Sequence 7.10.4

Release Notes

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PNMSOFT
Business Processes in Motion™

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Contents

Introduction

Sequence v7.10.4 is an official product release incorporating new features and fixes. This version introduces powerful and practical new features such as Dual View, Workflow Stages, Generate Documentation and more.

This document details v7.10.4's features and changes. Sequence 7.10.4 was approved for release by PNMsoft QA on Jan. 11th, 2016.

Installation

You can download the installation files from the [Download Centre](#).

New Sequence 7.10.4 Installation

1. Unzip the file *7.10.4.0Installation/Sequence7.10.4_Setup.zip*.
2. Run *7.10.4_Setup.exe as an administrator* (it is in the zip file).

Follow the instructions in the *[Sequence 7.x Installation Guide](#)* in the [Knowledge Centre.](#)

Upgrading from Sequence v7.4 or higher

1. Verify that the accounts have the required permissions:
   - Refer to the "Required Accounts" section in the *[Sequence 7.x Installation Guide](#)*.
   - Use the "installation account" to run the upgrade.
   - **The database account should have sys_admin permissions for the duration of the upgrade. It can be downgraded to a minimum afterwards.**
2. Verify that version 7.4 or later is installed on your server:
   - In the Administration site, check the Assembly/Database version (under "Installation Details", bottom-right section).
3. Backup the configuration files, meaning the PNMsoft folder (product), and the Sequence websites: Flowtime, Administration and Process$^{TO\ GO}$.
4. Backup your SharePoint site if relevant.
5. Backup your Database.
6. Download and unzip the file *7.10.4.0Installation/Sequence7.10.4_Setup.zip*
7. Free up system resources:
   i. Use the IISReset command-line utility to reset the IIS.
   ii. Stop the Windows Services: Active Directory Synchronization Service, Background Runtime Service, Job Execution Service.
8. Run *7.10.4_Setup.exe* as an administrator (it is in the zip file).

   Note: The original installation settings are automatically loaded in the upgrade wizard. If any of these settings have changed, please update the install shield.

9. Run IIS Reset and restart the Sequence services.

10. Please perform sanity checks according to the 'Installation Tests' that are in pages 44-45 of the *Sequence 7.x Installation Guide*.

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

Upgrading from Sequence versions below v7.4

If you have Sequence versions 7.0 to 7.3 installed, you must first upgrade to v7.4 (see the v7.4 Release Notes for instructions), and then perform the procedure 'Upgrading from Sequence v7.4 or higher' above.

Updating from Sequence v7.10

1. Verify that the accounts have the required permissions:
   - Refer to the "Required Accounts" section in the *Sequence 7.x Installation Guide*.
   - Use the "installation account" to run the upgrade.
   - **The database account should have sys_admin permissions for the duration of the upgrade. It can be downgraded to a minimum afterwards.**
2. Verify that version 7.10 or later is installed on your server:
   - In the Administration site, check the Assembly/Database version (under "Installation Details", bottom-right section).
3. Backup the configuration files, meaning the PNMsoft folder (product), and the Sequence websites: Flowtime, Administration and Process^{TO GO}.
4. Backup your Database.
5. Download and unzip the file *7.10.4.0Installation/Sequence7.10.4_Setup.zip*
6. Free up system resources:
   i. Use the IISReset command-line utility to reset the IIS.
   ii. Stop the Windows Services: Active Directory Synchronization Service, Background Runtime Service, Job Execution Service.
7. Run *7.10.4_Setup.exe* as an administrator (it is in the zip file).
8. Run IIS Reset and restart the Sequence services.
9. Please perform sanity checks according to the 'Installation Tests' that are in pages 44-45 of the *Sequence 7.x Installation Guide*.

> ***Note: If you are updating your Database using scripts, use the scripts located in the Patch folder.***

JES Installation

Installation of the v7.10.4 Job Execution Service requires installation of .NET 4.5.1. This prerequisite installation will force your computer to restart during the upgrade/installation.

When the user that is running the Job Execution Service is not a local administrator, perform the following step to enable correct functionality of this feature:

Open the command prompt as an administrator on the server where the Job Execution Service is installed, and run the following command:

netsh http add urlacl url=http://+:5432/Management/ user=[Domain\UserName]

[DOMAIN\Username] = the user running the Job Execution Service

Note: Sequence does not support removing specific features (such as Process[TO GO], CRM connector, etc.) which have already been installed.

New Features

Dual View

Sequence 7.10 introduces a revolution in the App Studio – Dual View. Dual View enables Business and IT teams to easily collaborate on process modeling and design. Business Users can create a high-level model of the process in the Business View, using containers or familiar BPMN activities (BPMN 2.0 is supported). Then, process developers can drill down into each of these containers and define the activities functionality in Design view, which is similar to the standard App Studio canvas of previous versions.
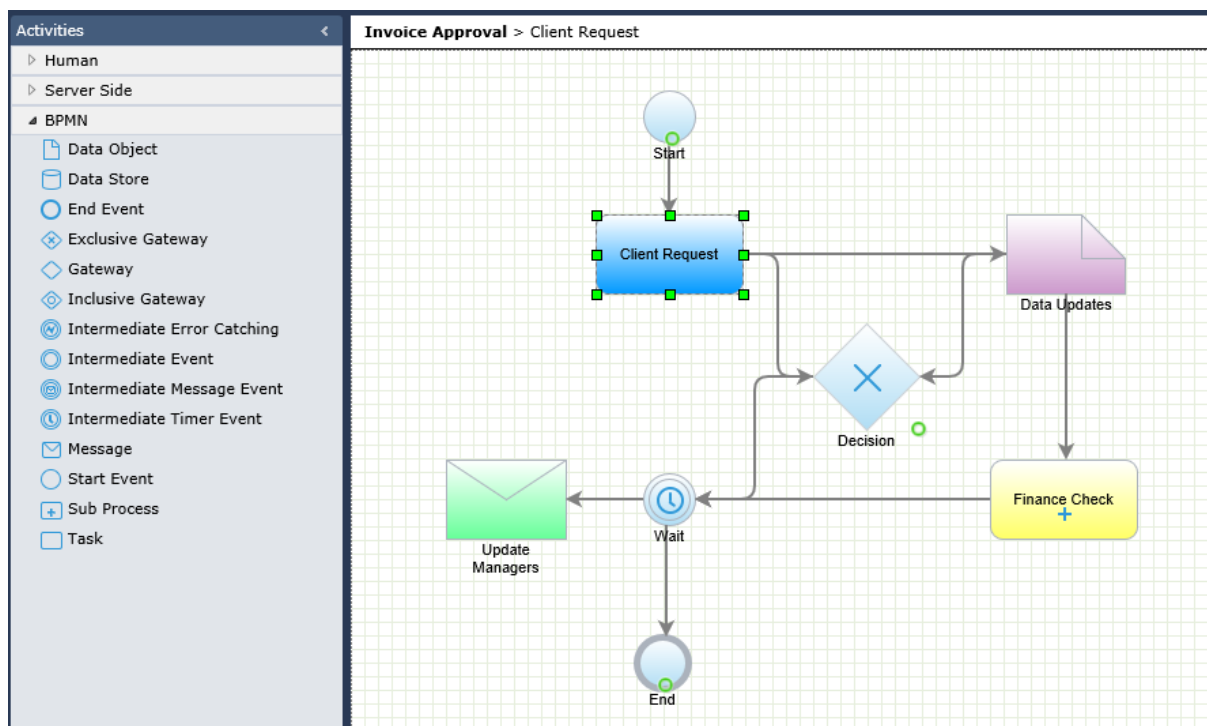
Business View
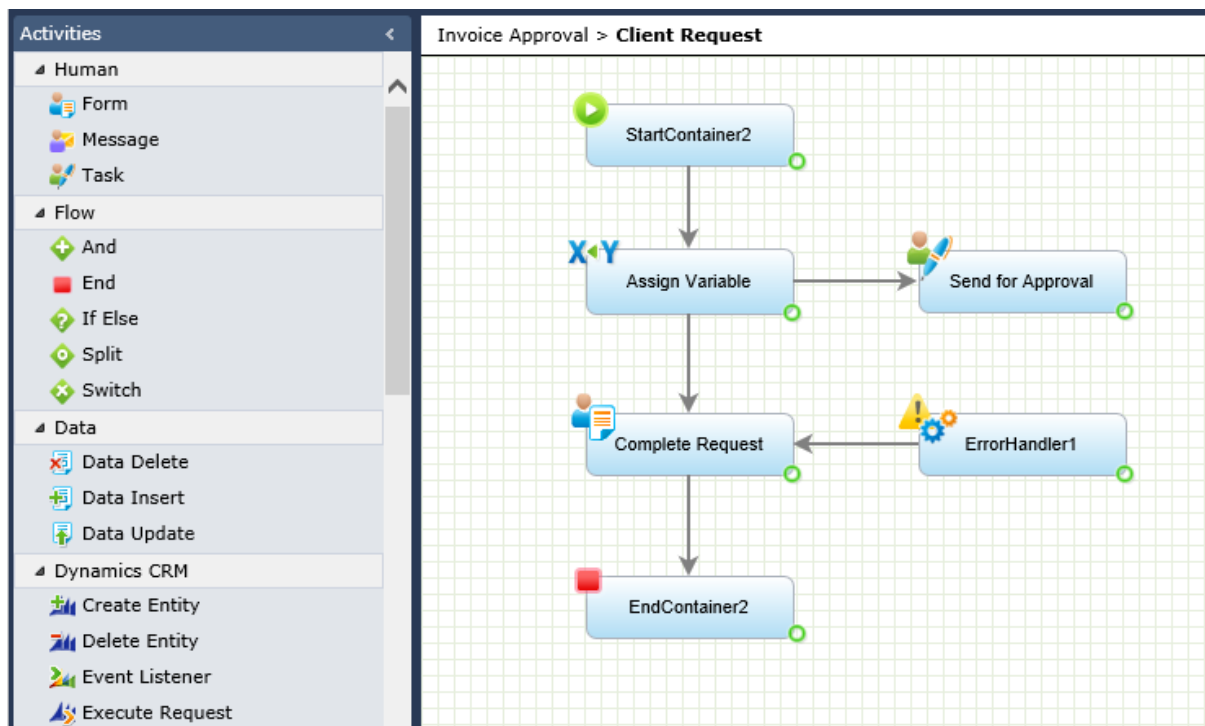
Design View

Navigating between Business and Design views is easy, using the top breadcrumbs. It's also easy to cut, copy and paste containers, and insert one container into another. You can even cut and paste activities from one container into another. Additionally, you can add Business containers to workflows from the top ribbon 'Diagram' tab.

The benefit of Dual View is that Business Users can be involved in process creation using familiar modeling standards, and they will not be confused with the fine detail.
IT developers can be guided to developing the desired outcome more effectively, and both IT and Business can be aligned better in a collaborative effort.

In addition, now that modelling can take place within the App Studio, Sequence becomes an all-in-one tool that includes both the stages of process Modeling and Design in one unified interface.

Learn more about Dual View
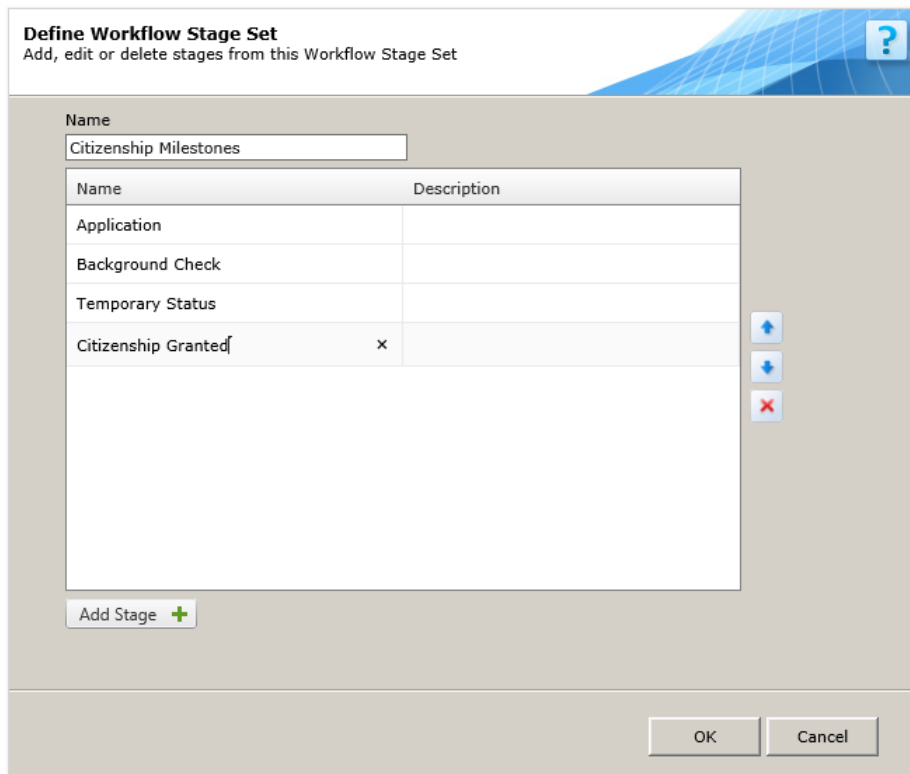
Workflow Stages

For many businesses, processes have distinct stages. For example, a government process of granting citizenship could include stages such as: Application, Background Check, Temporary Status, and Citizenship Granted. Sequence v7.10 enables you to define stages for processes, and then for end users to view the stage of the process at each point in time. This aids users to better understand where each process stands, and what is required to get to the next step.

You can define several Stage Sets (literally – a set of stages) to be used in your workflow. Then, you select which Stage Set will be used for a particular workflow.
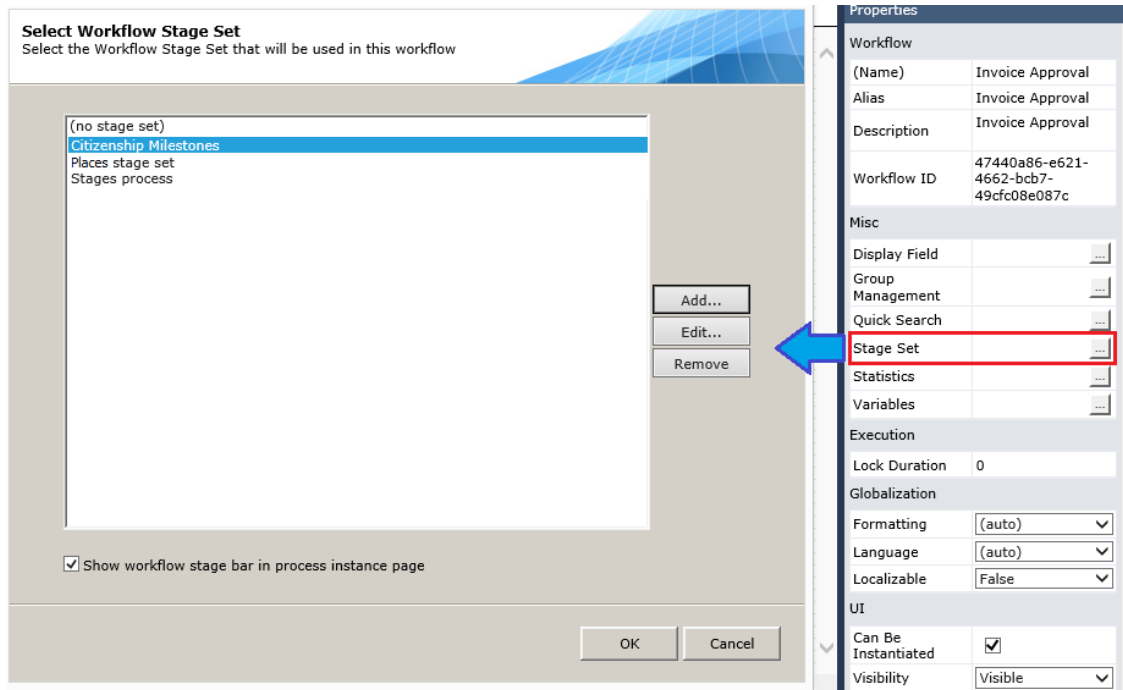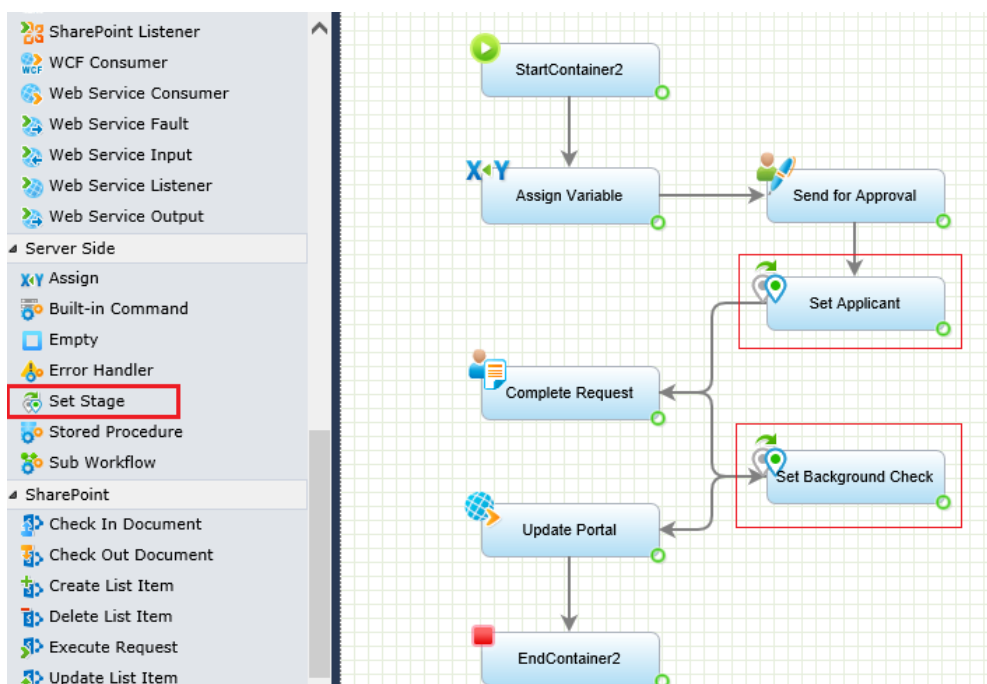

Select Workflow Stage Set

You can add/edit a specific Stage Set:

Defining Workflow Stages

Finally, you can use the new Set Stage activity to change the stage at different points in the workflow:

Set Stage Activity

Now, end users running the workflow can easily see the current stage of the process, from the stage bar at the top of their screen. Stages can also be viewed in Flowtime grids.

Stages in Flowtime

Notes:

If stages are not appropriate for your workflow, you can leave the default setting: "No Stage Set" selected.

The Workflows Stages design is not supported using the SharePoint 2010 skin.

Learn more about Workflow Stages

Generate Documentation

Very often you would like to generate a single document containing all of the important details of a workflow. Sequence v7.10 enables you to do just that. This document can be useful for collaborating with process stakeholders and managers, and it provides an excellent summary of the workflow's major elements, including:

- Activities
- Data Fields
- Views
- Permissions

…and more

To generate this document, from App Studio's top ribbon select **Collaboration > Generate Documentation**. A document is generated as a web page. You can copy and paste the content into a Word file and send it to others. Learn more

Generate Documentation

Process Owner

There is a new metadata field for process instances: Owned By. This field is used in Flowtime grids in a similar way to the 'Created By' field from previous versions. The Process Creator field still exists, but Flowtime Grids now display processes instances based on the Owned By field instead. In Flowtime, there is a new Web Part named 'Processes I Own'.

'Owned By' Column in Flowtime

You can use the 'OwnedBy' field in workflow expressions:

OwnedBy Field

Note: In the Process Instance page, Workflow properties area, 'Owned By' is displayed instead of 'Created By'. As a result, Delegatees will not see their own name in this field as in previous versions. Rather, they will see the process owner's name. This behavior can be modified in the Flowtime config file.

This change was made since it is often more relevant who owns a process instance rather than who originally created it.

New Activity: Built-in Command

There is a new activity in the Activities Toolbox > Server Side section: Built-in Command. This activity enables you to execute various actions within the workflow, including:

- Change Process Owner – see the Process Owner feature, above.
- Change Process Stage – see the Stage Set feature, above.
- Replace Leaver – replaces a Leaver with another user (only for use within a Replace Leaver workflow).
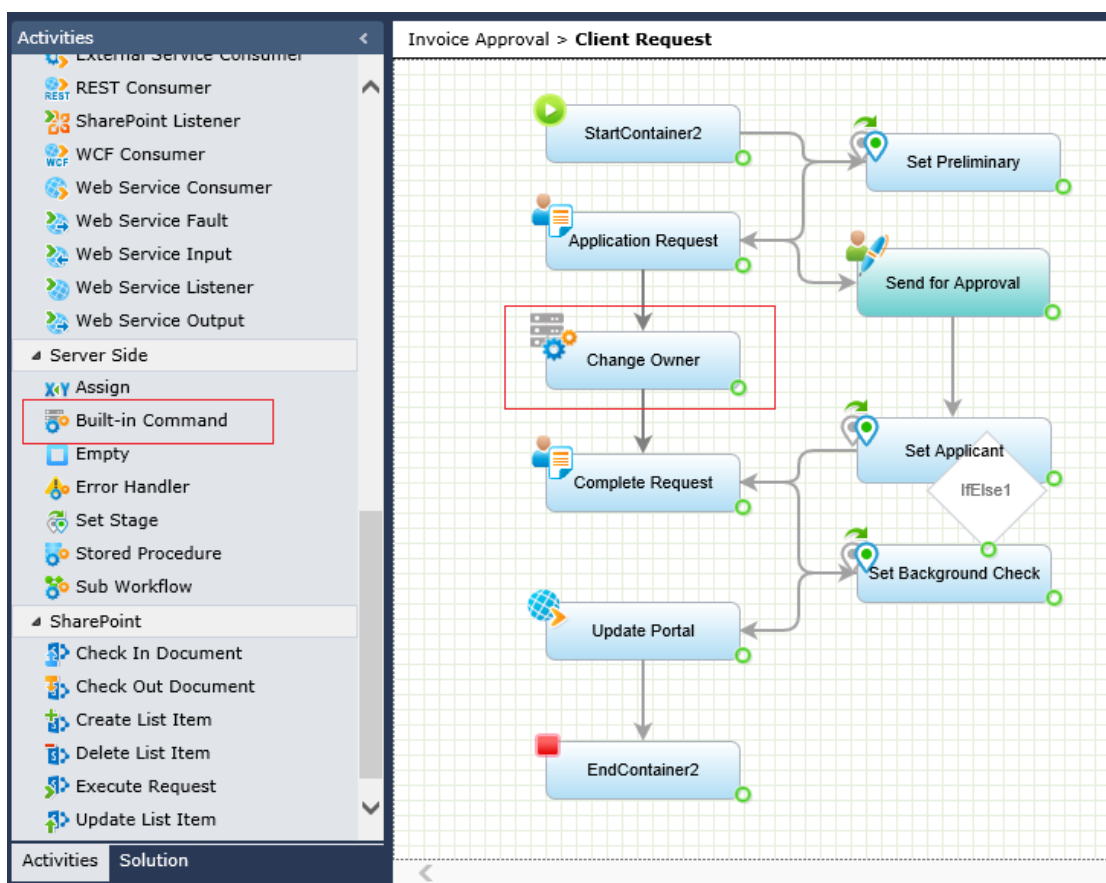
Built-in Command

[Learn more about Built-in Command](#)
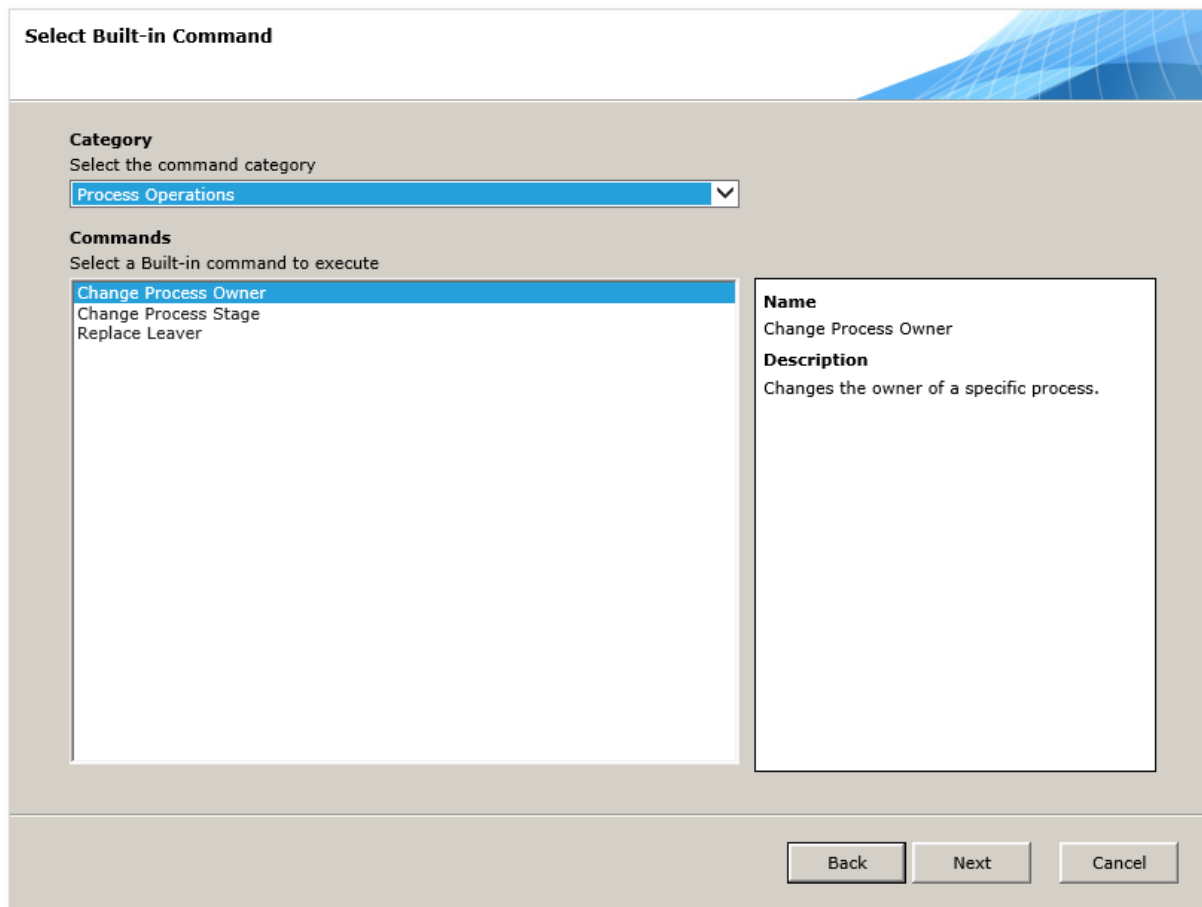
Built-in Command Selection

Form Viewer Web Part in Flowtime

The Form Viewer Web part is a new Flowtime web part. It enables you to embed a Form from any of your workflows directly inside Flowtime pages. This may be useful, for example, if you require Flowtime users to view a specific form on a regular basis.
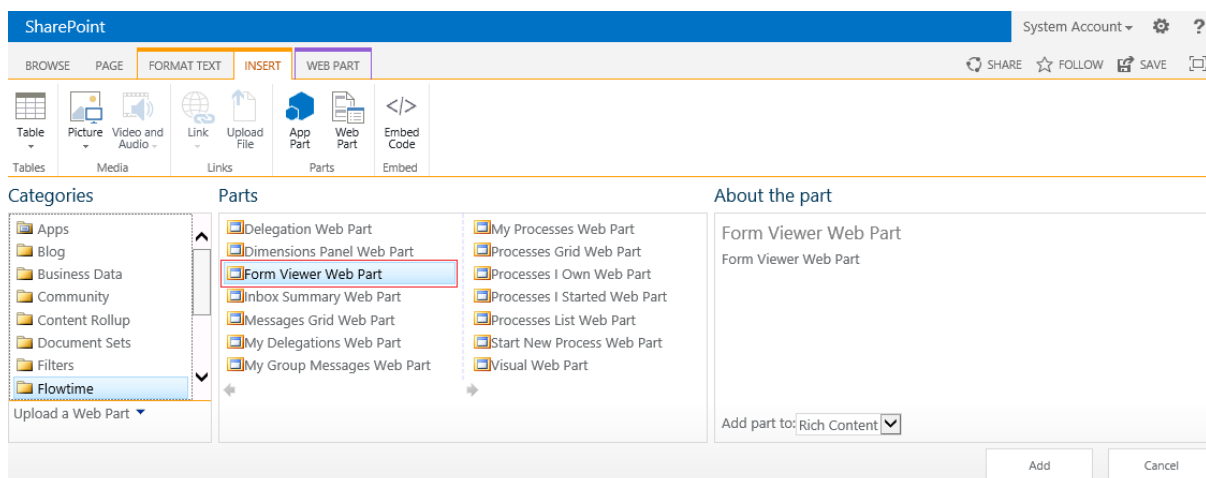
Form Viewer Web Part

Note: The embedded Form does not have a workflow instance.

Locking

v7.10 includes a smart locking mechanism for process instances, in order to prevent saving conflicts. If one user has just clicked submit on a form, the form locked. If another user tries to submit this form simultaneously, he won't be able to do so and will receive a warning message. Locking/unlocking occurs rapidly, on a second-by-second basis, so the instance will be unlocked as soon as the submit completes. In most cases, users will not experience locks.

> **Note: You can configure how many times to try to write to an instance if it is locked, in the Flowtime config file.**

Enhanced Features

App Studio Enhancements

Several enhancements have been made to the App Studio, to enable process designers to easily manipulate workflows and their activities.

Copy/Paste, Delete

You can now copy and paste activities from one workflow to another. You can do this by using either CTRL-C / CTRL-V keyboard shortcuts, right-click menu or top menu copy and paste options.

> **Note: Copy and paste is possible, but cut and paste is not enabled, to prevent accidental activity deletion.**

You can multi-delete activities, by holding down the CTRL key, clicking activities and selecting Delete or by dragging your mouse over activities (which highlights them) and selecting Delete.

### Guide Lines for Drag-and-Drop Activity

When you drag-and-drop an activity on the workflow canvas, guide lines appear, enabling you to position it on the canvas aligned with existing activities. This results in a more orderly workflow.
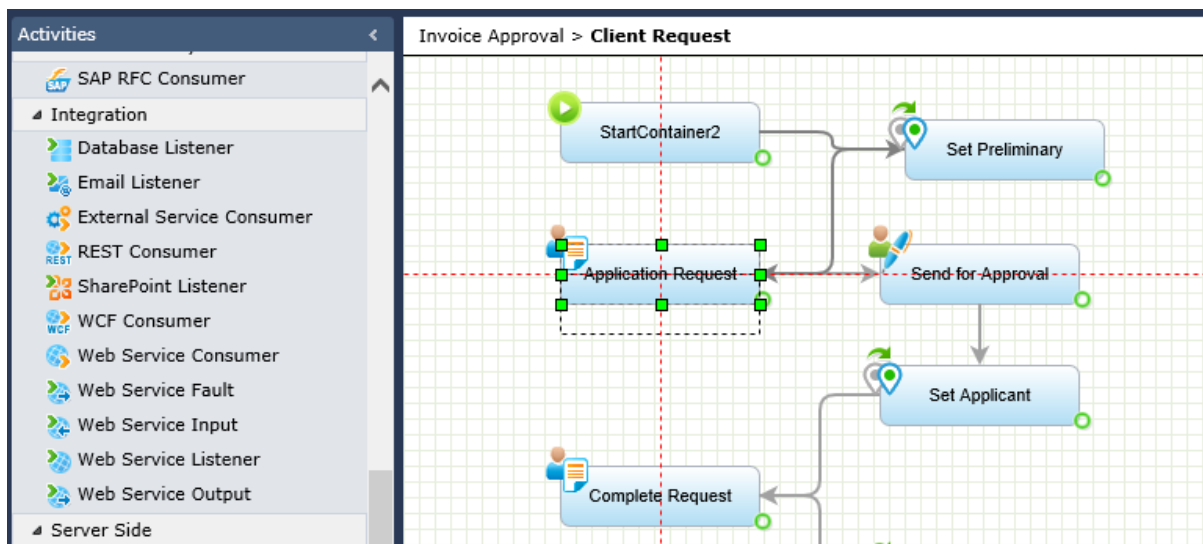
Guide Lines

New Color Picker
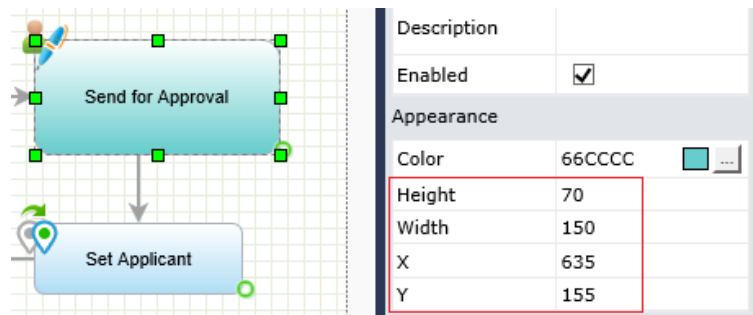
A new color picker has been introduced for coloring activities, which provides an easier selection from a wide range of colors.
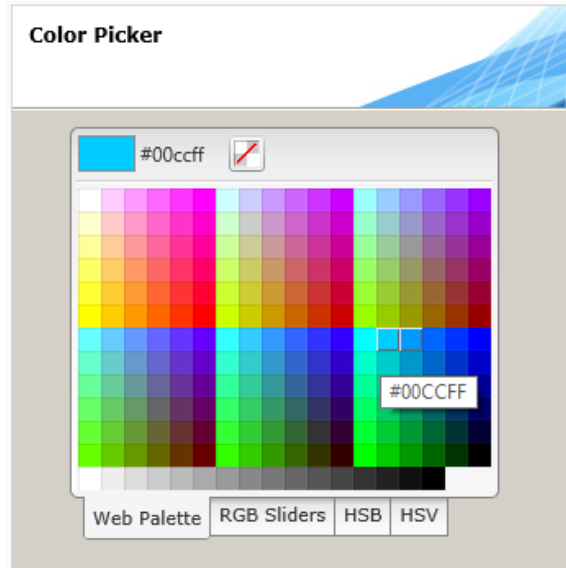
Color Picker

Adjusting Diagram Element Appearance

You can now adjust Height, Width and X, Y position properties for diagram elements on the workflow canvas (activities, comments, labels, etc.):

Adjusting Activity Appearance

Show/Hide Activities

In the View > Options screen of the App Studio, you can now select which Activity categories
are visible in the Activities Toolbox. To do so, select the Custom option from the menu, and
select/deselect categories as desired.
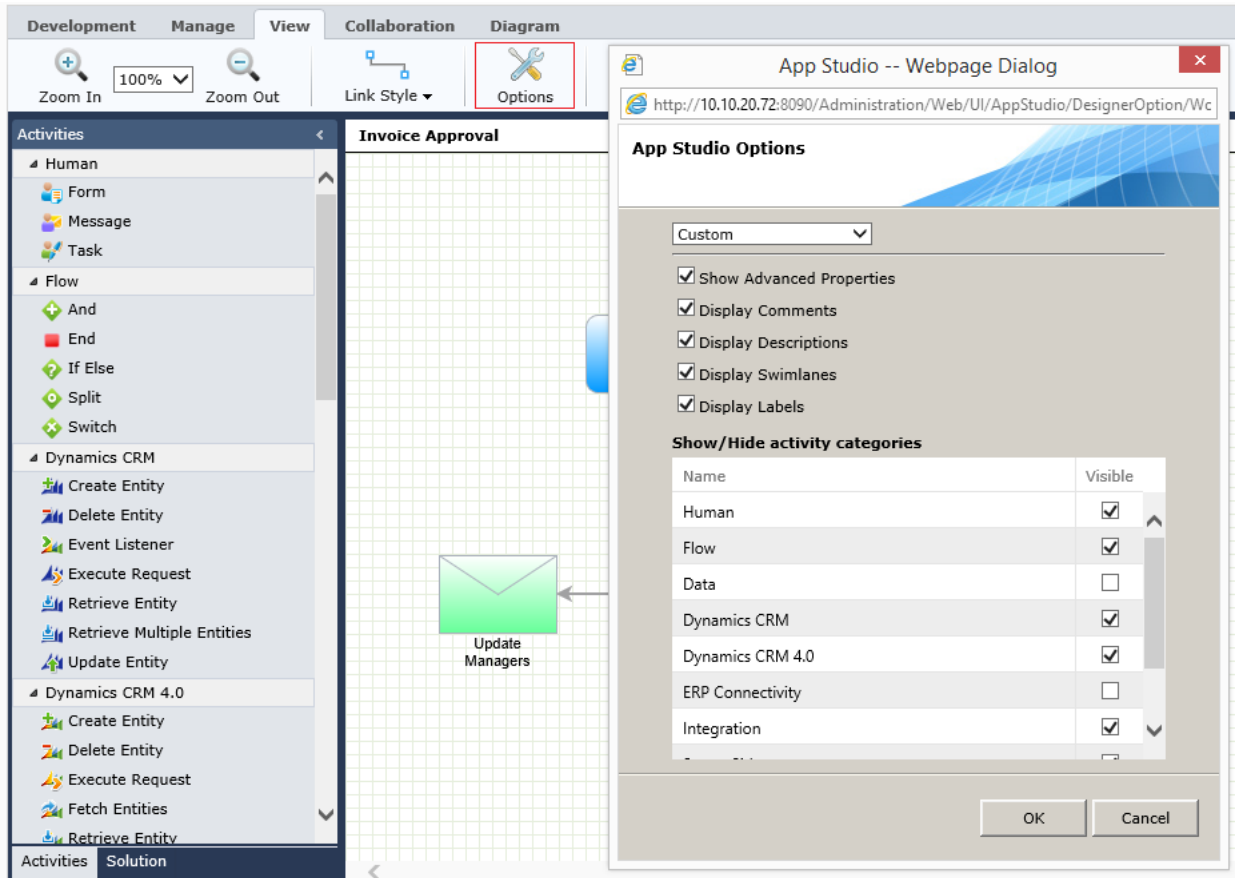
Show/Hide Activity Categories

Data Model Management Enhancement

When you add an existing table to a Data Model, all its lookup field queries are also added to the Data Model.

Rollback Branch in Debugger

In the Debugger, when debugging a workflow that has multiple branches, you can select which branch to rollback. In previous versions, rollback was performed according to the creation time of the activity that was selected to be rolled back. The Rollback Branch option gives you more control of what to roll back.
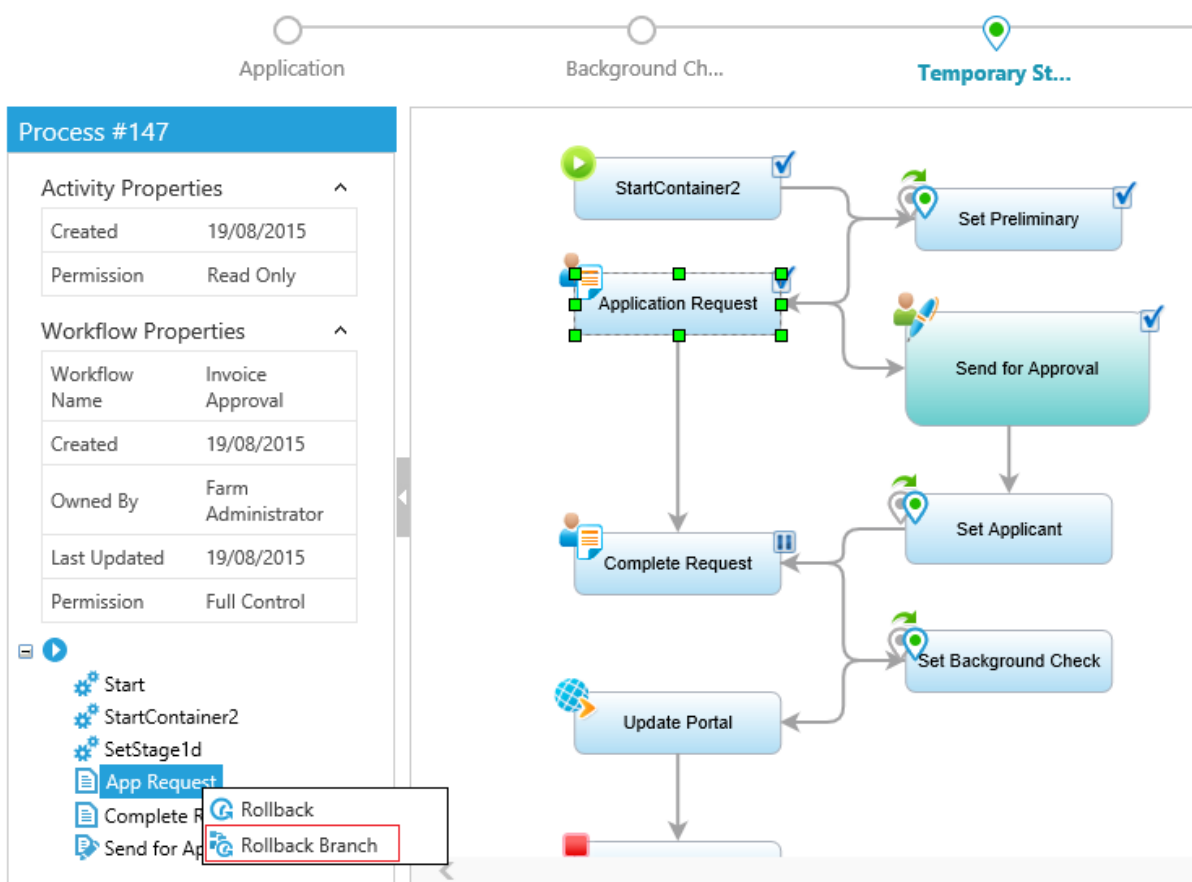
Rollback Branch

Permissions – New Wizard

The Workflow/Activities Permissions wizard have been enhanced and improved for faster, simpler control over permissions:

Permissions Wizard

The Permissions functionality is similar to previous versions, with the following added improvements:

- You can filter the list of permissions.
- You can edit/delete permissions easily using the 🖊 and ✖ buttons.
- You can quickly propagate workflow permissions to all activities by clicking ⩒ .
- You can use buttons to **Clear Workflow permissions** or
  Clear workflow and activities permissions.
- It is easier to select Users, Groups and Roles.

Print Process Instance

When printing a Process Instance page, the Print option will print what is in the execution window only, and will not print the process tree, properties area or top actions.
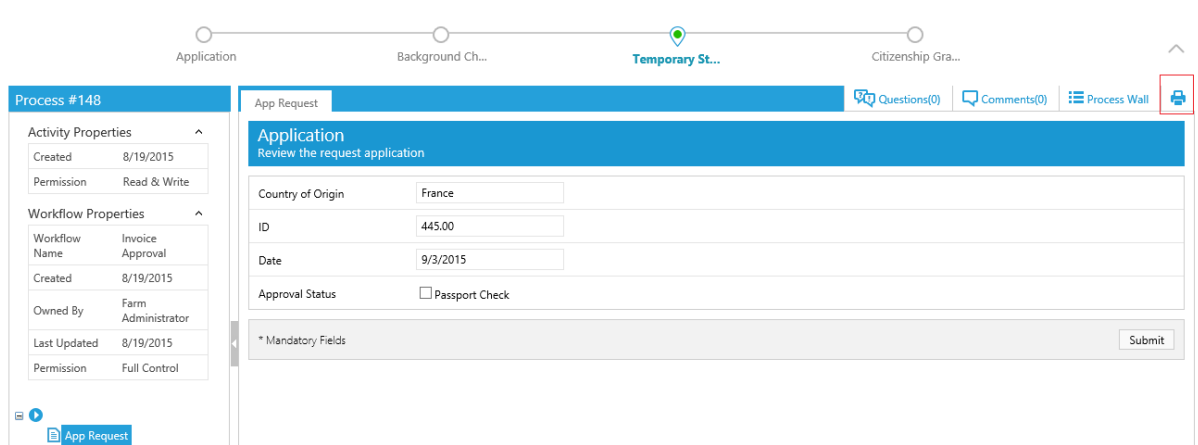
Print Process Instance

Note: Using Code Snippets (UX Studio > Development > Insert Snippets), you can determine how the page will be cropped in the print (for example, if there is a long grid on the page and you wish to crop it).

Active Directory Bulk Synchronization

In v7.10 the synchronization of the ADSS has been improved, and will perform synchronization from your Active Directory to Sequence quicker. This also means that by default, Active Directory data is synchronized in bulk to Sequence, overwriting changes to the organization made in Sequence. This is true even if Insert/Update/Delete options have been deselected in Sequence's Active Directory configuration wizard.

If you wish to revert back to the synchronization behavior of previous versions, which took the above settings into account (e.g. if Update is deselected, the synchronization will not overwrite records edited in Sequence), you can do so by editing the ADSS web.config file and setting this field to "false":

useBulkSynchronization="false" ("true" is the default)

Support for Dynamics CRM Online 2015

Sequence v7.10 supports Dynamics CRM Online 2015. Customers who wish to create intelligent processes for Dynamics CRM are advised to do so using PNMsoft SCE, a special edition of Sequence that is built for Dynamics CRM. Learn More

Expressions – Null-Conditional Operators

Sequence 7.10 expressions introduces null-conditional operators.

These operators can be used to test for null before performing a member access (?.) or index (?[]) operation.

For example:

```
{Form1}?.Query("UACT1").Last()?.Field("fldId")
```

returns 0 if Form1 is null or there are no records in UACT1 query.

Event Viewer – Logs

The Debugger > Event Viewer Logs now include the source of each notification, making it easier to troubleshoot issues and discover the root of the problem.

Breaking Changes

1. When you deactivate a user, Sequence removes the user from all his groups.
2. Tabs functionality has been changed slightly in the Process Instance page (Runtime.aspx). Previously, if there were multiple instances of an activity (for example in a loop), when you selected the tab of one of these instances, the tabs of the other instances were hidden. In this version, the tabs of the other instances of the activity are not hidden.
3. The new Active Directory bulk synchronization will overwrite changes made in Sequence to the organization, unless you change the setting in the ADSS web.config file (see the 'Active Directory Bulk Synchronization' section above).
4. Ajax Control Toolkit support has been discontinued in the following Sequence wizards:
   ChangeActivityForm.aspx
   ComponentWizard.aspx
   MessageWizard.aspx
   MessageAttachmentExpressionWizard.aspx
   WorkflowExpressionWizard.aspx
   ActivityWizard.aspx

Known Issues

See known issues online at:
http://members.pnmsoft.com/Downloads/Lists/Known%20Issues/AllItems.aspx

Web.Config Modifications

Please see this document for a list of web.config modifications.

Resolved Cases

Ticket #	Description
9359	E-mail Listener: Expression to display multiple recipients, displays only the first recipient.
9360	E-mail Listener: Can't Insert data from ds.Item.Subject (example) with InsertData activity.
9325	Date picker Min/Max properties can be set only from markup and not from right side properties.
9329	Lookup tables of Sequence 6 processes: The page stops responding as a result of changing page size (IE10 and IE9).
9170	Reminder email missing the 'Open Task' link if the reminder mode is 'Email'.
8853	Several versions of IE10: When opening a process from a web part and closing it, the web part refreshes for a very long time.
8821	ADSS: Group manager property is lost after ADSS is running.
8752	Update Data: No alert when external table defined as data source does not have a primary key.
8522	Inconsistent behavior when de-activating an employee (Breaking Change).
8456	Some JS snippets do not have the language set correctly so can't see them in the wizard.
8340	External table with field which is a foreign key in another table issue.
8368	Group/OU with name more than 2 words is being cropped in the recipients list when editing after importing the WF.
8210	Grid behavior when deleting last row from page should be changed.
7979	Web parts (SharePoint 2013) crash when variable name starts with a number.
8455	SEQUENCE 6 upgraded to 7: Calendar pop-up is clipped by the "sub form" frame. Need to insert the fix to installation.
31447	Missing listener service declaration in Process$^{TO\ GO}$ web.config.
30926	Process wall does not load after upgrade to v7.10.
31416	ADSS does not execute after upgrade to v7.10.
31287	Redundant scrollbar in organization window while working in 1360x768 resolution.
29234	JES can only be installed with the BRS and the ADSS.
31981	Missing translation of time unit in Process$^{TO\ GO}$.
NA	Security issues found in the App Studio deployment and permission screens.
NA	App Studio is not responsive when working with IE 10 or IE 9.
NA	Unable to use the permissions option of Cascade Lower with Public.

Resolved Change Requests

Ticket #	Description
10330	One Click Action should support delegation messages.
7663, 6405	Allow Copy-Paste activities between workflows.
6521	Allow labelling the Switch and Split branches for better flow indication.