Remarks

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This document contains the Release Notes with changes since version 6.3.22.

For details on upgrading to Appway 7, see the article: 'System Upgrade: 6.3 to 7.0' at:
https://community.appway.com/screen/kb/article/system-upgrade-6-3-to-7-0

For documentation of new and existing features, see the Appway Knowledge Base at:
https://community.appway.com/screen/kb

For information on Known Issues in Appway 7, see:
https://community.appway.com/screen/kb/article/appway-7-known-issues

For information on deprecated and removed features in Appway 7, see:
https://community.appway.com/screen/support/news/feature-removal-and-deprecation-planned-with-
appway-7-0
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Appway Platform (Core)

Feature

Area	Importance	Description
Actions and Events	High	The enhanced Event/Action framework allows the implementation of richer interactions and more flexible solutions. In addition to listening to their "own" Events, components can now listen to Events performed on other components and trigger defined Actions based on these Events. Components can also listen to Screen Events, e.g. to the resizing of a Screen, and react with a defined Action.
Business Object	High	The motivation for introducing Style Business Objects is to provide more stability and governance to solutions by removing the need to use custom CSS for comprehensively styling components and solutions. Using Style BOs, the styling of a component can be performed using an intuitive editor, specifically adapted to the component and providing an instant preview for all states and variations.
Client-side Rendering	Medium	Rendering of many Screen Components has moved from the server-side to the client-side. This drastically reduces the amount of data sent to the client, with positive effects especially for mobile devices. Additionally, this feature is the basis for more pure client-side operations, for example the new client-side Actions that act directly on components (introduced in Appway 7). This approach enables users to build solutions that make less server requests, resulting in a more responsive solution.
Cluster	Medium	MapStore Batching ensures optimized speed and stability when performing a large number of small write operations. Two related configuration properties are available: - ‘nm.cluster.persistence.threads.count = 4’. Defines the number of threads to use for persistence. The thread pool size is 2.5 times this property to allow multiple tasks to run in parallel (e.g. writing Value Stores and reading an evicted Cluster File). - ‘nm.cluster.persistence.tasks.timeout = 60000’. Sets the timeout in milliseconds to wait for tasks to complete. This timeout ensures that Hazelcast and HTTP threads are not indefinitely blocked.
Cluster	High	Value Store Splitting is a new tuning feature that allows the system to only fetch and update the data that is required as part of a request. This reduces network traffic as well as memory and CPU consumption, while improving response times and caching. When enabled (set nm.cluster.persistence.valuestores.splitting.enabled = true), all new Value Stores are automatically split and no further effort is required.
Inbox	High	Inbox represents the latest and most powerful evolution of the user portal concept within Appway. Designed with a focus on Work Automation and User Experience, significant emphasis was placed on improved usability and customizability. Inbox serves as a personal hub for end-users working with business applications developed with Appway and is designed to boost the efficiency of their interaction with these systems. Inbox is a solution-based feature and is delivered as a Package. The Inbox Package contains all relevant Business Objects allowing for easy implementation and customization. The new Inbox extension provides the required filtering, searching, paging, and sorting

		capabilities.
Master Password	Low	A new Script Function for changing the master password is available, which can only be accessed by server administrators.
Packages	High	Packages are a new organizational layer in Appway which drastically simplify the management of large and complex solutions, foster reuse across different solutions, and boost agile and parallel development for teams. A Package serves as a container for Business Objects, bundling Business Objects which belong together. More importantly, a Package clearly defines which of its Business Objects, and how its Business Objects may be used by other Packages.
Process Spectrum	High	Case Management is a new paradigm for dealing with complex and emerging tasks in a business context. In contrast to Process Management – a complementary paradigm already addressed in Appway – Case Management does not entail enforcing a strict, pre-defined sequence of actions to reach a particular goal. Rather, the new case-based approach requires defining the boundaries within which a user is free to choose from the available options to reach a goal. Cases provide guidance and recommendations, but always leave the final decision on the next step to take up to the expertise of the end-user. Cases can be configured using the new 'Case Template' Business Object.
Refactoring	Low	Improved performance of the Refactor ID feature by changing to a Business Object Dependency-based traversal algorithm.
Screen Component	Medium	The new 'Filter Tray' Screen Component allows end-users to filter and sort the contents of a screen, thus improving screen navigation and result refinement. Different types of filter designs can be utilized to best suit your use case and the associated data, for instance a multiple choice filter or a slider filter. This Screen Component is part of the ComponentExtension.
Screen Component	High	The new 'Form Channel' Screen Component is the first implementation of a new concept in Appway: Interaction Channels. An Interaction Channel is a fully automatic presentation layer, which means that it is self-adapting and populated dynamically based on a defined data context. Future Interaction Channels are not restricted to this form-based approach, but can take other forms, e.g. text- or voice-based conversational interfaces. The Form Channel is currently designed to work with Case Management. This Screen Component is part of the ComponentExtension.
Screen Component	High	The new 'Layout Container' Screen Component brings with it a maximum of flexibility and stability, allowing you to build exactly the layout you need. For example, you can define the orientation of the layout (horizontal or vertical) and nest Layout Containers in different combinations to achieve more complex structures. Intuitive configuration and predictable layouting structures make the creation process straightforward.
Screen Component	Medium	The new 'Navigation Menu' Screen Component creates a horizontal list of Navigation Menu Elements, which can e.g. act as links to different screens / pages. You define the exact functionality of each Navigation Menu Element by assigning an Action(s) that is triggered when a user clicks on the menu element. This Screen Component is part of the ComponentExtension.
Screen Component	Medium	The new 'Search Field' Screen Component is a text field whose appearance, controls, and configuration properties are designed specifically for searching data. The Search Field component is designed to appear on the page header. This Screen Component is part of the ComponentExtension.
Script Language	Low	The ReturnType and ParameterDescription annotations have been added to improve the documentation of the Primitive Type methods and to create strongly typed Appway return values.

Change

Area	Importance	Description
3rd Party Library	Low	Apache Commons HttpClient (HttpClient 3) has been substituted with Apache Commons HttpClient (HttpClient 4) in all of Appway; before HttpClient 3 was still used in some areas.
3rd Party Library	Low	Lucene: - Updated Lucene document index version - Fixed an issue where LuceneDocumentIndex rebuilt on every restart - Replaced Lucene libraries lucene-core-2.9.4 and lucene-memory-2.9.4 with libraries

		lucene-core-4.10.1, lucene-memory-4.10.1, lucene-analyzers-common-4.10.1, and lucene-queryparser-4.10.1 and made necessary code changes to adapt to API changes - Added Lucene library lucene-queries-4.10.1
3rd Party Library	Low	The following Java libraries were updated: - jQuery from 1.9.1 to 2.2.4 (and removed the nm.workspace.jquery.compatibility configuration property) - jQueryUI from 1.10.0 to 1.12.1 - jsTree from 3.1.0 to 3.3.0 - TableSorter from 2.0.0 to 2.0.5 - jQuery Timepicker Addon from 1.3 to 1.6.3 - Modernizer to version 3.1 (a custom build, containing just a minimal subset) - Masonry from 3.1.2 to 3.3.2 (fixed a Screen Editor preview in Firefox)
3rd Party Library	Low	Updated Apache Camel libraries to version 2.16.4. (from version 2.12.5). Moved camel-crypto, camel-http, camel-restlet and corresponding dependencies (org.restlet) into the ILBackwardCompatibility Extension.
3rd Party Library	Low	Updated Spring libraries to version 4.1.9.RELEASE.
3rd Party Library	Medium	Upgraded the Hazelcast library from 3.5.5-dev-20160118 to 3.6.5-dev-20160711 and also added the Hazelcast Client library.
Configuration	Low	The length of the value you can enter for the configuration property nm.uid.prefix is now limited to a maximum of 32 characters.
Data Classes	Low	Data Classes: The ‘Entity Store storage strategy’ property is no longer available. Existing settings are migrated to the new ‘Autonomous’ property introduced in Appway 7 which is relevant for the new Value Store Splitting functionality. The migration occurs according to the following logic: - Entity Store storage strategy = Strong / Autonomous=true - Entity Store storage strategy = Weak / Autonomous=false By default, 'Autonomous' is set to “true”.
Error Page	Low	The default business error page has changed in Appway 7. While the look and feel is consistent, some deprecated Screen Components and Actions were exchanged. See the 'Changes to Default Error Pages' section in 'System Upgrade: 6.3 to 7.0' for more details.
Job Scheduler Service	Low	Removed several deprecated methods related to scheduling and unscheduling jobs (scheduleJob(), unscheduleJob() and restartJobScheduler()). Also removed the deprecated com.nm.sdk.data.jobs.Job.
PDF Renderer	Low	The default value of the configuration property nm.pdfrenderer.encoding has changed from Cp1252 to Identity-H. This means that PDF documents generated with Appway now support Unicode characters by default. This change should not have any effect on existing solutions.
Resources	Medium	Up to Appway 7, access to Resource BOs via Url was not protected by default. It was however possible to add Resource BOs to an Access Policy to restrict access if needed. With Appway 7, this behavior has changed. Resource BOs are now protected by default, except for Resource BOs using the file types white-listed in the configuration property nm.workspace.resource.filetypes.anonymousaccessallowed (default value: js,css,jpg,jpeg,png,gif). Important! For Resource BOs in the Base Package, you can continue to define access through Access Policies. Access Policies take precedence over any settings made in the configuration property. See the 'Default Accessibility of Resource Business Objects via Url' section in 'System Upgrade: 6.3 to 7.0' for details.
Rule Editor	Low	Screen Action and Document Action: The properties "Screen" and "Document" are now dynamic. If an existing rule has used such an action with one of those properties set to a special variable value ("$inputFormActionDocumentId", "$inputFormActionInputFormId", or "$outputFormActionDocumentId"), the property value is now automatically converted to an expression when the rule is loaded from XML code.
Screen Components	Low	The 'Text' Screen Component can now only be used for normal text. The 'Style' dropdown on the Properties tab allowing you to select other styles is no longer available. Instead, dedicated components were created for the other styles: Heading 1 - Heading 6, Code, Preformatted Text and Paragraph.

Security	Low	Access to KeyService functions is now limited to functions that create keys, test if keys exist, remove keys, and encrypt/decrypt text. Usage of these functions is only available to users in the Administrator role.
Security	Low	The KeyService is now cluster-based for better stability. This change is seamless and requires no user interaction. During the first startup, the node holding the init latch places all of the keys from the conf/key.properties file into the 'cryptoKeysMap' cluster map. Then the file will be deleted. All other nodes just delete the key.properties file. Note: If your Appway installation uses a Relational database or Cassandra as a cluster storage backend, you need to create the 'cryptokeys' table manually. See the 'Cluster Storage Update' section in 'System Upgrade: 6.3 to 7.0' for details.
Studio	Low	It is no longer possible to create a new Integration Link from the Integration Link Management menu.
Studio	Low	The browser rules now determine whether a new window or a new tab is opened when you access a new page in the Studio.
Studio	Low	The function of the ESC key has changed: it can now be used to close modal windows, clear the content and remove focus from filters and other similar actions. Before Appway 7, ESC invoked FastTrack, which is now opened with Shift-Space instead.
Studio	Medium	The number of left side menus in Appway Studio has been reduced and their content reorganized for a more intuitive navigation experience. The new menus are: Solution Design, Solution Maintenance, Data & Integration, System Maintenance, and System Configuration. Tip! Instead of navigating through the menus, you can alternatively use the new "Go To" command available in Fast Track (invoked by Shift+Space in the Studio). This command allows you to easily jump directly to different Studio sections.
Studio	Low	The option for Locking /Unlocking the Application was moved from the Deployment menu to the new location: System Maintenance > System Overview > Platform Locking.
Workspace	Low	Changed the default value of the configuration property 'nm.workspace.validation.mandatory.ignoreWhiteSpacesAsInput' from 'false' to 'true'. The new default behavior is to ignore white space entered in fields with a Validator of the type mandatory; this means that the field will not validate in such cases.
Workspace	Low	The design of the default login page has changed and now uses a reduced and minimalistic design.

Bugfix

Area	Importance	Description
Documents	Low	Fixed the GeneratePdfFunction which was empty after merging due to an issue in conflict resolution.

Appway Extensions

Feature

Area	Importance	Description
Extension	Medium	DataStore Extension 3.3.3 - Feature: Each Data Class mapped in a datasource now has metadata with the key 'DataStore_tableName' that contains the name of the database table. - Feature: The Script functions 'GetDataStoreTableName' and 'GetDataStoreHistoryTableName' have been added to retrieve the table name of a Data Class mapped to the database. From now on, each raw SQL script has to contain the table name resolved using this function, instead of the DataClass id. To strengthen the scripts, it is recommended to also use these two functions for raw SQL scripts involving Data Classes mapped with a previous version of the DataStore extension. Example: String $dataSourceName := 'mysql'; String $query := 'SELECT * FROM "' & GetDataStoreTableName(Person) & '"'; Indexed Person $persons := LoadDataEntities($dataSourceName, Person, $query);

		- Change: Each Data Class mapped via release 3.3 of the DataStore extension has a unique table name starting with 'DS_' and followed by 22 letters and numbers. The name is case sensitive and occasionally contains underscores. - Change: Renaming of Data Classes mapped into the database does not require changing the database table name. - Change: The table 'DsRelations' (in the 'sourceType' and 'targetType' columns) contains the database table name of both of the Data Classes involved instead of using the Data Class id. Nothing changes for Data Classes mapped before this new release, since they keep the table name. -Change: DataStore is now a permanent extension. -Change: Special procedures must be taken into consideration for renaming, duplicating, moving, and importing Data Classes which are mapped into the database (see section 1.10 of the DataStore documentation). - Change: The following Primitive Types support Value Store Splitting: CompoundTerm, SimpleTerm and SortingTerm. Note: If Value Store Splitting is enabled, then the values of the previous mentioned Primitive Types are serialized/deserialized into/as a null value only if they are set as a property of a Data Class.
Extension	Low	DeprecatedFunctions Extension 1.0.0 Use this new extension if you want to continue to use any of the Script functions deprecated in Appway 5.1 in Appway 7. See the 'System Upgrade: 6.3 to 7.0' article on community.appway.com for more details on the extension and the affected functions.
Extension	Medium	ILBackwardCompatibility Extension 1.0.2 Use this new extension if your solution uses an Integration Link that fulfills these two conditions: - Uses either the “Camel Queue” start element or the “Camel Queue Notify” component, - with an Endpoint URI parameter starting with: restlet, http or crypto. See the 'System Upgrade: 6.3 to 7.0' article on community.appway.com for more details.
Extension	Medium	UnprotectedExecutionFunctions Extension 1.0 Use this new extension if your solution uses the JAVAEXEC or EXEC function and you want to continue to do so in Appway 7. See the 'System Upgrade: 6.3 to 7.0' article on community.appway.com for more details.

Change

Area	Importance	Description
Extension	Low	BAM (Business Activity Monitoring) Extension 3.4.3 - Change: The DataClasses BAMFilter and BAMActivityFilter are now protected: they cannot be deleted, moved, or refactored. - Change: All Screen Components which were used in the BAM Dashboards and deprecated in Appway 7.0, were replaced with corresponding new Screen Components. - Change: Removed the BAM Simulation Module. BAM (Business Activity Monitoring) Extension 3.4 - Change: Moved BAM sections in the Studio to new locations: sections under BAM (Measure&Analyze, BAM Dashboards and SLA report) are now located under Solution Maintenance > BAM; the installation page previously located at Administration > BAM > BAM installation is now found at Platform Configuration > BAM > BAM installation.
Extension	Low	CassandraHazelcastStore Extension 21 (21.0.2)

		- Change: The extension now uses MapStore batching. - Change: Removed the 'exists' check when writing or deleting rows. - Feature: Added the possibility to set the Cassandra driver read timeout using the extension property com.nm.cluster.cassandra.readTimeoutMillis. - Feature: Username and password can be provided using an external identity provider implementing the IdentityProvider interface which can be used importing identity-provider-xx.jar in the project. Upgrade notes: - Ensure the table 'valuestoretodataentities' exists. - Ensure the table 'dataentities' exists. - Ensure the table 'chatunreadinfos' exists. - Ensure the table 'licenselogentrylists' exists. - Ensure the table 'cryptokeys' exists. - The table 'entityindexdefinitions' is no longer needed. See the 'System Upgrade: 6.3 to 7.0' article on community.appway.com for more details on creating tables.
Extension	Low	CustomSensors Extension 0.4 (0.4.2) - Change: Configuration properties for this extension can no longer be set via the system configuration (System Configuration > Configuration Properties). Instead, set them directly in the Extension properties. If you have specified configuration properties for the CustomSensors extension in your system configuration, move them in one of the following ways: - Go to System Configuration > Extensions and manually set the properties of the CustomSensors extension (right-click on the extension and select Edit Configuration). - Create a CustomSensors.cfg file in the extension folder and add the properties there.
Extension	Low	IntegrationLinkComponents Extension 1.4.1 If you are using the IntegrationLinkComponents extension together with JNDI to reference connection factories and queue names, ensure the following libraries are present in the application server libs directory: - activemq-client-5.10.2.jar (instead of the old activemq-core-5.5.0.jar) - hawtbuf-1.10.jar - Suitable JMS provider libraries See the 'System Upgrade: 6.3 to 7.0' article on community.appway.com for more details on the extension and the affected functions.
Extension	Low	Mail Extension 3.1.1 Change: The scope of the GetScreenHTML function, which renders a 'Screen' Business Object and returns HTML code, has changed. Currently, only the following subset of Screen Components is supported: - Text, Heading 1, Heading 2, Preformatted Text and similar components - Link and Link Container - Image and Div - Info Table and its subcomponents - If, For, For Each and other logic components - Include, Template, Template Area, Placeholder - HTML Head Style, Script, Raw Code and Raw Code Container
Extension	Low	RelationalDbHazelcastStore Extension 11 (11.0.1) - Change: The extension now uses MapStore batching. - Change: Connections are now fetched from the pool when needed. Upgrade notes: - Ensure the table 'valuestoretodataentities' exists. - Ensure the table 'dataentities' exists. - Ensure the table 'chatunreadinfos' exists. - Ensure the table 'licenselogentrylists' exists. - Ensure the table 'cryptokeys' exists. - The table 'entityindexdefinitions' is no longer needed. See the 'System Upgrade: 6.3 to 7.0' article on community.appway.com for more details on

		creating tables.