and Edit the Form Quickly

UI Generation and Templates

Sequence 8 introduces templates which help you get started with the responsive forms. You can pick a template when creating a new View/Form. The UI Generation has also been adjusted to provide responsive markup with a click.

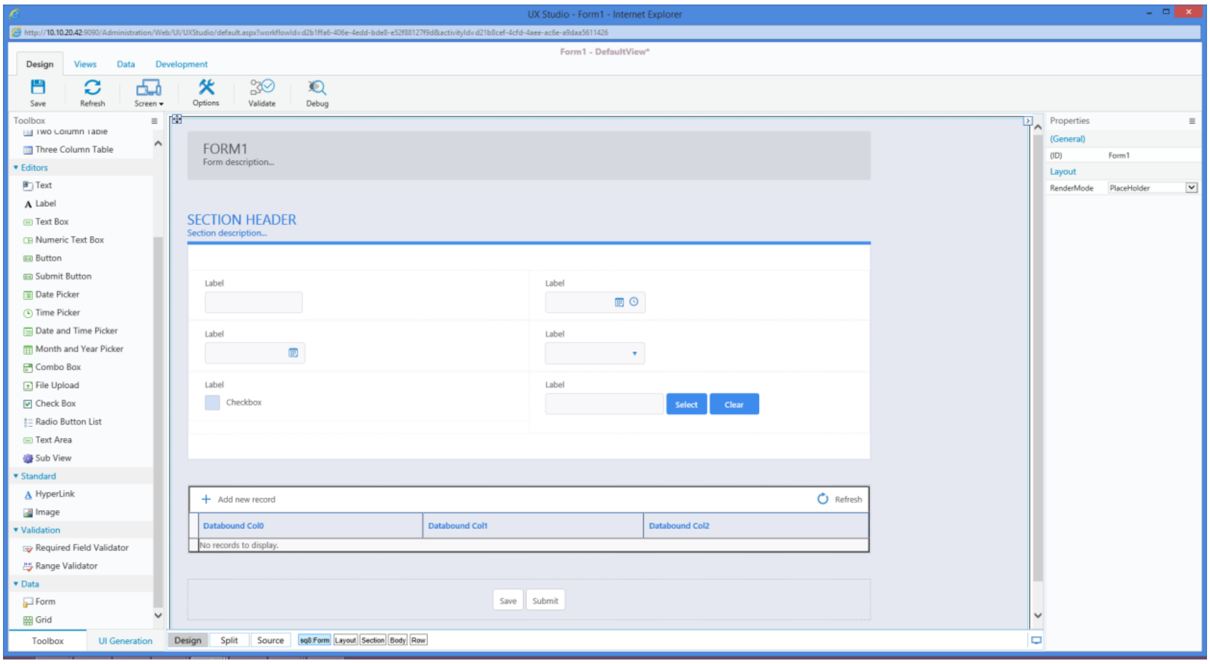


Responsive Templates (Marked with 'R')

[Learn more about Responsive Forms]

Controls New Skin

We have added an attractive skin to the controls that will complete the beautiful theme.



Controls New Skin

The following keys control the theme and skin of the environment:

```
<add key="PNMsoft.Sequence.Forms.Web.v8.UI.FormControl.Theme" value="Zinc" />
```

```
<add key="PNMsoft.Sequence.Forms.Web.v8.UI.FormControl.Theme.Controls.Skin"
value="Sequence8" />
```

Organization Management

Sequence enables you to manage employees, groups, and roles in your organization. The Organization Management page includes a tree, representing your organizational structure. You can use this tree to assign roles to users and set group properties. You can also manage group hierarchy using drag and drop.

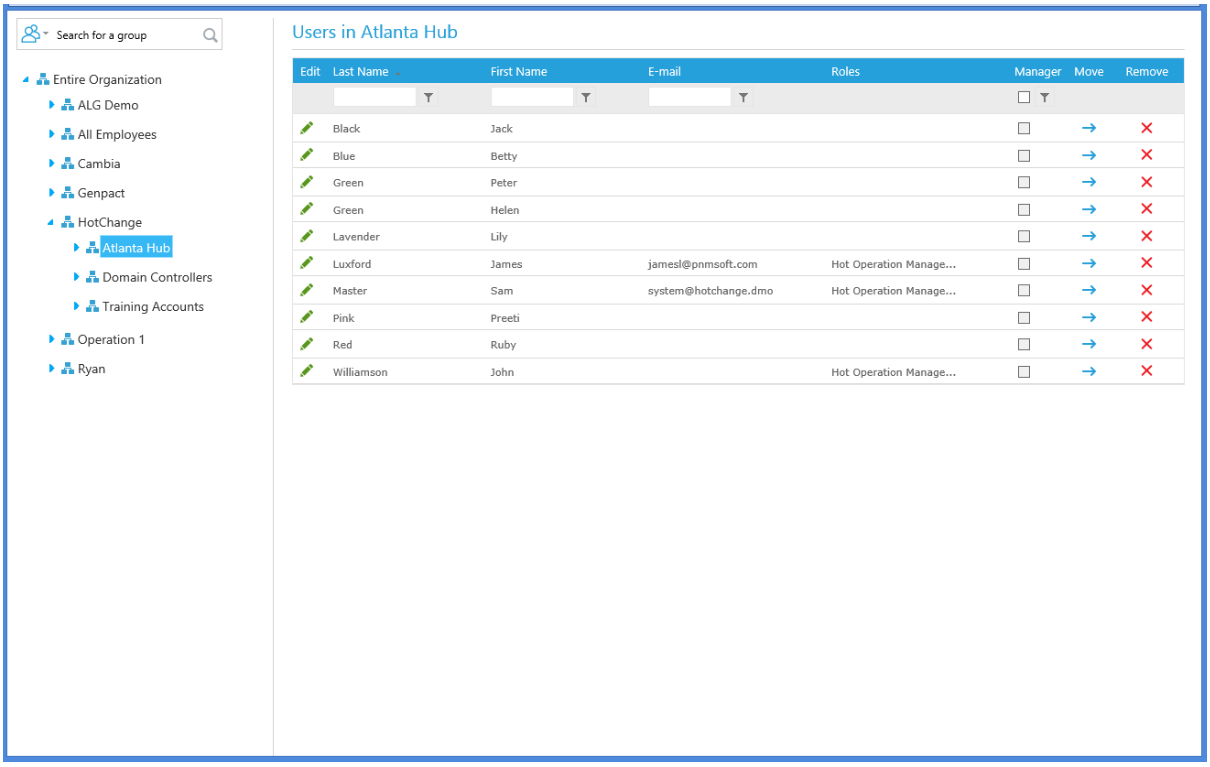
> ***Note: It is highly advisable to import users from your Active Directory and manage users and groups from one location.***

New Look and Feel

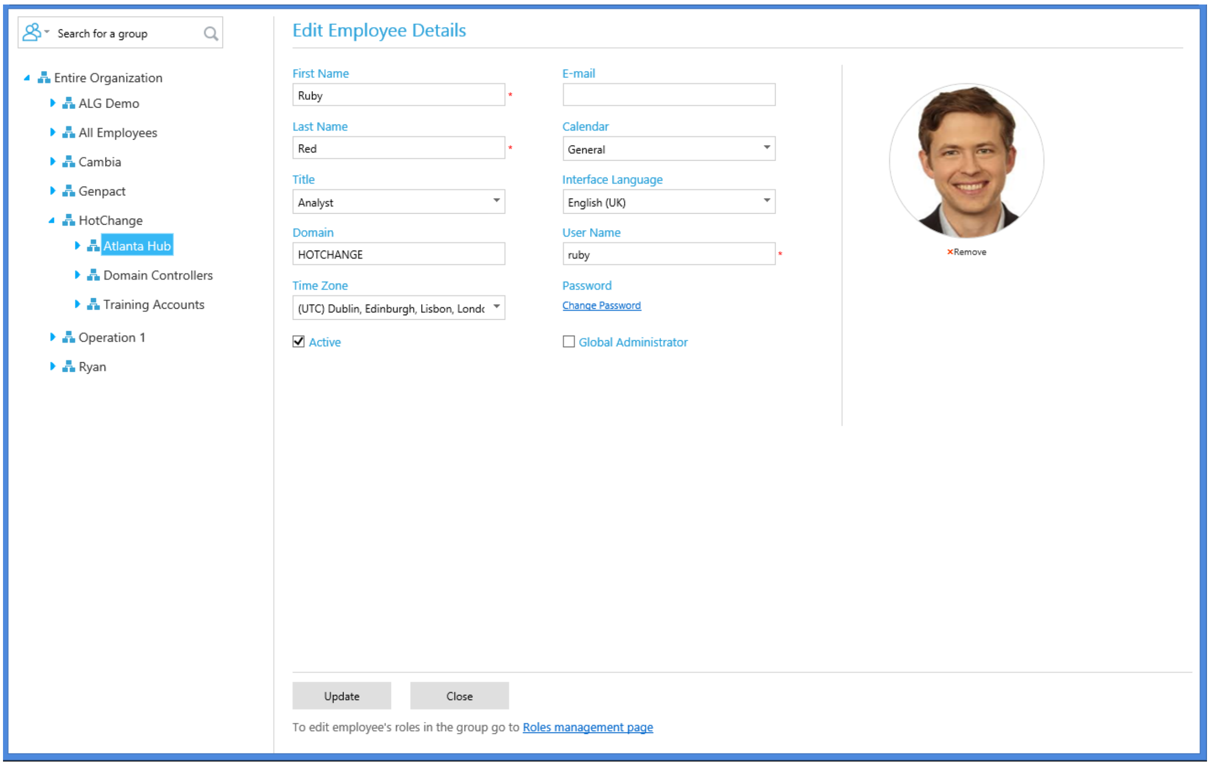
In this version we have changed the look and feel of the organization management module. We have also updated the actions that can be performed on an organization.

You can find new menus and actions from the Organization tree.

You can change the hierarchy of groups that were not imported from the Active Directory by dragging and dropping tree nodes.



Employees in Group



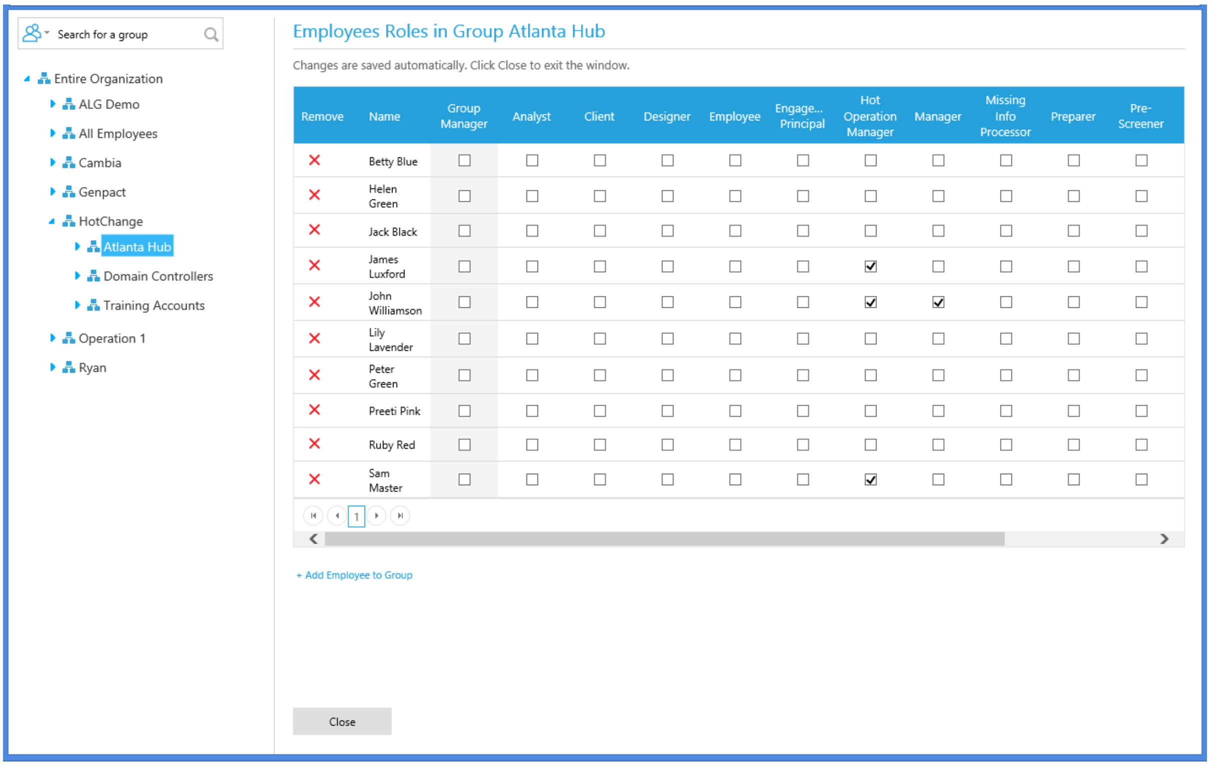
Edit User Details

Note: Groups and employee membership which were imported from the Active Directory cannot be managed from Sequence, as changes will be overwritten upon the next ADSS execution.

Multi-Roles per User in Group

Each employee in the group can be assigned one or more roles. This enables you to manage an employee's skills based on his group membership.

Right-click a group and select **Manage Employee Roles**. The *Employee Roles in Group* screen appears, enabling you to edit roles for employees in the group.



Manage Employee Roles

System Roles

There are several built-in System roles:

- Group Manager
- HotOperations Manager (for HotOperations Solutions)
- Team Leader (for HotOperations Solutions)
- Employee

You cannot delete these roles or edit their role name, but you can edit the alias (how the name will appear in Flowtime). You can assign these roles to one or more employees in a group.

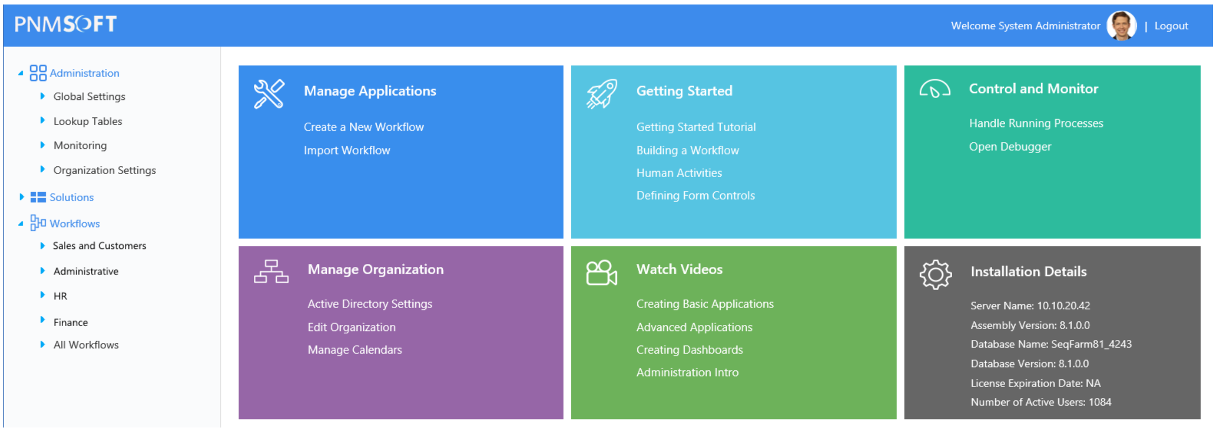
> ***Note: HotOperations Portal elements and action privileges are correlated directly with the HotOperations Manager and Team Leader Roles.***

Learn more about Managing your Organization

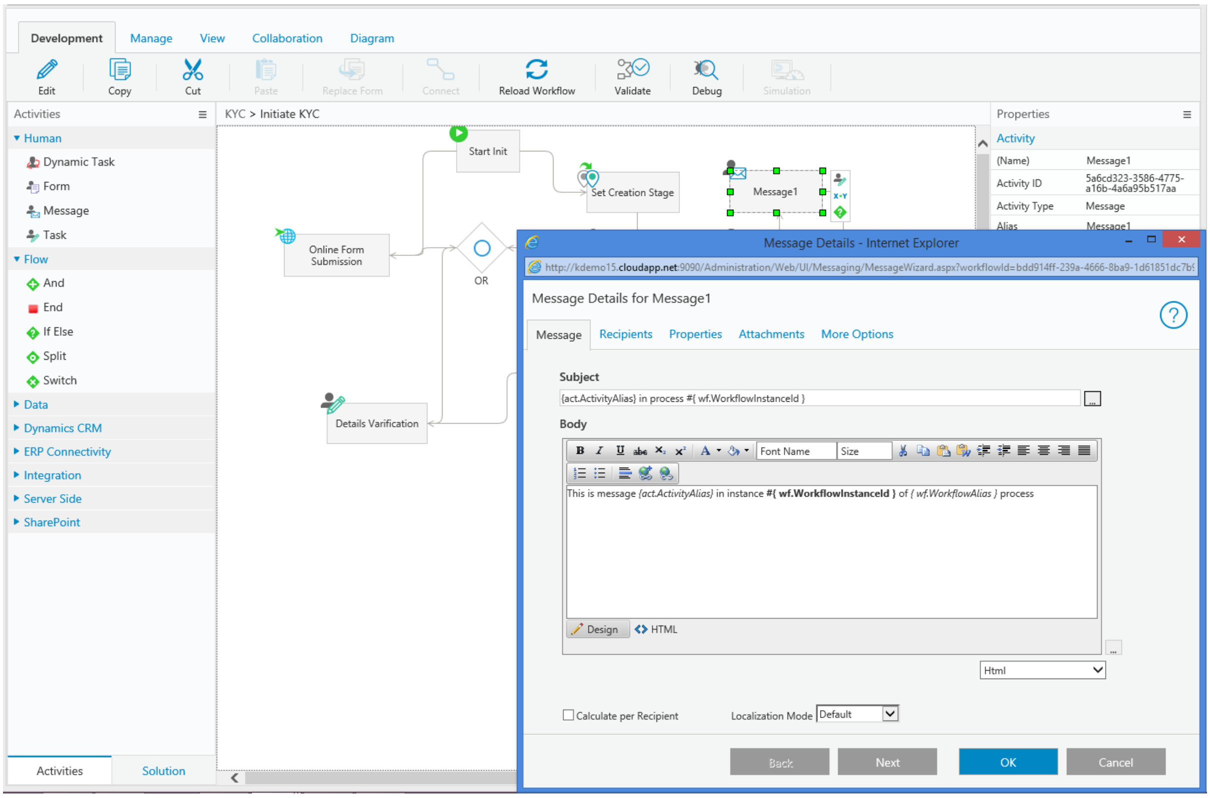
Administration

New Look and feel

Sequence's Administration and App Studio have been repainted to give the system a new and fresh look.



Administration Homepage



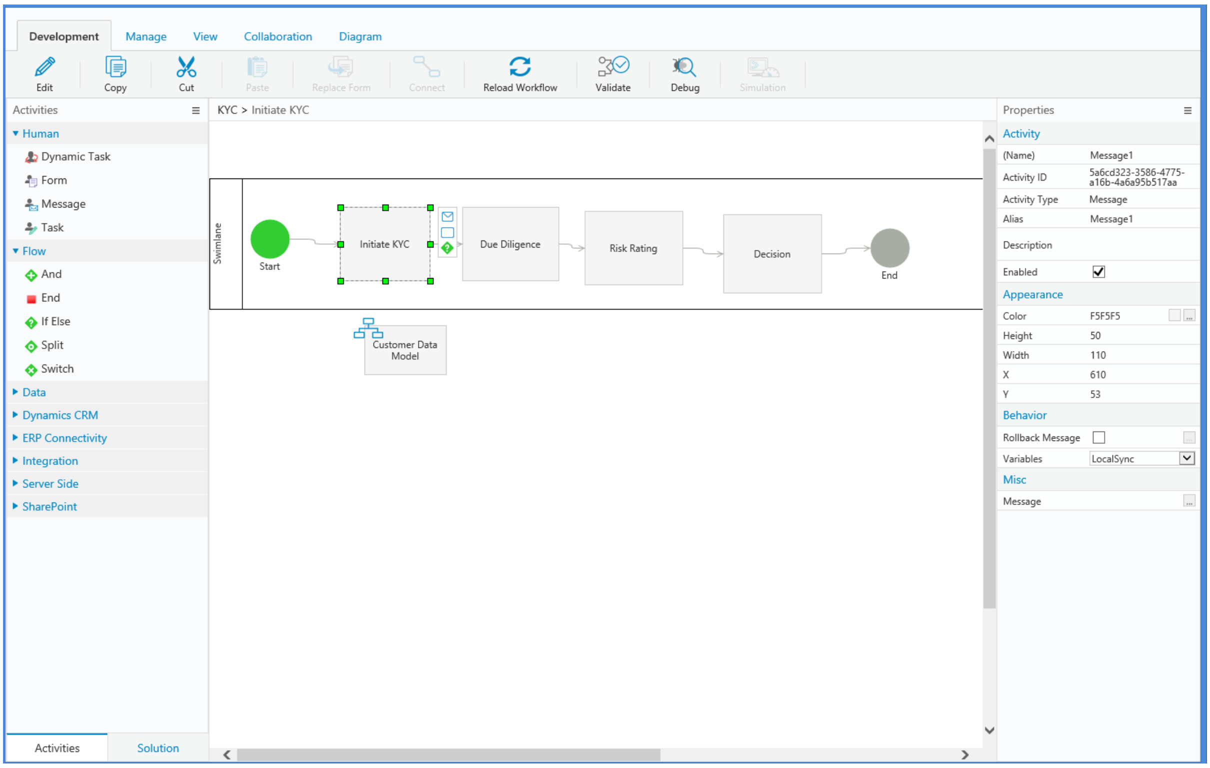
App Studio Canvas and Wizard with the New Look

New Modelling Capabilities

We have introduced two great modelling enhancements to the App Studio.

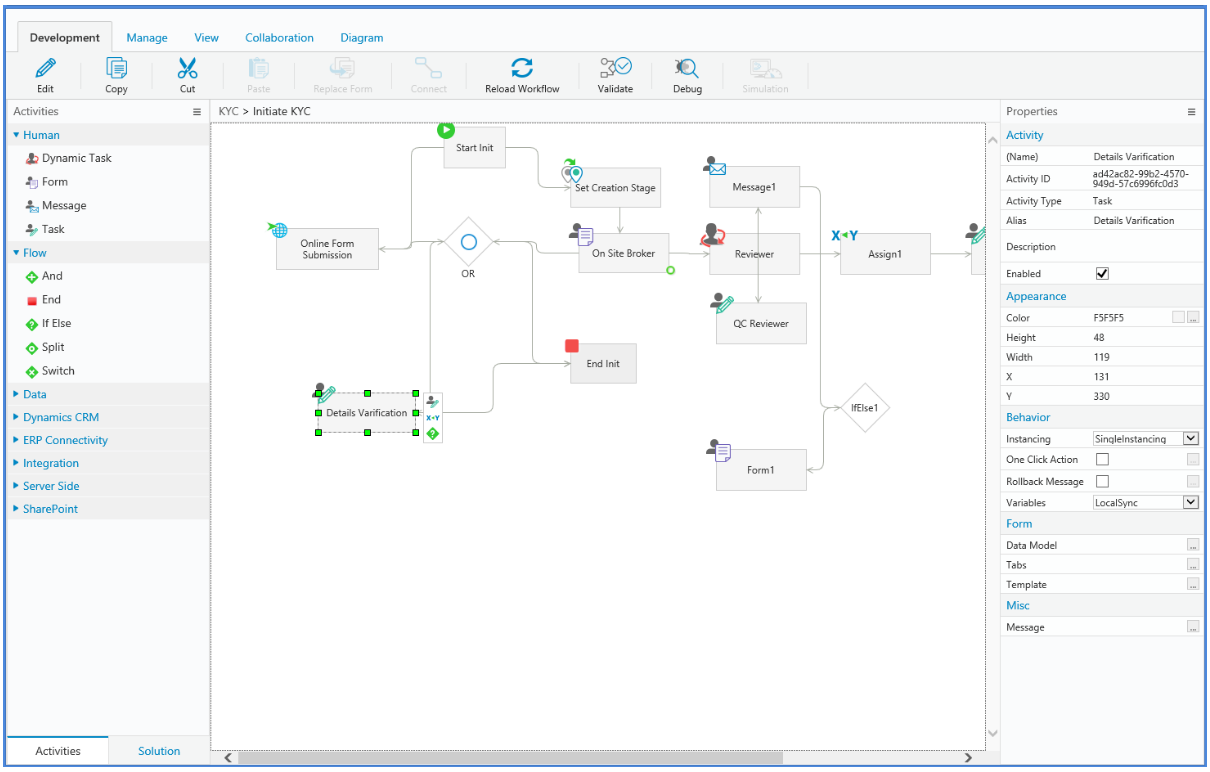
The first is the ability to quickly add shapes to your diagrams. Clicking an activity opens a **Quick Add** menu with common activities which you can simply add by clicking their icon.

If you are in a top level view (i.e. modelling with containers / BPMN shapes) this provides the ability to add BPMN shapes quickly.



Containers Quick Add Menu

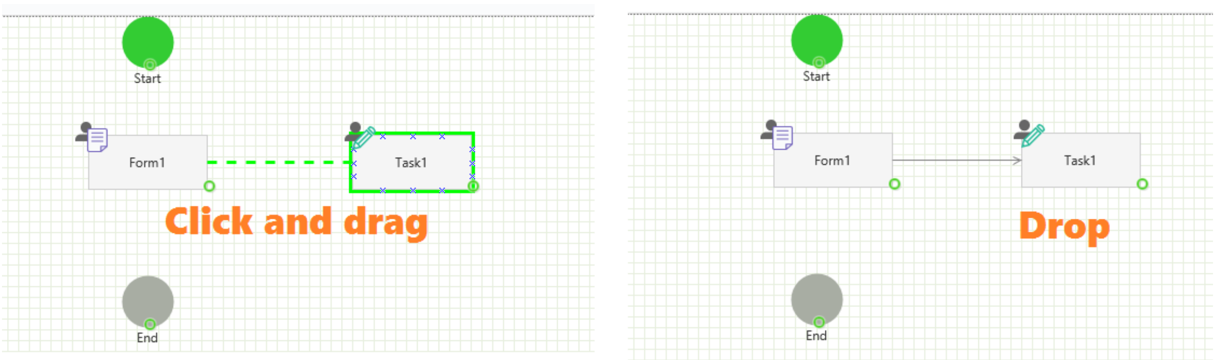
When you are working on the implementation level (i.e. working with activities), the Quick Add menu includes common activities.



Activity Quick Add Menu

The second modelling enhancement is the ability to connect activities by drag-and-drop.

To connect activities, hover over the first activity, hold down the left clicker, and drag the connector to the second activity. Release the left clicker. The activities are connected. (Previous connection methods will continue to work as well.)



Connecting Activities by Drag and Drop

Learn more about the App Studio

General Enhancements

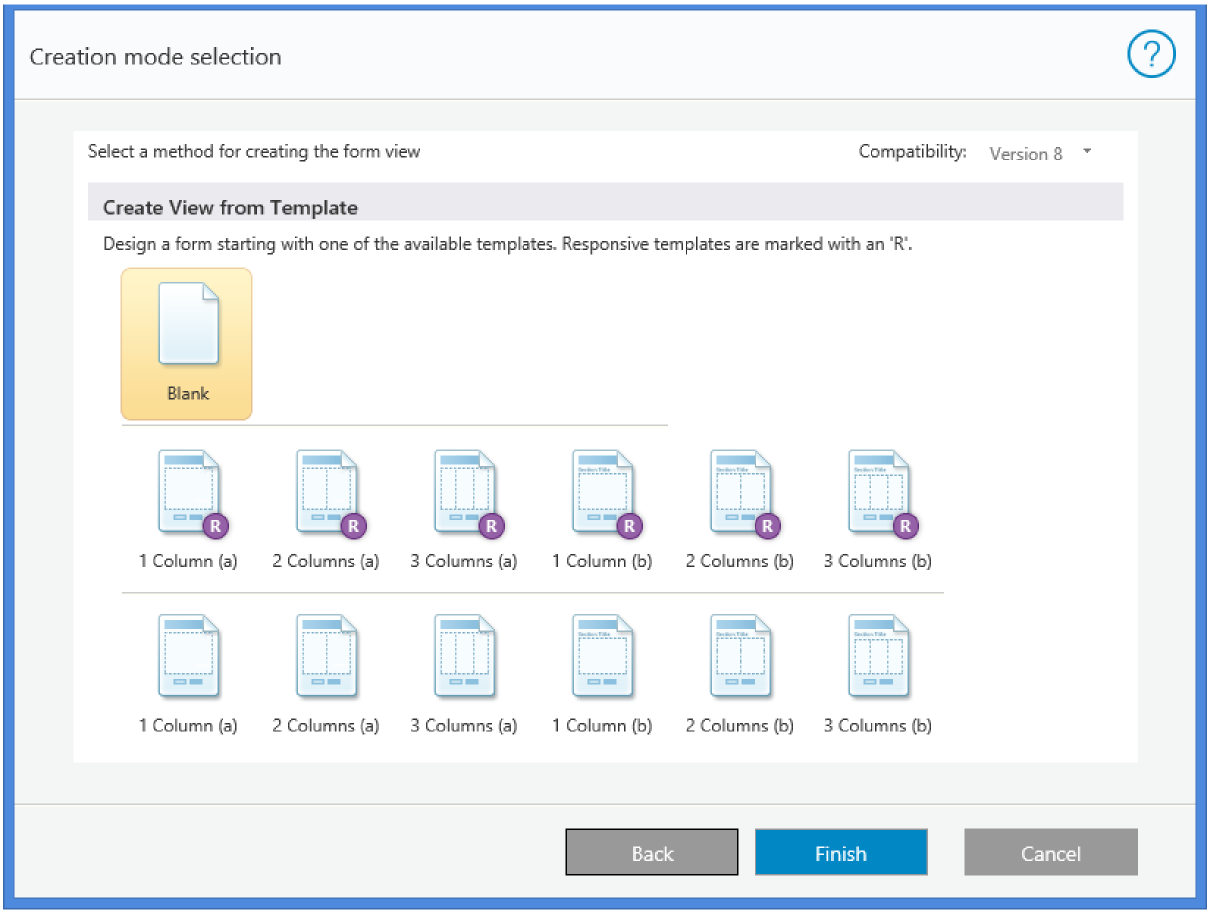
Up-to-date Telerik Controls Version

A new set of Telerik controls (version 2016.1.113.0) have been added to the UX Studio.

To ensure compatibility, existing implementations (from Sequence 7) will continue to use the original controls version.

When creating a new view, you can select the compatibility version (Sequence 8 or Sequence 7). This will affect the version of controls, snippets, auto generation code and view execution.

Please note that form views created in Sequence 7 compatibility cannot work in Sequence 8 compatibility views, and form views created in Sequence 8 compatibility cannot work in Sequence 7 compatibility views.



Selecting View Compatibility Version

To work with the new controls in the form markup, use the prefix `sq8`. (The view version must be set to Version 8.)

Notes:

Combining Sequence 8 and Sequence 7 controls on the same view will result in an error.

The Bindable control and Bound control have the sq prefix for both Sequence 8 and Sequence 7 view versions.

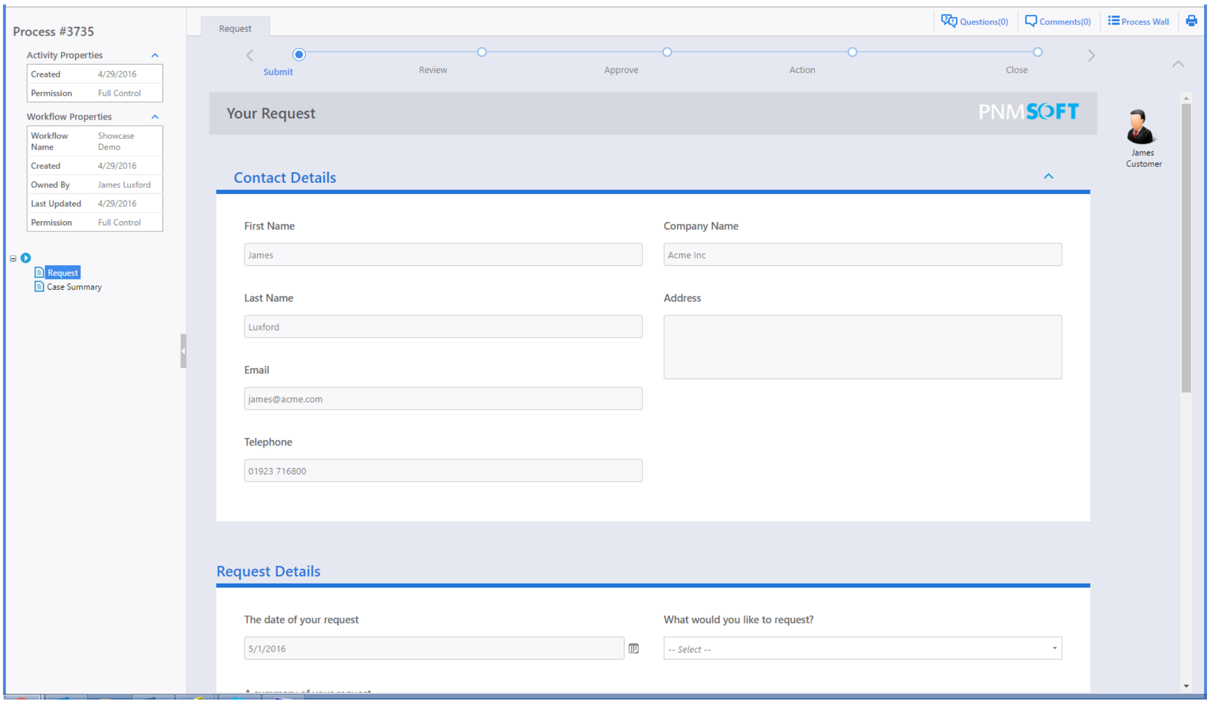
Changing to a different view version after view creation is not supported.

To enable Sequence 7 form controls compatibility, add this key to the Administration web.config file:

```
<appSettings>
   <add key="PNMsoft.Sequence.Forms.Web.UI.FormControl.CompatibilityLevel" value="V7"/>
</appSettings>
```

Inline Stages Display Mode

We have added a new display option for the Stages (Where am I) feature. You can now set the stages to display in-line with the form.



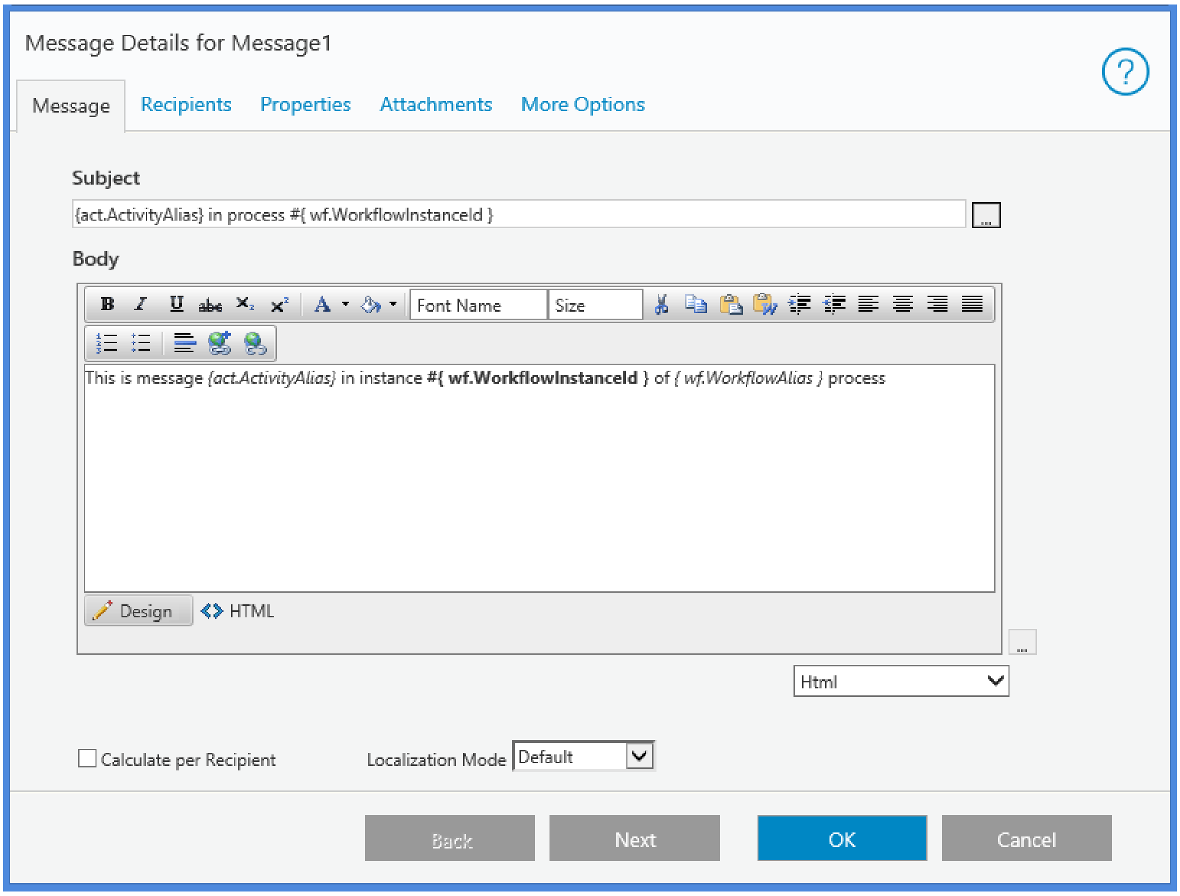
Inline Stages

Search for Workflow

To ease workflows search, you can now search for workflows when clicking on the Workflow node in the Administration > Workflows tree.

Message and Task Activities Defaults

When creating a Message or Task, we have added default values to the Subject and Body to enable you to quickly create these activities and edit the message later.



Message Properties Defaults

WCF Consumer Enhancements

- Support for UserName credentials in WCF Consumer: We have exposed the ability to configure WCF services to use store user credentials when configuring the service with Message mode security or Basic authentication transport security.
- We have exposed all endpoints defined in the WCF custom configuration.

Stored Procedure Activity Enhancements

A new property was added to the Stored Procedure activity: **ThrowOnErrorInvoking**.
If you check this property, the system will throw an exception if any parameter expression fails during execution.

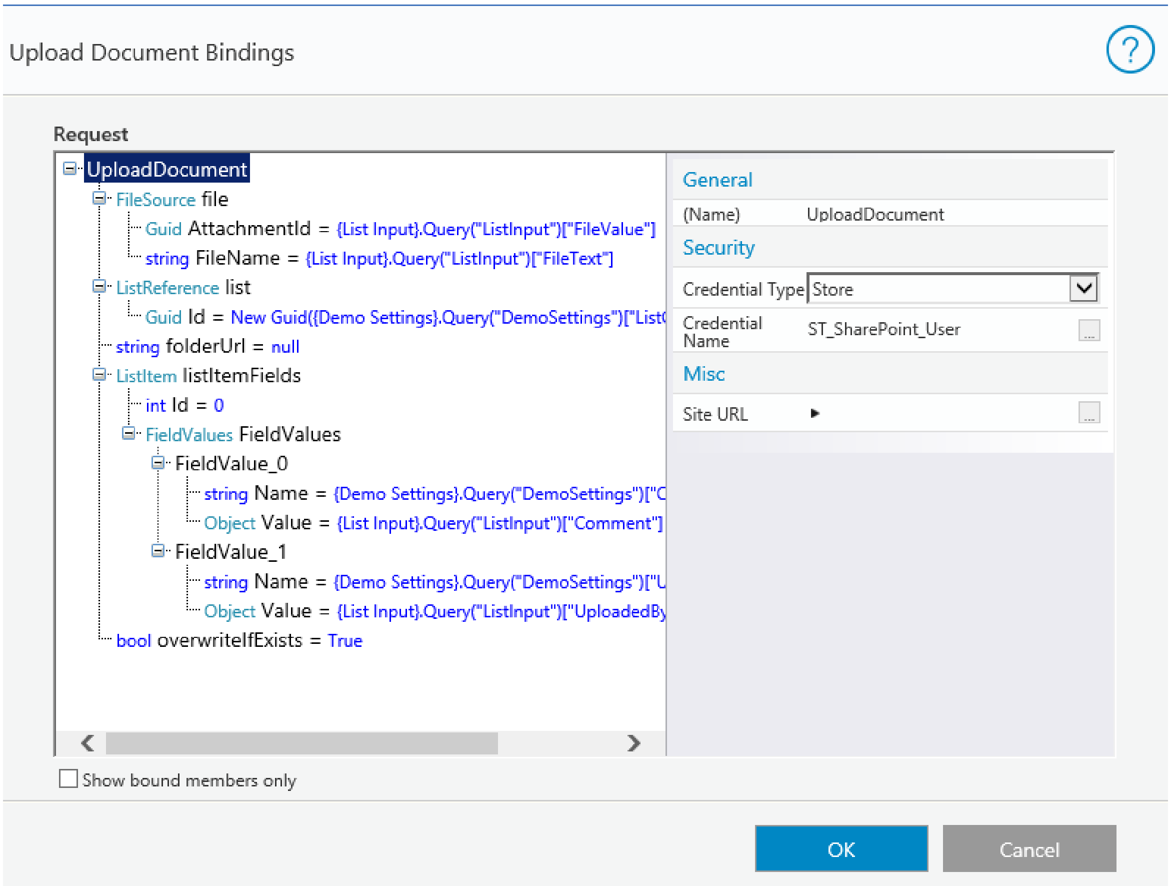
SAP RFC New Protocol

The SAP Communication protocol has been changed to the new NetWeaver library.

SharePoint Activities Enhancements

Dynamic URL Support

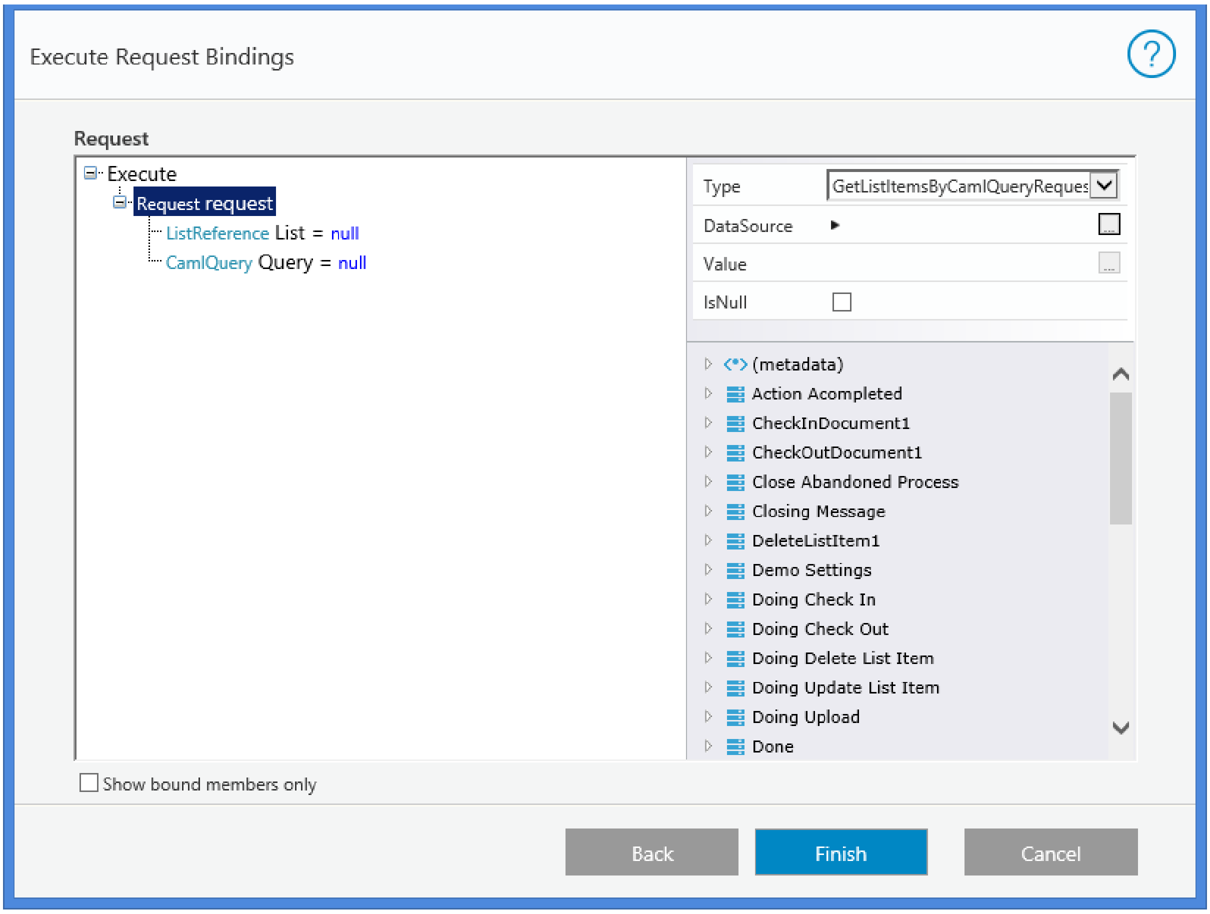
You can now execute the same SharePoint activity on different SharePoint sites by using the Dynamic URL property.



Dynamic URL

CAML Query Execution Support

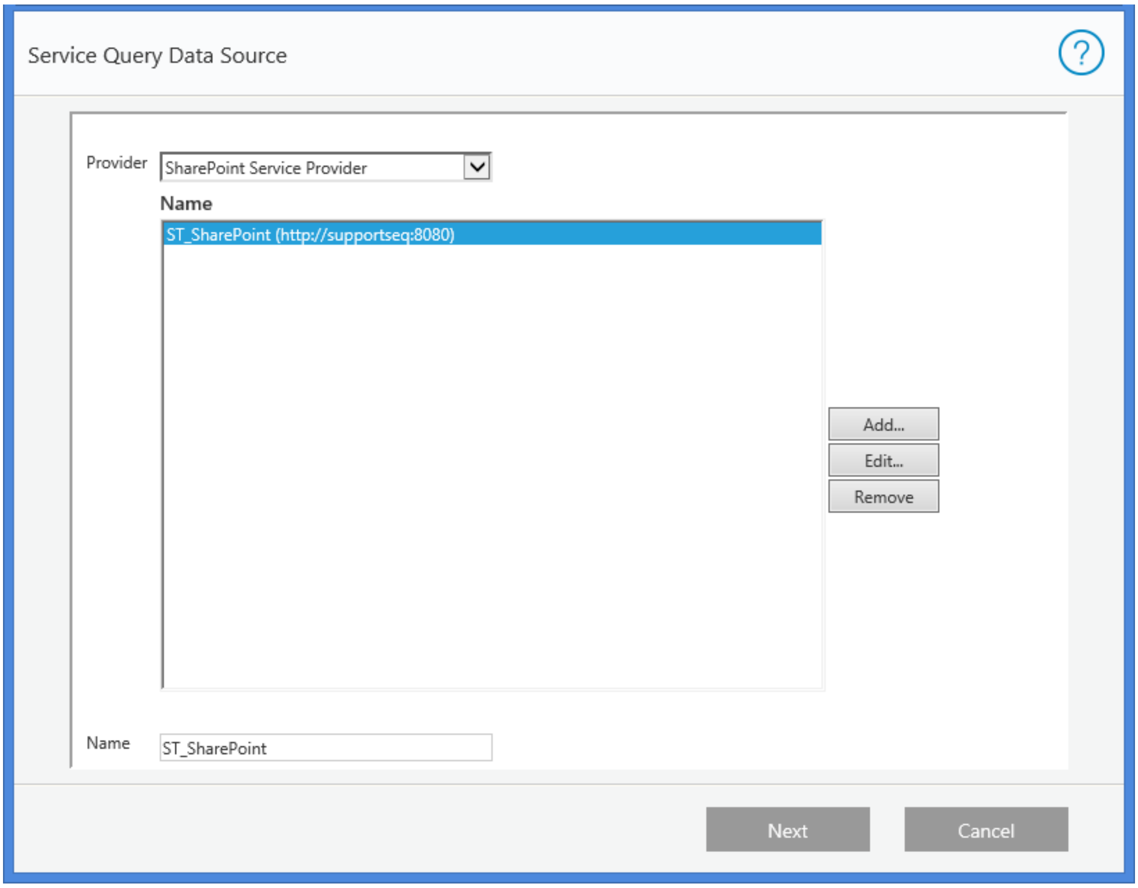
The SharePoint Execute Request activity supports a new type: CAML query execution. This request type enables you to retrieve SharePoint list items by CAML query.



CAML Query Execution

SharePoint Service Query

We have added a SharePoint as a Data Source query to the forms - 'SharePoint Service Provider' - so that you can expose your CAML Query result directly in the forms.



Service Query Data Source

Breaking Changes

1. Sequence Flowtime portal has new layouts and Flowtime control has a new look and feel. To control the site and controls display use the Flowtime web.config.
2. Sequence App studio has gone through major visual changes. Please note that there might be differences in the way your workflow diagram is displayed.
3. The following services now run in .NET 4.5: BRS, ADSS and JES.

Summary and Benefits

Sequence 8 with HotOperations, powered by PNMsoft's patented *HotChange®* architecture, provides the following benefits:

- Enables the creation of intelligent Case Management solutions.
- Provides superior real-time Work Optimization capabilities for large-scale operations.
- Enables Operations Managers to make informed decisions with predictive analytics.
- Provides extreme flexibility in automatic and dynamic work assignment.
- Surfaces relevant data for case managers and workers.
- Enables superior control over organizational structure and roles.
- Provides enterprise-level portals and dashboards for Case Management per role.
- Provides unique work and case modelling capabilities.
- Enables creation of responsive forms and fantastic UX.
- Harmonizes work between systems and teams.

For more Sequence 8 documentation and resources, please visit:
Getting Started with Sequence 8 on our Knowledge Center.