

Release Notes: LogicNets Release 7.4 (Update)

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1.0 Introduction

LogicNets is pleased to announce Release 7.4, which introduces exciting new features as well as enhancements to existing features and helpful bug fixes. We have made changes across many areas, as highlighted in the image below. Be aware that some of the new or updated features may require you to make changes to existing applications, but we have identified these possible required actions in orange boxes in this document.

General Platform	Installation & Configuration	Designer	Content Modeling General	Web Services Framework	StarterApp Portal Framework	Assessment Framework	Support Center Framework
Security Enhancements	Launch Package by Category	Project Validation Tool	Package Data	Token-based Authentication	Custom Layout	Collapsible Section	Save & resume sessions from Portal Application
Parts Lifecycle Management	Access Control at Group Level	Legacy Project Conversion	Post-Install Jobs		Child Workflows		External data storage
jQuery	Distributed User Management	Designer Tabs	New Data Types				Custom historical data queries
	Command Line Interface	Show/hide system data objects in Data Viewer	Package Installer Framework				
	ADFS Support	Rule Editors	Database Profiles				
			New Parts				
			Code Checker				

NOTE: Titles that have (*) next to them are the latest additions the 7.4 release.

2.0 New Functionality

This section highlights the new features included in Release 7.4.

2.1 General Platform

2.1.1 Security Enhancements

Support Articles	System Configuration Security Settings Redirect Session Security Vulnerabilities and Content Modeling
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With v7.4, LogicNets focused a lot of effort on adding security enhancements to help you to protect your application against such security threats as cross-site scripting (XSS). We have put in place additional controls that let you more directly manage the security settings for your installation.

New Security Settings

- LogicNets has activated Cross-Origin Resource Sharing (CORS) and Content Security Policy (CSP) and updated our system to allow you to manage these through a configuration setting. In configuring CORS and CSP you have control over the type and location of content that is allowed into your application.
- New whitelisted redirection settings allow you to explicitly configure those locations to which your application can be redirected.

IMPORTANT: ACTION REQUIRED

The CSP new security settings may affect your existing applications if they refer to content/resources from external websites. You will need to add the trusted URLs and exceptions to your settings.

HTML Escaping

The output of interpolated data to the browser is vulnerable to the threat of XSS; for example, bad actors could deliberately inject malicious data into your application and escape the legitimate context of your application to perform unauthorized actions. Additionally, imported data could potentially contain malicious code. To guard against these kinds of threats the LogicNets platform, by default,

encodes and escapes all HTML, JavaScript, and data using `$()` expressions that are output to the browser. Additionally, the project validation tool in the LogicNets Designer provides warnings when it detects potentially unsafe elements in your models.

IMPORTANT: ACTION REQUIRED

By default, LogicNets sets the web security level to 'Safe', and we updated our platform and frameworks to work seamlessly with this new setting. However, you may need to update your modeled content to use these new security enhancement features. Where you have used HTML to format the data for output on the screen, you will now see escaped HTML instead of the formatting. The following article gives you information about these issues and how to develop safe content: [Security Vulnerabilities and Content Modeling](#).

If you cannot update your modeled content at this moment, you can downgrade the web security level to switch off the HTML escaping. Be aware that this means you may be less protected against the threat of XSS.

2.1.2 Part Lifecycle Management and Upgrades

Support Article	Part Lifecycle Management
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With Release 7.4, we have introduced new parts, updated existing parts, removed unnecessary part parameters, and deprecated old parts. With deprecated and internal parts, there may be some actions you need to take.

Deprecated Parts

Deprecating a part means that we are no longer using or supporting it and that over time it may no longer work in your application. We do this for a few reasons, but the most important one is security. We want to make sure that your applications are as secure as possible, and that means you may need to change some of the parts you use.

To make updating or replacing parts in your application as smooth a process as possible, we have updated the project validation tool. When you run the project validation tool, the system displays warnings you need to address and helps you resolve these warnings. It also has links to support articles that provide additional information.

Internal Parts

Many of the LogicNets tools are also built with logicnets that use the standard public parts as you do in your applications. However, we have developed some very specific parts for our use in the creating the system. Think of these as our own custom parts for our use only. We call them internal parts and, from this release on, the system blocks the execution of these parts outside of the logicnets toolset.

It is possible that you have used internal parts in modeling your applications without being aware of it. By running the project validation tool, you can see if your application is using deprecated or internal parts, and the tool will give you recommendations for converting to alternative parts.

IMPORTANT: ACTION REQUIRED

If your application uses deprecated or internal parts, the system will block their execution. You will need to run the project validation tool and change to the identified alternatives.

For several of the deprecated parts the project validation tool offers you an automatic conversion to the updated part. If no automatic resolution is possible, please see the documentation on our community portal at support.logicnets.com or contact support@logicnets.com for support.

2.1.3 jQuery

Support Article	Custom Layout Template Updates v7.4.
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LogicNets has migrated the system to the latest version of jQuery (jQuery v3.6.0 and jQuery UI v1.12), which provide the latest jQuery functionality, security fixes, and performance improvements.

IMPORTANT: ACTION REQUIRED

If you have created custom layout templates for your application, you will need to update the jQuery includes for the latest versions.

When you use standard layout templates in the platform/frameworks your application will automatically switch to the latest version of jQuery.

Also note that older jQuery versions are not shipped with the platform anymore. If there is a specific reason you need to use an older version of jQuery, will need to manually download that version, and add it to your project.

IMPORTANT: ACTION REQUIRED

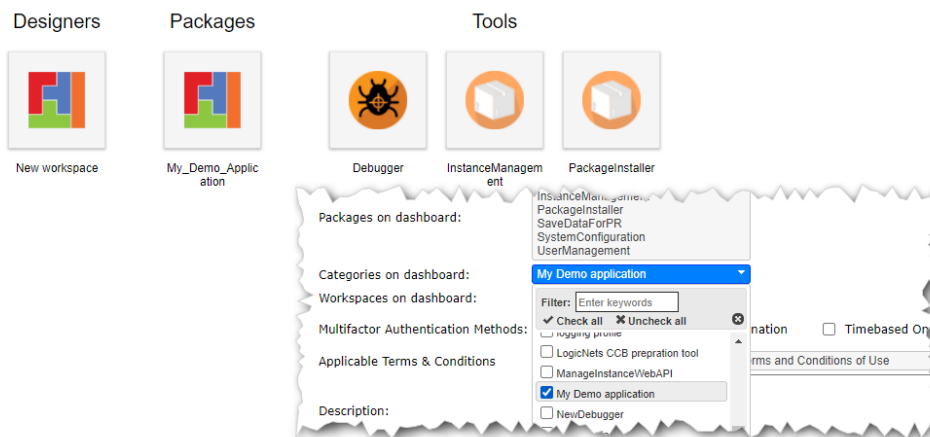
If you have custom JavaScript code in your application, you will need to verify the compatibility of your code with jQuery version 3.6.0.

2.2 Installation and Configuration

2.2.1 Launch Package by Category

Support Article	Accessing Application Versions from the Portal Landing Page
------------------------	---

From this release forward you can add package tiles to your portal page by package category. This keeps you from having to update the configuration when you install updated packages with the same category but different package names.



2.2.2 Access Control on Group Level

Support Article	Assigning Users and Packages to Groups
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From Release 7.4 forward, administrators assign workspaces, packages, and roles at the group level rather than at the user level. This follows user management best practices. These assignments are at the group level and administrators assign users to groups. Additionally, we have introduced group inheritance in this release. This allows you to build an inheritance tree of group authorizations with less maintenance effort and better control.

IMPORTANT: ACTION REQUIRED

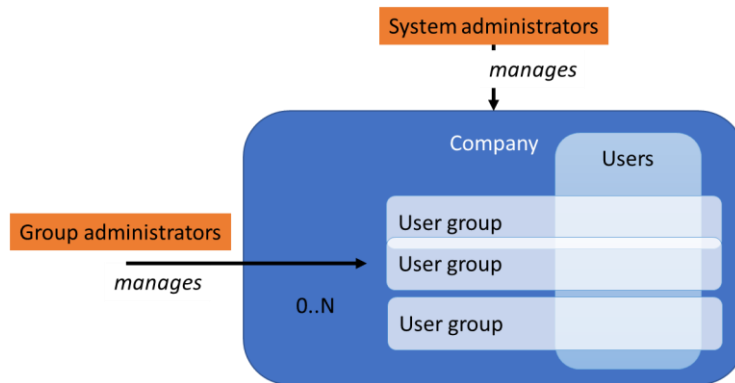
If you are managing user access to applications, we recommend you review all user-level assignments and create groups to replicate these assignments on the group level. Previous user assignments remain intact, but you will not be able to modify them going forward, only remove them.

There is no limit to the number of groups you are allowed to create, so you could map each user to their own group. However, it makes more sense to create group definitions and allocate users appropriately.

2.2.3 Distributed User Management

Support Article	Distributed User Management
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This release introduces the 'Group administrator' role to the Access Management module. This role is like a "light" system administrator and allows the person with this role to manage users of specific user groups within a LogicNets installation. The picture below explains this.



As opposed to a system administrator, who can manage all the users and user groups of the system, a group administrator is restricted to managing users within the groups to which he is assigned as an administrator. This functionality is especially useful for customers with a large user base, where the system administrators want to delegate the user management tasks to group administrators.

2.2.4 Command Line Interface

Support Articles	Access Management Tasks Instance Management
-------------------------	--

We have added the command-line interface *InstanceManagement* and *AccessManagement* to this release. These interfaces allow you to script and automate your instance and access management tasks using command scripts.

2.2.5 ADFS Support

Support Article	Configuring ADFS with LogicNets
------------------------	---

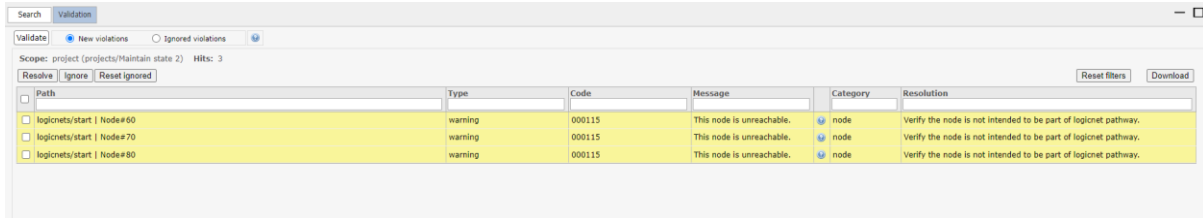
From this release forward, LogicNets supports connection to Active Directory Federation Services (ADFS) for single sign-on.

2.3 LogicNets Designer

2.3.1 Project Validation Tool

Support Article	Project-level Validation and Error Messages
------------------------	---

We have moved the location of the project validation tool in the Designer. It is now located in the bottom panel of the Designer, next to the search function.



The project validation tool is very useful, because it helps you to identify and fix issues in your projects and modeled content. The current version of the project validation tool checks for potential safety threats, deprecated parts, misconfigured parts, and missing resources.

The project validation tool will not automatically modify your project and modeled content, but some of the validation warnings/errors have a built-in resolution option you can trigger using the 'Resolve' button. Additionally, you can have the system ignore false positive warnings so they do not appear in the list the next time you run the tool.

2.3.2 Legacy Workspace Conversion

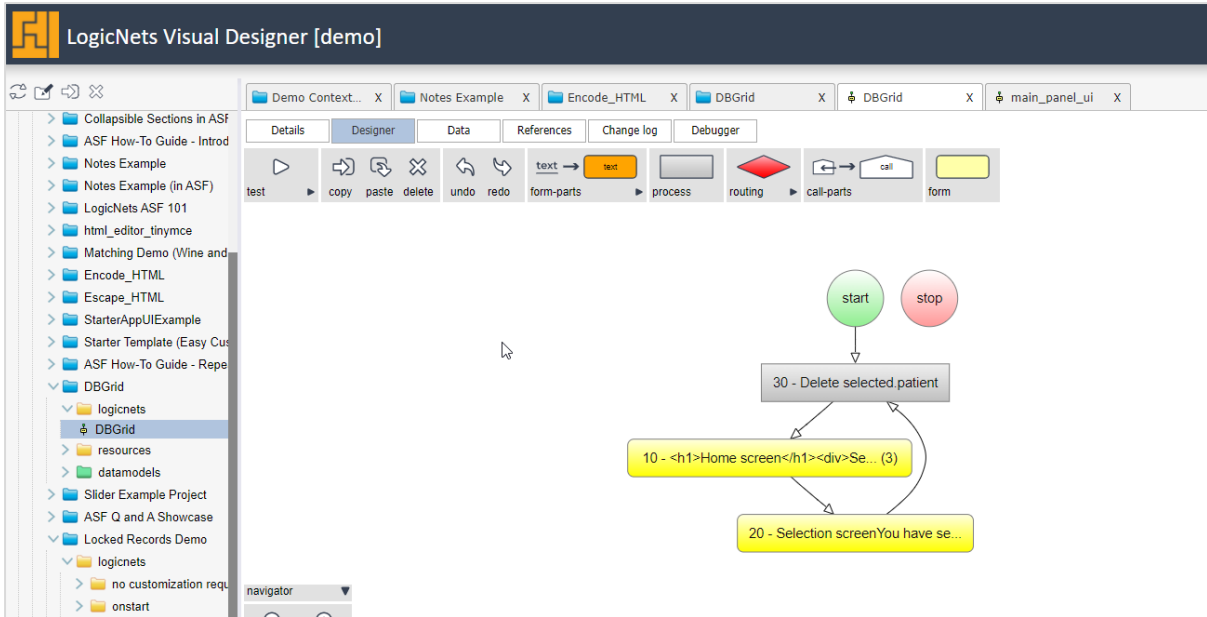
Support Article	Workspace Migration
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In Release 7, we enhanced the logicnets workspace with new export, search, and publish functionality; however, this new functionality was only available for projects created in Release 7 and higher. In Release 7.4, you can also convert your workspace and make use of this enhanced functionality.

2.3.3 Designer Tabs

Support Article	Designer Tabs
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From v7.4 forward, you can keep multiple project items open in the Designer Viewer, including logicnets, data tables, and images. This new feature allows you to quickly switch between different project items. Each open project item is represented by a tab in the tab bar at the top of the Designer Viewer, and you can easily switch between them by clicking on the corresponding tab.

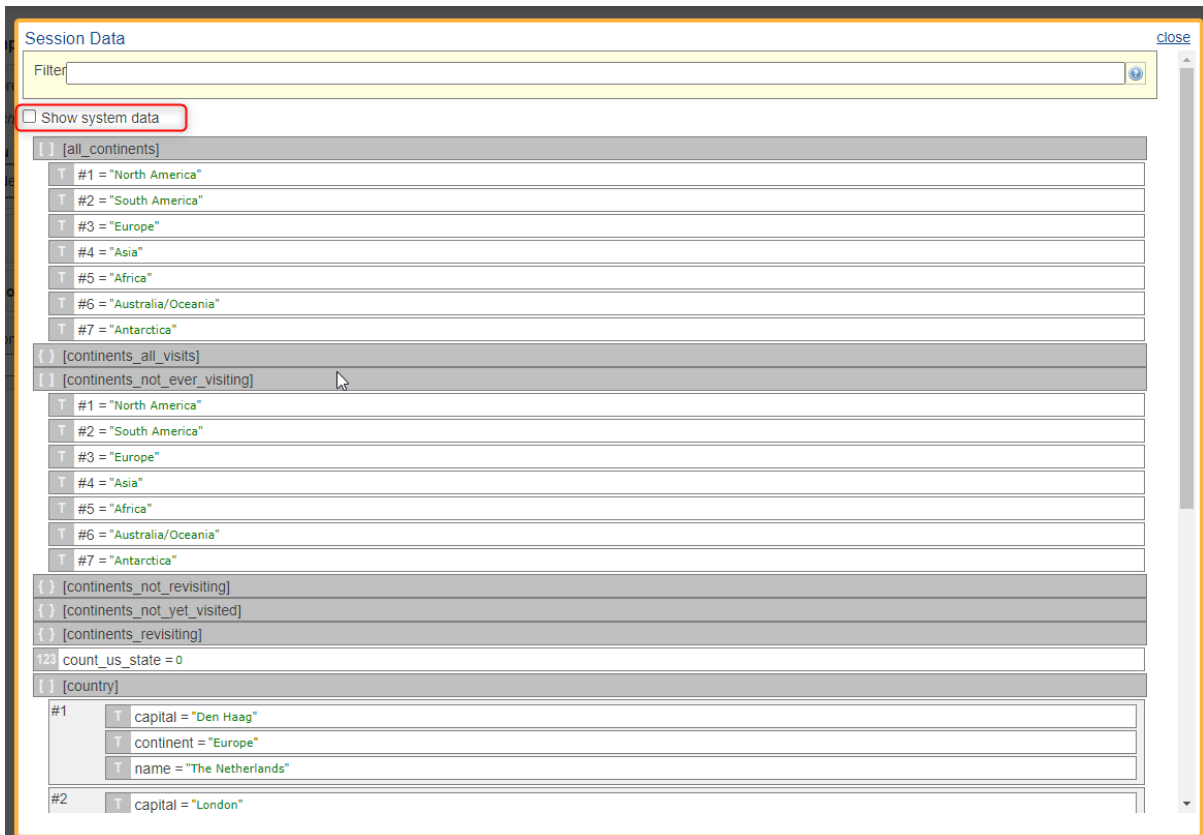


2.3.4 Show/Hide System Data Objects in the Data Viewer

Support Article

[Logicnet Data Viewer](#)

LogicNets has enhanced the logicnet Data Viewer with a filter for system data objects, which are those data objects generated by the platform application frameworks. By default, the system filters out system data objects so you can focus on the data objects generated by your application.

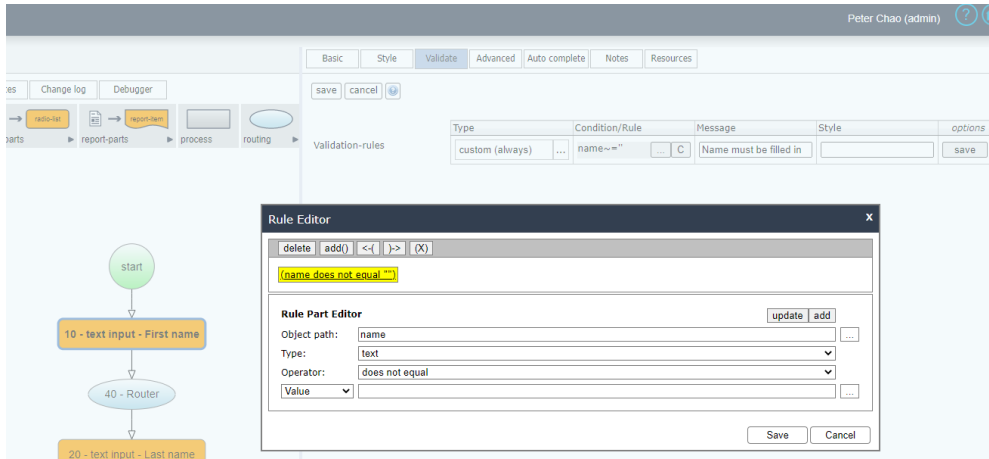


Additionally, LogicNets improved the layout of the Data Viewer to include type icons for the data objects.

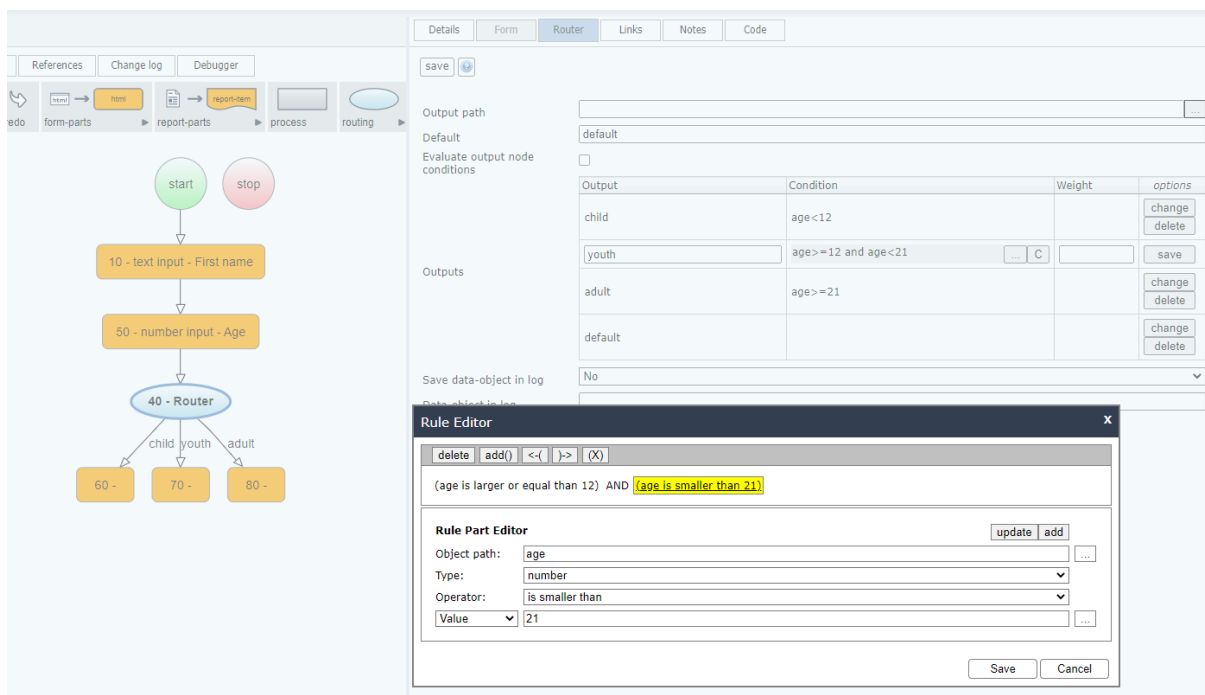
2.3.5 Rule Editors (*)

From v7.4 forward you will be able to use the rule editor to compose the logic of a validation rule/condition for the following:

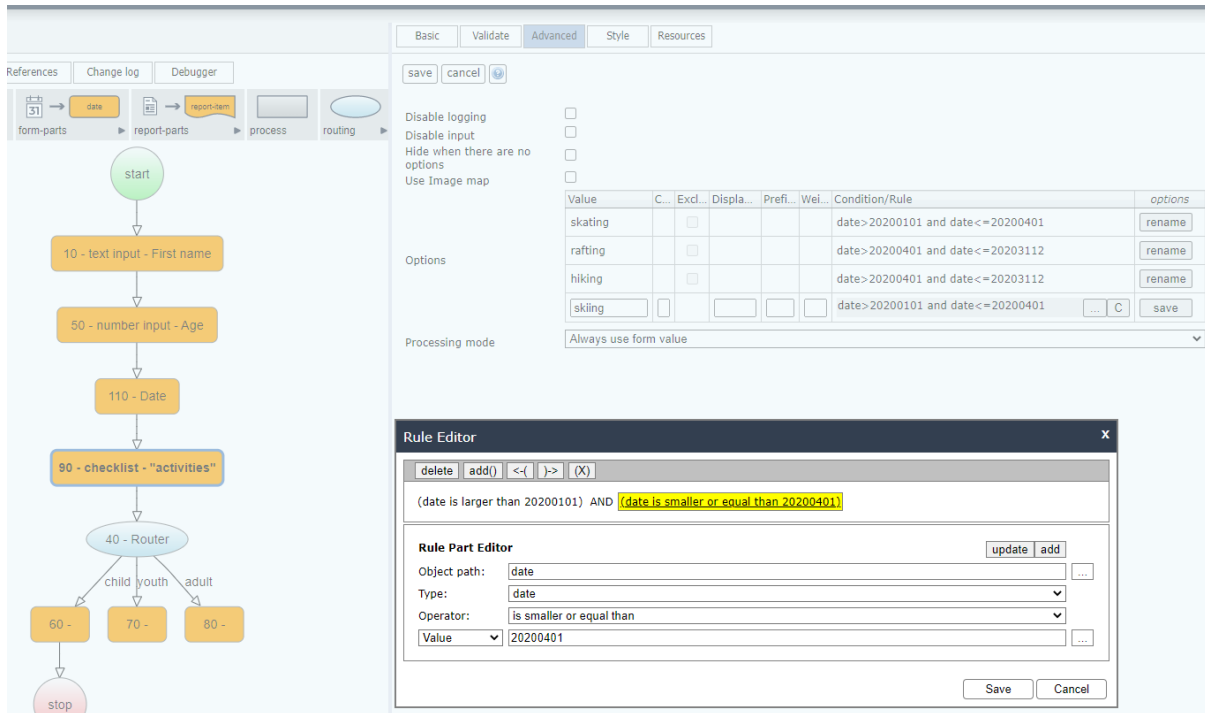
- The Validation rules for type "list all", "custom (always)", and "custom (value available)" in form parts:



- The Conditions in a Router:



- The Conditions for showing and hiding the options of a Radio List, Checklist, and Dropdown Menu:



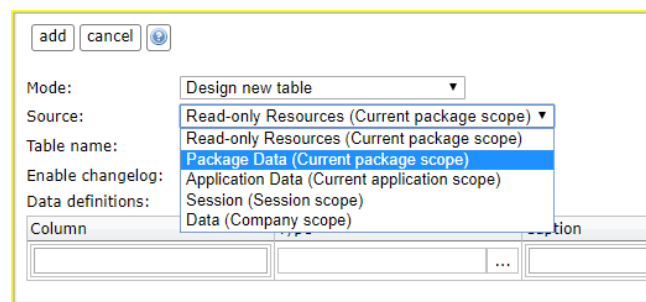
The screenshot shows the LogicNets configuration interface. On the left is a flowchart starting with a 'start' node, followed by '10 - text input - First name', '50 - number input - Age', '110 - Date', '90 - checklist - "activities"', and a '40 - Router' node. The router has three paths: 'child', 'youth', and 'adult', leading to '60 -', '70 -', and '80 -' nodes respectively, which all lead to a 'stop' node. On the right is the configuration panel with tabs for 'Basic', 'Validate', 'Advanced', 'Style', and 'Resources'. The 'Advanced' tab is active, showing options for 'Disable logging', 'Disable input', 'Hide when there are no options', and 'Use Image map'. Below these is a table of options with columns for 'Value', 'C...', 'Excl...', 'Displa...', 'Prefi...', 'Wei...', and 'Condition/Rule'. The table contains four rows for 'skating', 'rafting', 'hiking', and 'skiing'. A 'Rule Editor' window is open, showing a rule: '(date is larger than 20200101) AND (date is smaller or equal than 20200401)'. The 'Rule Part Editor' below it shows 'Object path: date', 'Type: date', 'Operator: is smaller or equal than', and 'Value: 20200401'.

2.4 Content Modeling – General

2.4.1 Package Data

Support Article [Data Storage Concepts](#)

'Package Data' is a new local package-scope data source that you can use for persistent storage of your application data. The key difference from the existing 'Resource' data source is that data that is stored to Package Data is not overwritten when you install or reinstall a package or updated package. Additionally, you can define your 'default' content to populate the tables in the Package Data when they are created for the first time.



The screenshot shows a configuration dialog for 'Package Data'. It has buttons for 'add', 'cancel', and a help icon. The 'Mode' is set to 'Design new table'. The 'Source' dropdown is open, showing options: 'Read-only Resources (Current package scope)', 'Package Data (Current package scope)', 'Application Data (Current application scope)', 'Session (Session scope)', and 'Data (Company scope)'. The 'Table name' field is empty. The 'Enable changelog' checkbox is checked. The 'Data definitions' field is empty. The 'Column' field is empty.

2.4.2 Post-Install Jobs

Support Article [Post-Installation Jobs](#)

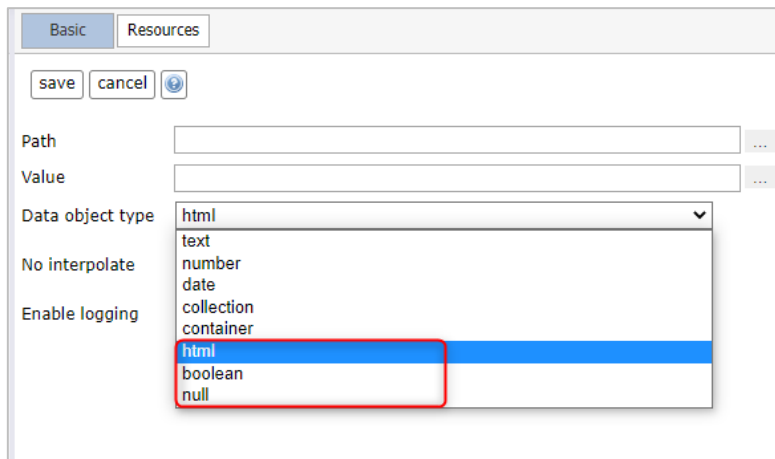
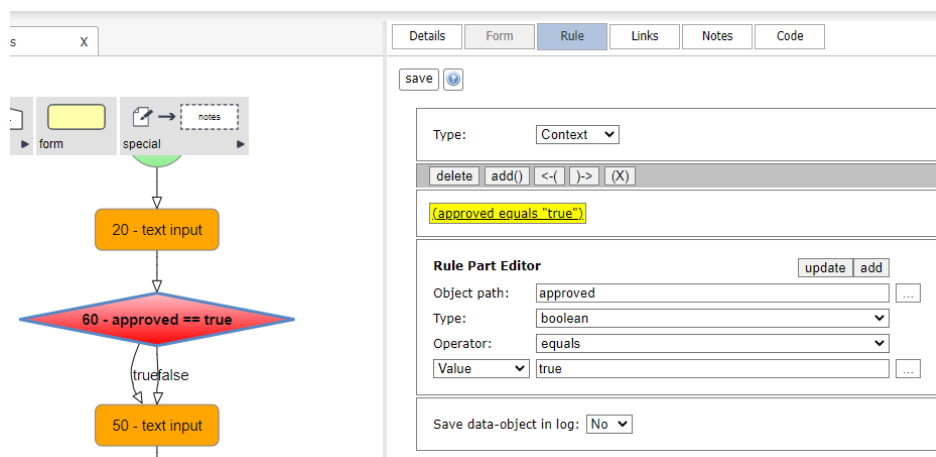
From v7.4 forward, you can add post-install jobs to your packages. Post-install jobs are logicnets that the system executes when you install a package, and these can include modeled data migrations, the setting of user defaults, creating user groups, and assigning roles. Post-install jobs can perform these actions rather than requiring that a system administrator manually perform them. They also prevent mistakes and provide you with configuration control.

2.4.3 New Data Types

Support Article	Set Data Object Value
------------------------	---------------------------------------

In v7.4, we have added the following new data types: *HTML*, *Boolean*, and *null*.

- The HTML data type allows you to explicitly mark certain content as safe HTML and prevent it from being escaped by the system.
- The Boolean and null data types complete JSON support in LogicNets. You can correctly import and export to JSON the Boolean values *true*, *false*, and *null*.

2.4.4 Package Installer Customization

Support Article	Package Installer Configuration
------------------------	---

We have added the Package Installer framework to this release, and it allows you to customize the standard LogicNets package installer tool with your own branding and decision logic in the form of installation rules. The installer framework also permits you to implement your own custom installation rules about which packages can be installed/uninstalled based on the role of the logged-on user.

Additionally, you can add tags to packages and query from within the application for packages with certain tags or characteristics.

2.4.5 Database Profiles

Support Article	Database Profiles: Oracle, MS SQL, and MySQL
------------------------	--

LogicNets supports integration with the following database management systems: MySQL, MS SQL Server, and Oracle. From v7.4 forward, you can control integration with these databases using

customizable database profiles. These database profiles allow you to configure the mappings between logicnets and database types, resolve naming conflicts with reserved database keywords, and define auto-increment behavior.

2.4.6 Code Validator (*)

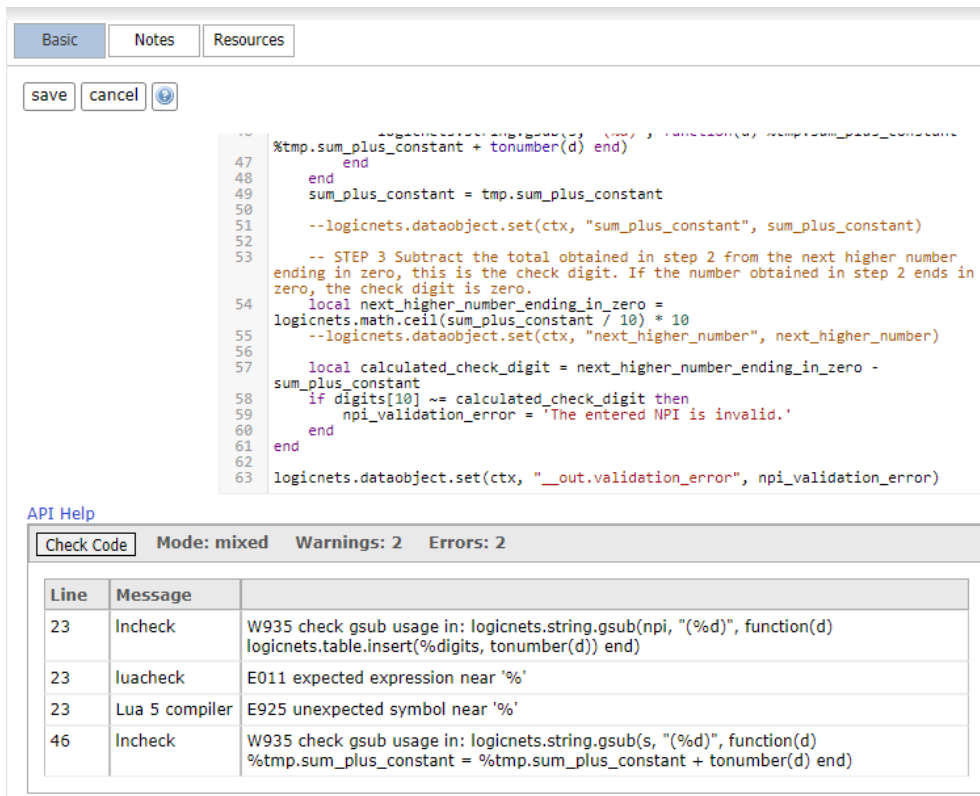
Support Article	Server-side Script
------------------------	------------------------------------

In v7.4, LogicNets has added a code checker to the script part. This allows you to check for errors in your Lua code.

There are four different types of checkers:

- Lua Check: This performs standard Lua syntax checks.
- LogicNets Check: This performs LogicNets-enhanced Lua checks.
- Lua 5 Compiler: This checks for Lua 5 compatibility errors.
- Lua 4 Compiler: This checks for Lua 4 compatibility errors.

The code checker helps you to spot errors in your script, but it can also help you prepare for your future migration to the Lua 5 that comes with the next release of the LogicNets platform.



The screenshot shows the LogicNets Code Validator interface. At the top, there are tabs for 'Basic', 'Notes', and 'Resources'. Below the tabs are 'save', 'cancel', and a refresh icon. The main area displays a Lua script snippet with line numbers 47 to 63. The script includes comments and function calls like `logicnets.math.ceil` and `logicnets.dataobject.set`. Below the script, there is an 'API Help' link and a 'Check Code' button. The status bar shows 'Mode: mixed', 'Warnings: 2', and 'Errors: 2'. A table below the status bar lists the errors:

Line	Message
23	Incheck W935 check gsub usage in: logicnets.string.gsub(npi, "(%d)", function(d) logicnets.table.insert(%digits, tonumber(d)) end)
23	luacheck E011 expected expression near '%'
23	Lua 5 compiler E925 unexpected symbol near '%'
46	Incheck W935 check gsub usage in: logicnets.string.gsub(s, "(%d)", function(d) %tmp.sum_plus_constant = %tmp.sum_plus_constant + tonumber(d) end)

2.4.7 New Parts (*)

This section introduces the new parts that are available with this version of the application. See the related support articles for more detailed information about each part.

2.4.7.1 Countdown Timer

Support Article	Countdown Timer
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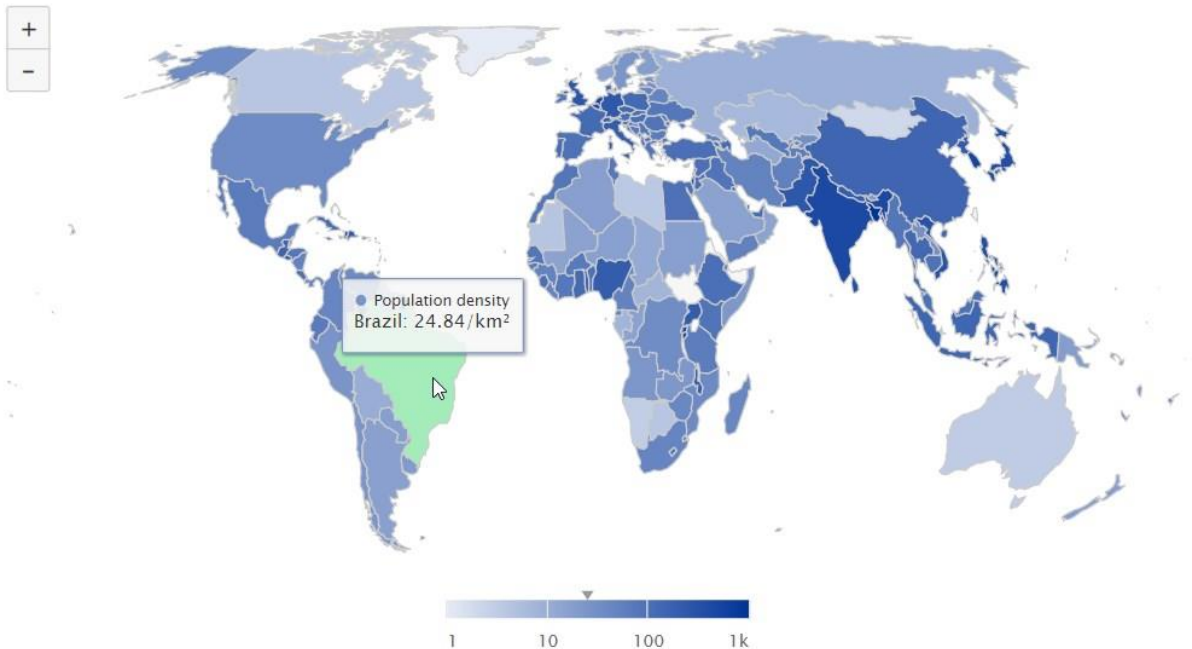
The Timer part allows you to create a countdown function for applications using the Starter Framework and model the actions the application takes once the timer reaches 0.



2.4.7.2 Display Chart (Map)

Support Article	Display Chart (Map)
------------------------	-------------------------------------

From v7.4 forward you can include in your applications dynamic maps that are based on the underlying data from your data model.



2.4.8 Updated Parts

This section introduces the updated parts that are available with this version of the application. See the related support articles for more detailed information about each part.

2.4.8.1 Slider Control

Support Article	Slider
------------------------	------------------------

The slider control part allows your application users to set a numeric input variable based on the position on a slider. Sliders are useful for allowing users to set values without typing numbers and for visually indicating discreet values in a small value set.



2.4.8.2 Datetime Input Control

Support Article	Date/Time Input
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This part replaces the current Date and Time parts. It allows your application users to type in the date and/or time or pick the date and/or time from a calendar. The part has features that include the ability to automatically format the type in date-time according to the localization setting.



IMPORTANT: ACTION REQUIRED

If you upgrade to v7.4 and your applications use older Date or Time parts, you will need to use the project validation tool and resolve any date/time part errors.

2.4.8.3 Vertical Repeater

Support Article	Vertical Repeater
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The vertical repeater is a variation of the repeater nodes, like the [Smartgrid Repeater](#) and [Tab Control](#). As with the Smartgrid and TabControl, you can model a logicnet to display and capture user input based on items in a collection. The vertical repeater displays these items in a vertical layout.



2.4.8.4 Export Table Data

Support Article	Export Table Data
------------------------	-----------------------------------

This part allows you to export table data to an .xml, .xls, .txt, or csv file.

2.4.8.5 Fetch Package

Support Article	Fetch Package
------------------------	-------------------------------

This part allows you to retrieve information about packages installed on the system.

2.4.8.6 Get Package Name

Support Articles	Get Current Package
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This part retrieves the name of the package of the logicnet from which this part is called or the name of the package of the provided logicnet name.

2.4.8.7 Get Files/Folders in Order

Support Article	Get Files/Folders in Order
------------------------	--

With this part you can retrieve a list of project items in a project folder, such as the logicnets, images, content, or subfolders. The system writes the detailed information about the project items to a collection data object in the same order as they are stored in the project folder.

2.4.8.8 Package and Tag Lookup

Support Article	Package and Tags Lookup
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This part allows you to retrieve a list of packages installed on your system that are associated with selected tags.

2.4.8.9 Text-to-HTML Conversion

Support Article	Regenerate HTML
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This part converts a piece of text to HTML.

2.4.8.10 Strip HTML

Support Article	Strip HTML
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This part strips all HTML tags from the input. It also allows you to replace certain HTML tags with other text; for example, you could replace the HTML for new lines (
) with the text new-line character (\n) or place a new line behind each bullet of an HTML bulleted list ().

2.4.8.11 Generate Data Log

Support Article	Generate Data Log
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This part allows you to retrieve a copy of the current data log, which may be useful to you for review meta-information about the questions on your form or if you want to export it.

2.4.8.12 Extract Data Objects from Data Log

Support Article	Extract Data Objects from Data Log
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This part allows you to update the context and data log with the entries in the provided data log collection.

2.4.8.13 Close Session

Support Article	Close Session
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With this part you can have the system close the current session to prevent your application users from continuing to use the application.

2.4.8.14 Get Session

Support Article	Get Session
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This part loads the last-stored version of the current session and encodes it as a Base64 string.

2.4.8.15 Get Application Details

Support Article	Get Application Details
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This part retrieves the details of your running application, including the package name, category, version, and settings.

2.4.8.16 LUA Transform

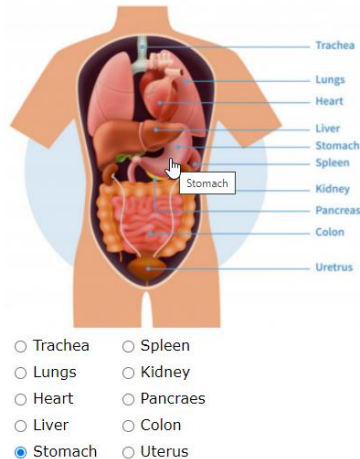
Support Article	LUA Transform
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This part allows you to transform one Lua structure into another based on a given schema.

2.4.8.17 Clickable Image Maps

Support Article	Radio List Checklist
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From v7.4. forward you are able to use a clickable image map with radio button or checklist parts, allowing you to present the options available in your list in a clickable image. You can do this in addition to or instead of providing a standard radio button or checklist option.



2.5 Content Modeling – Web Services Framework

2.5.1 Token-based Authentication

Support Article	Web Services Access Control
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Previous LogicNets releases supported basic authentication. From this release forward the system will allow you to use bearer tokens to authenticate your web-service application. Although the basic authentication method is technically simpler and easier to set up, the token-based authentication method is safer and provides the following advantages:

- The lifetime of a JWT token is limited, so a stolen token cannot be reused indefinitely.
- Since all the necessary user information is included in the token, there is no need to store user information locally in your LogicNets installation.
- The token is signed with a RSA256 key.

2.6 Content Modeling – Application Starter Portal Framework

2.6.1 Custom Layout

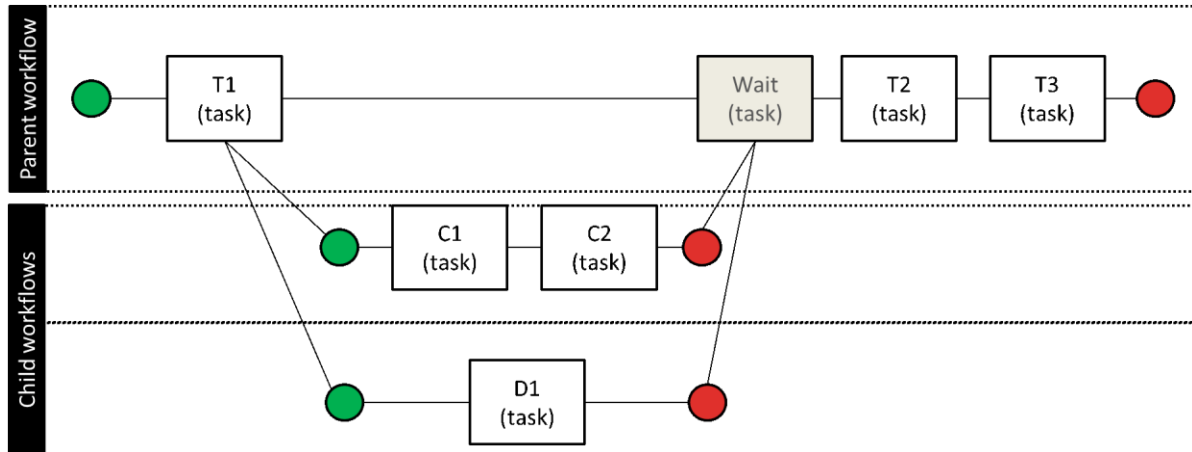
Support Article	Custom Screen Layout and Structure
------------------------	--

From this release forward you can define your own frame layout in the Application Starter Portal framework. This gives you a more flexible way to organize sections in your application the way you want. Previously, the number of layout sections were fixed with predefined names, and you could only switch sections on or off. Using your own layout templates removes this limitation.

2.6.2 Child Workflows (*)

Support Article	Creating and Using Subworkflows
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From this release forward you can create and start parallel subworkflows from your main workflow. You can also require that these subworkflows are completed before the system continues through the main workflow.



2.7 Content Modeling – Assessment Framework

2.7.1 Collapsible Sections

Support Article	Collapsible Section
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With this release, you can use collapsible sections in your Assessment-Framework-based applications, allowing you to minimize the amount of vertical space required to display content in your application.

2.8 Content Modeling – Support Center Framework (*)

2.8.1 Save and Resume Sessions from Your Portal Application

Support Article	Saving and Loading from Your Starter Application
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With this release, you will be able to save and resume a session in your Support Center Framework-based application for your Application Starter Portal Framework-based application.

2.8.2 Support for Externalized Data Storage

Support Article	Configuring Your Data Storage Location
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With this release, you can externalize the storage of the Support Center Framework-based application. You can also now store the diagnostics data collected via your Support Center Framework-based application to a MySQL, Oracle, or MS SQL database.

2.8.3 Historical Data

Support Article	Customize Your Historical Data Selection
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With this release, you can control the set of historical data that the system feeds into the cause selection control.

3.0 Other Enhancements and Bug Fixes

In addition to the functionality mentioned in other sections, Release 7.4 includes the enhancements and bug fixes detailed below.

3.1.1 General Platform

Functional Area	Update	Issue #
Security	Activated Cross-Origin Resource Sharing and Content Security Policy.	LN-9256
Security	Removed server information from response headers.	LN-9252
Security	Upgraded default web security level to 'Safe'.	LN-8009
Session timeout	Fixed the issue with session timeout when a child session is open.	LN-8668
Log	Solved the issue with multiple 'Duplicate part id detected' warnings displaying on screen when the application is started debug mode. Converted log type of these message to 'info'.	LN-4408
Email	Fixed issue with email not being sent on CentOS.	LN-6981
Error Pages	Updated the look and feel of standard error pages.	LN-6898
Third-party Libraries	Updated LogicNets third-party libraries: <ul style="list-style-type: none"> • jQuery v3.6.0 • jQuery UI v1.12 • xmlsec1-1.2.30 • libxml2-2.9.9 • openssl-1.0.2 • openssl-1.1.1q 	LN-7589 LN-11478

3.1.2 Installation and Configuration

Functional Area	Update	Issue #
Custom Installer	Added support to include template projects and favicon to custom installers.	LN-8637
Email	Added the ability to configure the subject line of the system-generated user authentication emails.	LN-7340

3.1.3 LogicNets Designer

Functional Area	Update	Issue #
Publishing	Added configuration setting to switch on/off the use of the project meta-XML file (default: off). The project XML is only useful with the integration of LogicNets with an Enterprise Content Management System. Note: The project meta-XML file impacts the performance of publishing and runtime performance of your application.	LN-7326
Publishing	Fixed issue with missing resources in published packages. When multiple projects are published at once, resources were not correctly transferred to the published packages.	LN-9870
Workspace	Fixed issue with blank input form in the new project window. When a workspace had been created with invalid characters in the workspace name the new project window does not allow the creation and entering of the name of a new project. A workspace name may only consist of the following character: a-z A-Z 0-9 (space) _ - .	LN-7938
Workspace	The name of the workspace now shows on the top bar of the Designer.	LN-9195
Data	Fixed issue with blank screen when switching between database tables in 'resources > tables' folder. When sorting is set to one of the columns of a table and the view is switched to another table, a blank screen may appear.	LN-6300
Framework	Fixed issue with nodes toolbox definitions in framework projects. When a framework project is created based on another framework the nodes toolbox setting overrides to show/hide nodes was not working properly. Now the parent framework	LN-6152

Functional Area	Update	Issue #
	<p>elements can be disabled using checkboxes and only the additional override settings need to be configured.</p> <p>More details on building your own frameworks can be found in this support article: Customized Frameworks</p>	
Logicnets	Fixed issue with the automatic resetting of the zooming of the logicnet after pressing the Save button in the node details pane.	LN-5757
Project Validation	Added validation warnings for self-closing, non-void tags. HTML non-void tags cannot be self-closing, so a validation warning will display where you have modeled HTML with self-closing, non-void tags.	LN-9459
Logicnets	The context menu of a node has a new menu item called 'add call nodes'. If you select this item, the system adds a call node after the node for each of the node's output options.	LN-9999
Logicnets	LogicNets fixed a bug that caused a crash with a rule expression that contains '%'.	LN-10823

3.1.4 Content Modeling – General

Functional Area	Update	Issue #
Advanced Calculation	Added support for the mathematical functions floor, ceil, min, max, exp, log, log10, sin, cos, tan, asin, acos, atan, pow, deg, rad, sqrt, mod, abs, pi and comp.	LN-6325 LN-10632
Calculation	Added configuration setting for setting the number of decimals places for rounding.	LN-8879
Collapsible Section	Added 'Data object', 'Expand/collapse callback' and 'Initially expanded' configuration settings, which allow you to store the expanded/collapsed state and control them from the logicnet.	LN-6137 LN-7156
Content References	Added mp4 support to content articles.	LN-5925
Convert Text to Collection	Added configuration setting 'Conversion type'. The new 'Force collection' conversion type allows you to create a single-entry collection from the text in the input.	LN-6743
Convert Text to Date	Added support for short years, e.g. 01/01/99.	LN-8415
Copy/Merge	<p>Added the copy/merge part to both the 'Data objects' and 'Collections' menu.</p> <p>With this part you can create a new data object as a copy of an existing data object or merge the data of an existing data object into your target data object.</p>	LN-5238
Database	Fixed issue with Get Records failing on tables in Oracle databases.	LN-9981
Database	Fixed issue with writing the error of a failed Get Records to the log object.	LN-10071
Database	Added query operators 'in', 'not in', 'is larger than', 'is smaller than', 'is larger or equal than', and 'is smaller or equal than' for text columns. Added query operators 'in' and 'not in' for number columns.	LN-8107
Database	Added check for insertion of text in a number column. Number columns only accept numeric values or 'NuLLeD'.	LN-7956
Date Difference	Output now includes 'counted' years, months, days, hours, minutes, and seconds.	LN-8099
Date Input	Fixed crash when user enters a year > 2035 in the date input. This date input is a deprecated part, so we advise you to use the new date time input part, which does not have this issue.	LN-7174
Dbgrid	Reorganized the Dbgrid editor, grouping related settings and splitting up basic and advanced settings. Fixed issue with order-by on multiple columns.	LN-9591 LN-9587 LN-9547

Functional Area	Update	Issue #
	<p>New functionality:</p> <ul style="list-style-type: none"> Aggregate functions MIN, MAX, COUNT, AVG, SUM, and GROUP_CONCAT Column aliases, to be used with columns with SQL expressions and aggregate functions Totals row Range filtering in numeric columns CSS style class for options buttons 	LN-8914 LN-8902 LN-8433 LN-8193 LN-6577
Display Chart	<p>Fixed issue with series configuration in which if the configuration is by a JSON data structure, the 'series' part of the configuration was ignored.</p> <p>New functionality:</p> <ul style="list-style-type: none"> Support for \$() in the database queries The display chart part can now be added to your logicnet from the nodes toolbox 	LN-7937 LN-6864 LN-6844
File Download	<p>Added options to present the download of a single file or data object. The file download part replaces the deprecated 'Present download' part and includes its functionality.</p> <p>Note: You need to whitelist file paths to external directories.</p>	LN-8679
File Upload	<p>Fixed issue with uploading files to external network storage with Windows network paths.</p> <p>Added support for files larger than > 100Mb</p> <p>Added progress indicator</p> <p>Added the possibility to cancel the ongoing upload</p>	LN-8901 LN-10632
Format Variable	<p>Added the 'format always' option in the process mode. This option is useful when the input and output are the same data object, and where the input is an empty collection. Previously, without this option the output remained the empty collection. With this option the output is set to an empty string.</p>	LN-9009
Format Variable	<p>Added the new part parameter 'Target Type' to indicate whether the formatted output should result in plain text or HTML. Note: If the output is plain text the system will escape it for security.</p>	LN-9024
Notes	<p>Fixed issue with selection of note types. When custom types are used with notes where the caption and type are different, it can happen that no type is selected by default when the user clicks on the new note button.</p> <p>Fixed issue with the update of note types. New updates to note types were not saved.</p>	LN-8049
Radio, Checklist, Dropdown	<p>Added the ability to quickly switch a form part between radio, checklist, or dropdown.</p> <p>The 'route on output' option is only available for Radio and Dropdown parts with manual list type. Hence when switching from a Radio or Dropdown part to a Checklist part, this option and the corresponding node outputs will be cleared. Similarly, when one switches from 'manual' list type to 'table data' or 'collection', also this option and the node outputs will be cleared.</p>	LN-3028 LN-9999
Replace Text	<p>Added configuration setting to switch regular expressions on and off.</p>	LN-6829
Router	<p>Added support for commas in output names.</p>	LN-5934

Functional Area	Update	Issue #
Server Script, Custom Parts	Functions in the logicnets.os namespace require a special license to run.	LN-8387
Smartgrid	Fixed issues with losing IDs of Smartgrid items after resuming a session. New functionality: <ul style="list-style-type: none"> Support for \$() in the column names Configuration options to switch on/off 'add', 'delete', 'filter', 'sort', and delete confirmation 	LN-9460 LN-7853 LN-3853 LN-7157
Tab Control, Smartgrid, Collapsible Section	Fixed issues with disappearing parameter tab. When a call node that was previously modeled as function was reused for the Smartgrid, the parameters tab did not always show.	LN-7155
Text Input	Allow "_" in email addresses.	LN-8250
Text Input	Added HTML support for pre- and post-fixes.	LN-6267
XML XSLT	Changed the file path syntax to make it consistent with the rest of the platform. Previously the part accepted file@<package name>, now it should be <package name>@file. The <package name>@ is optional and only needs to be used when the input file resides in another package.	LN-6135
XPath	Fixed issue with query returning non-exact matches when no exact matches are found.	LN-10676

3.1.5 Content Modeling – Application Starter Portal Framework

Functional Area	Update	Issue #
Popup	Added a data object for storing the value of the button the user pressed to exit a popup.	LN-7437
Datalog	Fixed the issue where the caption was not exported with the data log.	LN-7330
Datalog	Fixed the issue where the data log for packages with a single input were not indexed.	LN-7329
Package Launcher	Improved performance when launching packages.	LN-6414
Validation Errors	Form nodes in the Start Application Framework now include the output 'validation_errors' for when validation errors are triggered in the form parts.	LN-10300

3.1.6 Content Modeling – Workflow

Functional Area	Update	Issue #
Workflow	Added the automatic storage of the workflow input data to the persistent task data container of the workflow.	LN-9864

3.1.7 Content Modeling – Assessment Framework

Functional Area	Update	Issue #
Info Panel	Added new 'pin-on-click' option.	LN-9764
Info Panel	Added a different help link to external resources, such as a Wikipedia article.	LN-7744
Form Title	Added a fallback to the name of the logicnet when the title or short caption is not specified. This can be turned on/off in the project settings.	LN-3025

3.1.8 Content Modeling – Web Services

Functional Area	Update	Issue #
Logging	log_outbound_ws_calls was not working in call_webservice when using in async mode (worker).	LN-7456
Error Handling	Permissions errors with Webservice calls in JSON were returned in HTML, instead of JSON.	LN-6898