Appway Platform (Core)

💡 Feature

Area	Importance	Description
Administration	Low	New administration tool "System > Cluster Cache" implemented. It is used to manage the entries in the cluster cache.
Administration	Low	Script Language: Contexts: The table of contexts now uses interlines to make it possible to display the whole location path, without having to resize the column.
Administration	Low	User Roles and Groups: The dialog for adding/removing users to/from a role or group now supports multiple interval selection.
Catalogs	Low	Three new properties added to Cache Filter: "Cache Location": The default value is "Application Cache (local node)", which means that the cache content is stored in the application cache. If set to "Cluster Cache (distributed)", the cache content is stored in the cluster cache and is therefore shared by all cluster nodes. "Enable Fallback" and "Validation Expression": Used to check if newly acquired records are valid or not. If not, they are rejected and old existing values will be continued to be used.
Cluster	Low	A new scheduled job "Cluster System Time Sync Check" automatically checks the system time on all cluster nodes. The job runs by default every 20 minutes. If system time is not within a range of 10 seconds on all nodes, a warning message is generated: "Cluster system time out-of-sync! (current difference is 42s.)"
Cluster	High	Cluster functionality enabled. A single Appway installation can now be installed on multiple servers nodes. Distributed Services: Almost all services in Appway now work in a distributed fashion. Services are now either using inherently distributed state (e.g. distributed maps) or they make sure to keep their state synchronized over all cluster nodes (e.g. using distributed messages or distributed tasks). A complete new set of services has been implemented to support cluster-wide storage (Cluster File Service and Cluster Cache Service), locking (Cluster Log Service), logging (Cluster Log Service).
Cluster	Low	Default Hazelcast configuration: - near cache eviction policy set to LRU - near cache TTL set to 1 hour - near cache uses object format and also caches local entries
Cluster	Low	The new scheduled job "Cluster Size Check" checks if the current cluster size (number of nodes) is smaller then the configured minimum cluster size and generates a warning message "Current cluster size '2' is smaller than initial min cluster size '3'" if such a situation is detected. The warning message has a cool-down phase of 10 minutes. In addition to this, the job also reports the current cluster size as info log message.
Cluster Cache	Low	New functions for distributed application cache added: ClusterCacheStore, ClusterCacheLookup, ClusterCacheRemove, ClusterCacheClear, and ClusterCacheNames. Dependencies on cluster cache entries implemented.
Cluster Storage	High	Persistence: Business objects, users, process instances, value stores and most other objects in Appway are now stored in the "cluster storage". The concrete cluster storage implementation can be exchanged. The default (and only built-in) cluster storage is based on the file system. It saves all objects in subdirectories of a new top-level directory "cluster" in the data home. Alternative cluster storage implementations for Cassandra and JDBC databases are available as extensions. Persistence is managed by Hazelcast. By default, objects get saved with a write-behind strategy 10 seconds after they have been modified and committed in memory.
Configuration	Low	The two new configuration properties "nm.memory.job.schedule" (default value: "30 * * * ?") and "nm.memory.job.paused" (default value: "false") may be used to change the schedule and pause the "Low Memory Check" background job.
Console	Low	Integration Links: New context menu items "Restart" and "Reset Statistics" added.
Console	Low	Java Threads: The Java thread details dialog opened with "View Stack Trace..." now shows more Appway-related information like the current user, the HTTP request URL, the time the thread is already active and an "Appway stack trace" based on the location stack.

Console	Low	Process Instances: Added multi-selection to the list of process instances. A toolbar has been added to execute actions on the set of selected process instances.
Core	Low	Diff viewers now have a jump to prev/next diff feature.
Deployment	Low	Importing business objects now generates an automatic discussion message.
Deployment	Medium	It's now possible to export deleted business objects. On the target system, they'll appear as deleted uncommitted business objects (if the user doesn't choose to commit upon import). This allows administrators to propagate business object deletions among different Appway systems. The export dialog now has a new column called "Active", which indicates whether a business object is deleted or active. Since deleted committed business objects are never automatically removed from an Appway installation, this means that the export dialog will always show all deleted committed business objects that ever existed on a system, unless they're purged manually.
Integration	Low	Appway now has better support for HTTP/HTTPS-based integration. It manages SSL certificates for server and client authentication and supports file uploads.
Integration Link	Low	File/Directory Scanner: New property "Use Done File" added. If checked the scanner will only process a file if there exists a file with the same name ending with ".done".
Monitoring	Low	JMX counters for Cluster features added.
Performance	Low	Collect screen rendering and processing statistics. This feature is disabled by default. Set the configuration property "nm.screenstatistics.enabled" to "true" to enable it. Changing the configuration property has an immediate effect (no restart required).
Platform	Low	Shutdown: HTTP requests sent to Appway after a shutdown has been initiated are blocked and an error message is displayed to the user.
Platform	Low	Startup: Extensions: Appway now adds the version number of the extension to the log entry created when the extension is started.
Process Editor	Low	Implemented new process task "Evaluate Rule". This allows to evaluate a single rule instead of having to evaluate a complete rule set. This makes it easier when not working with rule sets and avoids to create artificial ones.
REST Service	Low	First implementation of a very simple REST service interface. In order to enable the REST service, the configuration property "nm.rest.service.enabled" has to be set to "true" (default value is "false"). The configuration property "nm.rest.service.auth.ips" is used as white list for client IP addresses allowed to access the REST service. The value is a coma-separated list of IP addresses. Wildcards may be used to include address ranges (e.g. "10.0.0.*"). By default only the localhost addresses "127.0.0.1" (IPv4) und "0:0:0:0:0:0:0:1" (IPv6) are allowed. Most REST endpoints require authentication. The REST service uses Basic authentication. The configuration property "nm.rest.service.auth.login" is used to select the login method. The value "webapp" (default) relies on the new login API defined in the Servlet Specification 3.0. The value "local" works only with local users but does not require support for Servlet Specification 3.0. In any case, the user must be a member of the role set with the configuration property "nm.rest.service.auth.role". This configuration property does not have a default value and must be set explicitly. The following REST endpoints are currently implemented: /version: Returns the current Appway version (plain text) /cluster/shutdown: Initiates a cluster shutdown and returns "OK" (plain text) /application/state: Returns the current application state ("STARTING", "RUNNING", "STOPPING" or "DONE")
Screen Editor	Low	A double-click on some screen compnents like Text, Button, Text Field, Checkbox or If now opens a text or script editor for the component's "primary" property.
Screen Editor	Low	Added a throbber to the drag and drop feature of the editor. Whenever the calculation of the drop positions or the dropping of a component itself takes more than 200ms, a throbber will be displayed in the drag and drop handle. Like this the user is notified of an ongoing process and does not think that the editor is broken. The throbber will be visible on systems that have high latency or if a user works on a huge screen.
Screens	Low	A new screen component "Slider" has been implemented.
Screens	Low	Ajax Update Area Action: The new property "JavaScript On Error Code" can be used to specify custom error handling code. This JavaScript code is executed if the server returns an HTTP status code other than 200 or if the server response does not appear to be valid JSON. The code has access to the implicit defined variables "request" (XMLHttpRequest object) and "exception" (may be null) to get more details about the reason for the error. If the code returns true, Appway's default error handling for ajax update errors is executed. If

		the code returns false (or nothing at all), the default error handling is not executed. In order to implement a "silent" error handling, the code "return false" can be used.
Screens	Low	Grid Layout: Grid and Grid Cell components now have Style tabs.
Screens	Medium	Info Table: The component "Table" has been renamed to "Info Table" to better signify how it should be used. It has a new property "Auto Layout", which is set by default for new instances and automatically makes the table visually appealing and responsive.
Screens	Low	The screen component "Text Field" now supports the new HTML 5 input types like "Number", "Email", "URL" or "Telephone Number".
Script Editor	Low	The script editor has a new toolbar action to toggle wrapping of long lines. This is only a visual effect and has no impact on the logical structure of the script code or line numbering.
Script Language	Low	Automatic conversion: Added support for String to Calendar conversion based on date input business objects.
Script Language	Low	Debugging: Support step into Data Class functions.
Script Language	Low	New function "ProcessErrorCode" implemented. The function takes an exception as parameter and first checks if the exception represents a process error. If yes, it returns the process error code. Otherwise, null is returned. The function also handles nested exceptions.
Script Language	Low	New functions to work with cluster files: READCLUSTERFILE, WRITECLUSTERFILE, DELETECLUSTERFILE and ListClusterFiles. The functions to read or write a cluster file are intended to handle text content, not binary content.
Script Language	Low	New primitive type "DateRange" implemented. It may be used to represent date ranges (potentially open on one or both sides) and to make checks and calculations based on them (overlap, intersect, etc.).
Script Language	Low	Syntax: The loop variable of a For or ForEach loop now may be declared inline. Examples: For Integer $i := 1 Condition $i <= $tasks Step $i := $i + 1 Do ... ForEach Person $person In $account.persons Do ...
Script Language	Low	The new configuration property "nm.exprlang.exception.constructorargumentcount" can be used to trigger exceptions when calling the constructor of a data class (function "NEW") with a wrong number of arguments. The default value is "false" which means that no exception is thrown. Changing this configuration property has an immediate effect and does not require a restart.
Script Language	Low	Two new primitive types "LocalFile" and "ClusterFile" have been added to work with local files and cluster files.
Script Language	Low	Validation: A warning message is created if a deprecated Java method is invoked from within the script language.
Script Language	Low	Validation: The function "NewObject" now validates the arguments for the parameters of the "NEW" method of the target data class.
Services	Low	Appway services are now all started using dependency-based start-up.
Studio	Low	Business Object Editors: Added "Get Help" entry to all editor menus. It opens the documentation for the business object editor on the Appway Developer Platform.
Studio	Low	Deployment: The import dialog now has an overview section with some statistics and an improved "Missing Dependencies" report.
Studio	Medium	The studio has a new home section with developer and system dashboards, and tools to inspect the status of the cluster.
Test Data Editor	Medium	The editor for Test Data has been reimplemented.
User Messaging	Low	A new backend for user messaging has been implemented. It supports discussions, chats and notifications through different channels.
Workspace	High	Added optional new workspace CSS file that modernizes how the Workspace is styled. This also adds a new "small" button type, and buttons can be set to "Default", "Primary", or "Warning". And it disables the automatic injection of space between screen components. To revert to the previous style (for backwards compatibility), set "nm.workspace.css.version" to the value "v1". Converting an existing solution with the "Data Home to Cluster Converter" tool automatically sets this configuration property to "v1".
Workspace	Low	Workspace Locks: Workspace locks are a new concept used to prevent parallel execution of multiple HTTP requests for the same process instance or process token. Every HTTP thread entering the process servlet first has to acquire an exclusive lock before it can

		process the HTTP request. This means that HTTP requests for the same process instance or token get synchronized. The configuration property "nm.workspace.lock.scope" is used to define the scope of the lock. The default value is "none" which means that workspace locks are not enabled (default behavior of Appway 5). If it is set to "instance", the workspace lock is held on the process instance, and if it is set to "token", the workspace lock is held on the process token. By appending "+session" to the value, the workspace lock is limited to the HTTP session. The configuration property "nm.workspace.lock.maxwaittime" is used to specify a time in seconds for how long an HTTP thread should wait for a workspace lock before generating an error. The default value is 30 seconds. If a thread had to wait for a workspace lock for more than 2 seconds, a warning is written to the log file: "User 'jsmith' had to wait 5.250 s for workspace lock 'Instance:1324567890123'". If HTTP tracing is enabled, acquiring a workspace lock is traced as well in order to identify performance problems related to long wait times. Please note that workspace locks are not distributed locks and therefore limited to the current node.

Change

Area	Importance	Description
Administration	Low	Overview: The page context menu action "Request Garbage Collection" sends a garbage collection request to all cluster nodes.
Administration	Low	System Report: The system report now collects information from all cluster nodes.
Architecture	High	Minimum requirement for Servlet Specification changed from version 2.3 to version 2.5. Distributable flag in web.xml added to indicate that this web application is now distributable.
Cluster	Low	Configuration: Changes to the configuration through administration tools are automatically distributed to all cluster nodes and configuration files in the "conf" directory of the data home are updated on all nodes. Manual changes to these files are not detected while Appway is running.
Cluster	Low	Job Scheduler: The following jobs are executed on all nodes of a cluster: - Cluster Size Check - Cluster System Time Sync Check - Data Table Model Unregistering - Low Disk Space Check - Low Memory Check - Process Engine - Temporary Files Maintenance - User Session Registry Maintenance - Virtual Files Maintenance The following jobs are executed only on one node of a cluster: - License Report Submission - Reload Configuration - Process Job Cleanup - Process Messages Maintenance - Process Start Job [...]
Configuration	Medium	Appway verifies that the configuration property "nm.uid.prefix" has a legal value and that the property "nm.cluster.local.nodename" has a non-empty value during startup. If either of these configuration properties is not set correctly, start-up is aborted. The value for the configuration property "nm.uid.prefix" must contain only lowercase characters "a" to "z" and digits "0" to "9".
Configuration	Low	Integration Links: The configuration file "conf/integrationlink.properties" is now managed by the cluster file service and no longer a physical file in the "conf" directory of the data home.
Configuration	Medium	The configuration file "content.properties" has been moved from directory "content" to directory "conf".
Configuration	Low	The following configuration properties have been added: - nm.applicationcache.size - nm.cluster.cache.maxsize - nm.cluster.cache.ttl - nm.cluster.local.nodename - nm.cluster.lockpool.processinstances.size - nm.cluster.lockpool.processinstances.timeout - nm.cluster.log.properties - nm.cluster.name

		- nm.cluster.persistence.delay - nm.cluster.persistence.filesystem.path - nm.entitymanager.enabled - nm.exprlang.exception.constructorargumentcount - nm.exprlang.exception.staticinvocation - nm.memory.job.paused - nm.memory.job.schedule - nm.rest.service.auth.ips - nm.rest.service.auth.login - nm.rest.service.auth.role - nm.rest.service.enabled - nm.screenstatistics.enabled - nm.security.ssl.serverAliasMappings - nm.usermessaging.chat.chunksize - nm.usermessaging.chat.heartbeatinterval - nm.usermessaging.chatinvitationtext - nm.usermessaging.chaturl - nm.usermessaging.notification.ttl_days - nm.workspace.css.version - nm.workspace.lock.maxwaittime - nm.workspace.lock.scope The following configuration properties have been removed: - nm.admin.deny.viewfolders - nm.admin.studio.maxbusinessobjectsinbrowser - nm.backup.desc - nm.backup.filter.exclude - nm.backup.shortdesc - nm.backup.user - nm.backupjob.paused - nm.backupjob.schedule - nm.businessobject.repository - nm.businessobjects.cachememorylimit - nm.businessobjects.cachestrategy - nm.businessobjects.maxcachesize - nm.businessobjects.startup.validate - nm.cluster.nodename - nm.datacontainerservice.persistent - nm.deployment.import.commitbydefault - nm.deployment.import.createcustomlist - nm.expressions.cachesize - nm.languages.prioritylist - nm.patches - nm.pdfoutputdesigner.bindingtree - nm.preferences.prioritylists - nm.processauditlog.attributes - nm.processauditlog.enabled - nm.processauditlog.level - nm.processdata.persistence.job.schedule - nm.processdata.persistence.priority - nm.processdata.persistence.threads - nm.processlog.datasource - nm.processlog.enabled - nm.runtime.applicationcachesize - nm.runtime.cachesize - nm.runtime.database - nm.runtime.database.checkoninsert - nm.runtime.database.maxtextsize - nm.runtime.database.updateentity - nm.runtime.datasource - nm.runtime.storejob.cron - nm.runtime.storejob.enable - nm.valuestore.mintimeincache - nm.workspace.bindings.overridecheck
Console	Low	Process Instance Details View: The dialog is now divided using tabs for Info, Tokens and Attribtues.

Console	Low	Process Instances: The context menu action "Lock" has been removed because explicit locks on process instances are not supported anymore in Appway 6.0.
Console	Low	Process Instances: The context menu items, toolbar actions and buttons used to save process instances and the table column "Dirty" have been removed. In-memory management and persistence of process instances is now handled by Hazelcast.
Console	Low	Value Stores: The context menu actions "Save Value Store" and "Flush Value Store" have been removed. In-memory management and persistence of value stores is now handled by Hazelcast.
Data Class Editor	Low	There's now a dropdown entry for Static Functions in the "create new property" area (case #6383). In the "create new property" area, switching between different property types that have text fields as input elements now retains the value entered into the text field.
Deployment	Low	When a local deleted committed business object with a given ID exists, and a business object with the same ID is being imported, the import dialog now categorizes the imported business object as a "New Business Object", rather than as "Overwrites Local Changes".
Expression Language	Low	Configuraiton properties "nm.exprlang.exception.argumentcount" and "nm.exprlang.exception.staticinvocation" can be used to configure script execution behaviour.
Extensions	Low	Assert required adapter properties (name, version, adapter-class) in adapter.cfg files.
Extensions	Low	Screen components Border Layout Manager and Phase Chevron are now part of the ComponentExtension.
Extensions	High	The top-level data home directory "adapters" has been renamed to "extensions".
Integration Links	Low	Integration Link Start component properties "Timeout" and "Consumers" are only available if message mode is asynchronous.
Language	Low	The id of language business objects no longer allows arbitrary characters for the variant part. The variant part now must contain only the following characters: "a-z A-Z 0-9 _ -". The complete regex pattern for a valid language id is: "[a-z]{2}(_[A-Z]{2}(_[a-zA-Z0-9_-]+)?)?". Some examples of legal ids: "de", "fr", "de_CH", "en_US", "th_TH_TH".
License File	Medium	Running Appway in cluster mode (on more than one node) requires a new license file. The new license file format "1.3" has a new license property "nm.license.cluster.maxsize" to specify a maximum number of cluster nodes.
Logging	Low	Log entries now by default contain the name of the current thread.
Monitoring	Low	JMX: The MBean "ProcessDataServiceInfo" is no longer supported.
PDF Output Tables	Low	The deprecated properties "documentId" and "language" have been removed. These properties were used only for backward compatibility with Appway 5.1.1.
Platform	Medium	The backup service and the administration tools used to create and restore a filesystem-based backup have been removed.
Platform	Low	The path to the Appway data home specified as context parameter, system property or environment variable is now converted into an absolute path and normalized. Normalized means that single dot "." directory names and a trailing directory separator are removed, double dot ".." directory names resolved, and all separators converted into platform-specific separators. Example: "../../data/" may get converted to "D:\Applications\Appway\data"
Process Data Persistence	Low	The process data service is no longer responsible for persisting process instances and value stores. The persistence commands, the command queue, the persistence threads and the scheduled job "Process Data Persistence" no longer exist. All configuration properties starting with "nm.processdata.persistence.*" are obsolete. In the console, the tab "Process Data" is no longer available.
Process Engine	Low	Complex Gateway: If the split expression returns an empty list or if none of the list values matches a connection name, the default connection is now activated. If there is no default connection, an exception is thrown and the token on the complex gateway is suspended. The validation in the process editor now generates a warning if a complex gateway has an outgoing conditional or label connection. All unconditional connections must have a unique name and there must not be more than one default connection.
Process Engine	Low	Explicit locks on process instances are no longer supported.
Process Engine	High	Isolation: While one thread makes changes to a process instance, these changes are invisible to other threads until committed. Changes are usually committed at the end of HTTP request processing or job execution. This guarantees strong consistency. Appway by default acquires a cluster-wide write-lock on a process instance before it makes any changes. This avoids "lost update" concurrency problems.

Process Engine	Low	The process instance status "Deleted" is not used anymore. For backward compatibility, this status is set on a process instance immediately before it is deleted permanently. Process instances with this status should not live for more than a few milliseconds. Console operations, script language functions and SDK methods used to delete a process instance now have an immediate effect. The value store is deleted together with the process instance.
Process Log	Medium	The features "Process Log" and "Process Audit Log" have been removed from Appway. The following configuration settings are not used anymore: "nm.processlog.enabled", "nm.processlog.datasource", "nm.processauditlog.enabled", "nm.processauditlog.level" and "nm.processauditlog.attributes". If the process log has been enabled and a process log data source has been defined, this data source may be deleted. If the database contains a table "WorkflowProcessLog", this table may be deleted as well. The directories "[DataHome]/processdata/processlog" and "[DataHome]/logs/process" are not used anymore and may be deleted. The same is true for the file "[DataHome]/conf/processlog.properties". The built-in script language functions "CustomProcessLogEntry" and "GetProcessStatistics" have been deprecated and do not return a meaningful result anymore. The service ProcessLogService has been removed and is not available anymore in the Java API of the Appway SDK. The tab "Process Log" has been removed from the Console UI.
Process Messages	Low	The cache "Process Messages Store" has been removed.
RSS Feed	Low	It's now possible to subscribe to an RSS feed that shows only system messages. Note that only messages created after this Appway update will be properly tagged as system messages, so the new feed only works for new messages.
Runtime Database	Medium	The "Runtime Data" service and all related features have been removed.
Screen Component	Low	Dropdown List: Renamed "Advanced" tab to "Searchable".
Screen Editor	Low	Actions of a component now show an icon that indicates whether it is a server-side action or a client-side action. The drop down to add new actions also states whether the action is server-side or client-side.
Screen Editor	Low	Actions that are marked as deprecated are not selectable as new actions anymore. Existing deprecated actions still work, but will be displayed with a strike-through and a tooltip, that says it should be replaced if possible.
Screen Editor	Low	If an extension is not installed and a container component deployed by this extension is therefore represented as Custom Container, the container component will be locked and the user is not able to add, move, delete, copy or paste child components.
Screen Editor	Medium	The screen component "Space" is now deprecated. Use CSS margins and paddings to achieve the desired layout instead.
Screens	Low	Ajax Update Area Action: The default messages generated by Appway in case of an ajax update error have been improved. If the error was caused by a server-side exception, the exception name and message is now displayed as well. If the ajax call fails with an HTTP status code 0, the message now tells the user that either the connection to the server has been lost or that the browser has cancelled the ajax request.
Screens	Low	Dropdown List: Removed property that allowed you to change String separator for multiple selection. It was never used, and Appway always used the default separator.
Screens	Low	Dropdown List: The property "Default Value" is now dynamic.
Screens	Medium	The screen component "Flow Layout" has been deprecated. Use "Adaptive Flow Layout" instead.
Script Language	Medium	Handle cyclic structures when comparing two data entity structures with "equals()" and when calculating a hash code with "hashCode()".
Studio	Medium	Business Object Editors: Multi-user editing capability is not available anymore if Appway is running in cluster mode (more than one node).
Studio	Low	Custom Lists: Smart custom lists do no longer contain other custom lists (static or smart). As a result, exporting a smart custom list now exports only the objects which are also displayed in the studio when this smart custom list is selected.
Studio	Low	Extensions: The extensions are now shown in two separate lists. One list shows all extensions that can be started and shut down while Appway is running. The other list shows all extensions for which Appway must be restarted to change their state.

Studio	Low	Logging: A new log viewer has been added to view the entries in the cluster log. The cluster log collects all log entries on all nodes for Appway services and components ("com.nm.*").
Studio	Low	Modules now display a reload button in the tabs, if they provide a reload function.
Workspace	Low	Do not override existing model value if new model value is equal. Note that this equal check only works for simple data values and primitive values of simple types (String, Boolean, Date, Money, Integer, Long, Double and other numeric types).
Workspace	Low	When "nm.workspace.css.version" is set higher than "v1", null gifs (transparent 1x1 pixel GIF images) are no longer added to screen renderings.

🐞 Bugfix

Area	Importance	Description
Administration	Low	Data Sources: When adding a new data source it is now checked that the name contains only characters "A" to "Z", "a" to "z" and digits "0" to "9". Spaces or other characters are not allowed.
Data Class Editor	Low	The variables "$this" and "$super" do not appear anymore on the list of available variables when editing static functions.
Deployment	Low	Fixed some problems that prevented Export and Commit dialogs from rendering properly when the repository could not find a Business Object.
Deployment	Low	Import/Export: A deleted business object is now painted as deleted in the export and import dialogs.
Extensions	Low	UI: Custom context menu items always opened the last URL for all menu entries.
Job Scheduler Service	Low	If a job is executed, the service now pushes a reference to the job (JobRef) onto the location stack. As a result, scripted jobs scheduled by the ScriptExecutionJob extension no longer show "unknown" as location under "Administration > System > Script Language > Contexts". (FogBugz case 5622)
PDF Output	Low	Page numbering options $$MO and $$XO did not work.
Platform	Low	System Startup: All business object specific operations during startup of services and extensions are executed with a head version filter.
Process Editor	Low	Placeholder Task: Validation: Check if referenced template screen contains a Placeholder screen component with name "CONTENT".
Process Editor	Low	When clicking on an element, the properties panel at the bottom is now immediately cleared. This prevents the problem where, when the server takes a long time to respond and the old properties are not replaced with the new ones, the user mistakes the properties for the previously selected element for the properties for the currently selected element.
Refactoring	Low	Refactor ID now doesn't fail anymore if the configuration file "content.properties" is missing
Refactoring	Low	Refactoring a business object that is inside a custom list no longer adds the custom list to the "Refactorings" custom list. Instead, custom lists are left where they are.
Refactoring	Low	Several bugfixes for refactoring of ids of label and color business objects.
Screen Validation	Low	On touchscreen devices, tapping on a form field with a validation error no longer shows the validation tooltip. Instead, the user has to tap the yellow validation triangle to see the error message.
Screens	Low	Dropdown List: Dynamic properties "Options URL" and "Options URL Parameter" are now evaluated properly.
Screens	Low	Dropdown List: The component did not render when an URL was given to fetch the options, but no data source was set (workaround for old installation: set static data source and enter a random entry; the dropdown list will render, and won't use the random data you entered)
Screens	Low	Dropdown List: The component now has a minimum width of 200 pixels (CSS style "min-width:200px"). This is to solve the problem where the width of a dropdown is given in relation to its parent element, and the dropdown then gets surrounded by a validation error. In this case, the validation error has a width of 0 in some browsers, and the dropdown disappears.
Script Editor	Low	Code completion for global variables and the implicit variable "$exception" in Try/Catch block now works as expected.
Script Language	Low	The ForEach statement now defines its own variable in a loop sub-scope. An already existing variable with the same name does not get overridden by accident anymore.

Studio	Low	Business Object Editors: Validation: Better detection and report of dependencies to business objects which have been deleted.
Studio	Low	Commit Dialog: When selecting business objects and picking "Commit Selected" from the context menu, already committed business objects will now be excluded from the list of business objects that are going to be committed.
Studio	Low	Fixed labels not being escaped when used inside the ConfirmAction's message (case #6119)
Studio	Low	Library: Custom Lists: When clicking on a custom list, a drag operation is not initiated immediately. Instead, Appway waits for the user to actually move the mouse before initializing a drag. This should prevent the problem where the user clicked on a custom list, a drag was started immediately, and the dragged element appeared below the cursor, preventing the user from properly clicking on a custom list.
Studio	Low	Library: Deleted objects will now be marked as such in the dependencies list of the library.
Web Application	Low	Userid field on login screen now prevents spell checking on mobile devices.