



## **Corticon Product Notes**



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# Copyright

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**Last updated with new content:** Corticon 7.1



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## Known issues in Corticon 7.1

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### Known Issues in 7.1.1.0

Item	Details
COR-15884	When using Corticon Studio, if the Windows Display Scale is set to a value other than 100%, the bottom row of prompt suggestions in the AI Assistant may not be visible even with scrolling.
COR-15867	Opening samples projects in Corticon Studio may record in the Studio log file errors of the form "o.a.v.deprecation - configuration key '<key name>' has been deprecated in favor of 'resource.loader.classpath.class'". These errors can be ignored.
OR-13381	The Web Console can only be deployed to Tomcat. Deployment to other applications servers is not currently supported. The Web Console can manage decision services running in Corticon Server in any application server.
COR-13218	When mapping a Corticon Vocabulary to the schema in a Snowflake database, Corticon Studio may generate validation errors if one or more of the mappings is to a prepared statement. Despite this error, execution of the decision service may be correct.
COR-10981	Corticon decision services using ADC or EDC for database access may log c3p0 warnings to the Corticon Server console. These warnings can be safely ignored.

Item	Details
COR-10074	<p>The corticonManagement utility option to extract diagnostic information from a Corticon Server log file for a specific decision service by name will produce zero records for decision services with names containing Kanji and similar characters. Example, the following command will fail to extract diagnostic records for the decision service named</p> <pre>"工事積算": &gt; corticonManagement.bat -e -ds 工事積算 -i</pre>
COR-8002	Corticon Studio will display an exception when displaying a ruleflow and from the "Navigate" menu selecting "Show In Properties". To display the properties for a ruleflow select the tab for the "Properties" view.
COR-6059	Corticon Server .NET license file cannot be updated via the Corticon Web Console when deployed to IIS. To set the license file you will need to update the CcLicense.jar that is under c:\inetpub\wwwroot\axis\lib and then restart IIS.
COR-5343	Query parameters to the REST service call-out cannot match SQL reserved words. Reserved words are remapped by the Autonomous REST Connector and do not work with Corticon.

### Known Issues in 7.1.0.0

Item	Details
COR-15930	The Corticon Studio installer log file may contain the error "java.io.IOException: The system cannot find the path specified". This error does not cause an installation failure and can be ignored.
COR-15907	Rule tracing in ruletests in Corticon Studio can not disambiguate rulesheets with identical names in a ruleflow. This situation is created when the rulesheets are in different filesystem folders but have the same name. When run in a ruletest in Corticon Studio, the ruletest will execute and the trace produced. The problem occurs when trying to open the rulesheet corresponding to a line in the ruletrace. Corticon Studio will open a rulesheet of that name but it may not be the correct rulesheet.
COR-15884	When using Corticon Studio, if the Windows Display Scale is set to a value other than 100%, the bottom row of prompt suggestions in the AI Assistant may not be visible even with scrolling.
COR-15867	Opening samples projects in Corticon Studio may record in the Studio log file errors of the form "o.a.v.deprecation - configuration key '<key name>' has been deprecated in favor of 'resource.loader.classpath.class'". These errors can be ignored.
COR-13683	Corticon Studio allows JSON to be imported into ruletests. This JSON must be in the Corticon annotated format. Native JSON cannot be imported.



Item	Details
COR-13381	The Web Console can only be deployed to Tomcat. Deployment to other applications servers is not currently supported. The Web Console can manage decision services running in Corticon Server in any application server.
COR-13218	When mapping a Corticon Vocabulary to the schema in a Snowflake database, Corticon Studio may generate validation errors if one or more of the mappings is to a prepared statement. Despite this error, execution of the decision service may be correct.
COR-11225	The 'sort' operator cannot be used in rulesheet filters. Doing so will result in a compilation error when running ruletests on the rulesheet or otherwise generating code for decision services that use the rulesheet.
COR-10981	Corticon decision services using ADC or EDC for database access may log c3p0 warnings to the Corticon Server console. These warnings can be safely ignored.
COR-10074	<p>The corticonManagement utility option to extract diagnostic information from a Corticon Server log file for a specific decision service by name will produce zero records for decision services with names containing Kanji and similar characters. Example, the following command will fail to extract diagnostic records for the decision service named</p> <pre>"工事積算": &gt; corticonManagement.bat -e -ds 工事積算 -i</pre>
COR-10070	The Corticon REST datasource may fail OAUTH2 authentication when using non ASCII characters in the REFRESH_TOKEN, EXPECTED_CLIENT_ID, or EXPECTED_CLIENT_SECRET.
COR-8002	Corticon Studio will display an exception when displaying a ruleflow and from the "Navigate" menu selecting "Show In Properties". To display the properties for a ruleflow select the tab for the "Properties" view.
COR-6059	Corticon Server .NET license file cannot be updated via the Corticon Web Console when deployed to IIS. To set the license file you will need to update the CcLicense.jar that is under c:\inetpub\wwwroot\axis\lib and then restart IIS.
COR-5343	Query parameters to the REST service call-out cannot match SQL reserved words. Reserved words are remapped by the Autonomous REST Connector and do not work with Corticon.



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## Issues fixed in Corticon 7.1

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### Issues Fixed in Corticon 7.1.1.0

Item	Details
COR-15907	Fixed the issue where Rule tracing in ruletests in Corticon Studio could not disambiguate rulesheets with identical names in a ruleflow. Corticon Studio will now open the correct rulesheet link in the trace results.
COR-16475	Fixed an issue in the Corticon WebConsole where an error was logged when an optional field was missing in the Decision Service request.
COR-15930	Fixed an issue with the Corticon Studio installer that caused a 'java.io.IOException: The system cannot find the path specified' error to be logged.
COR-16236	Fixed an issue in Corticon Server where it now correctly loads the c3p0 connection pool used by Hibernate for executing EDC enabled Decision Services.
COR-16244	Fixed an issue in the Corticon WebConsole where the Corticon Server license path was not displayed in the Server Details.
COR-16246	Resolved an issue in the analytics handler sample where updates to the corticon_analytics_rule_execution table were not being applied.
COR-16243	Fixed an issue where the getXMLClassName Server API was removed; it has now been restored.

Item	Details
COR-16161	Fixed an issue in the WebConsole where the WSDL failed to display correctly for a Decision Service with a name containing Japanese characters.
COR-16199	Fixed a regression in Corticon WebConsole 7.1 where Decision Services deployed via CDD were editable in the Web Console. This issue has been resolved, and now Decision Services deployed via CDD cannot be edited through the Web Console.
COR-16009	Fixed an issue where the Vocabulary Complexity Report was inaccurate when running in supported locales. The report failed to correctly account for attributes when executed in locales other than English, resulting in discrepancies.
COR-16003	The License Database Access field has been removed from the Web Console display, as it is no longer required by the Corticon Server. Database access is now always provided.

#### Issues Fixed in Corticon 7.1.0.4

Item	Details
COR-16236	Fixed an issue in Corticon Server where it now correctly loads the c3p0 connection pool used by Hibernate for executing EDC enabled Decision Services.
COR-16244	Fixed an issue in the Corticon WebConsole where the Corticon Server license path was not displayed in the Server Details.

#### Issues Fixed in Corticon 7.1.0.3

Item	Details
COR-16246	Resolved an issue in the analytics handler sample where updates to the corticon_analytics_rule_execution table were not being applied.
COR-16243	Fixed an issue where the getXMLClassName Server API was removed; it has now been restored.
COR-16199	Fixed a regression in Corticon WebConsole 7.1 where Decision Services deployed via CDD were editable in the Web Console. This issue has been resolved, and now Decision Services deployed via CDD cannot be edited through the Web Console.
COR-15930	Fixed an issue with the Corticon Studio installer that caused a 'java.io.IOException: The system cannot find the path specified' error to be logged.

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## Issues Fixed in Corticon 7.1.0.2

Item	Details
COR-15907	Fixed the issue where Rule tracing in ruletests in Corticon Studio could not disambiguate rulesheets with identical names in a ruleflow. Corticon Studio will now open the correct rulesheet link in the trace results.
COR-16161	Fixed an issue in the WebConsole where the WSDL failed to display correctly for a Decision Service with a name containing Japanese characters.
COR-16003	The License Database Access field has been removed from the Web Console display, as it is no longer required by the Corticon Server. Database access is now always provided.
COR-16009	Fixed an issue where the Vocabulary Complexity Report was inaccurate when running in supported locales. The report failed to correctly account for attributes when executed in locales other than English, resulting in discrepancies.
COR-15995	Fixed an issue in the Corticon WebConsole that prevented deploying a Decision Service with the same name but a different version.

## Issues Fixed in Corticon 7.1.0.0

Item	Details
COR-13434	In Corticon Studio, when editing a rulesheet, Corticon is not marking as errors invalid assignments to Date, Time and Datetime attributes. For example, a rule action which assigns an integer value to a Date attribute should be marked as an error. This data type mismatch can result in errors during decision service execution.
COR-15270	Fixed an issue with inconsistent uses of <Internal Name> id# and \$<External Name> id# in the returned JSON response. Now, newly created entities are using the .new operator and will be assigned <External Name> id#
COR-15911	Fixed an issue where in some cases rule execution could produce different results when a rulesheet contained multiple filters and the filters did not overlap on the rules impacted.
COR-15626	A new optimization was added to post-process the removal of Entities from the payload at the end of the rule execution rather than removing them inline during rule execution.
COR-15489	Fixed an issue when using the WebConsole on a Windows server to manage a Corticon Server running on a Linux server. The log path for a Batch Configuration specified in the WebConsole was not being honored.
COR-15432	Fixed an issue where different associations from a Parent entity with multiple filters was not filtering a rule that uses an association with the same parent entity. Now this rule configuration is working correctly.
COR-15266	Fixed an issue in Corticon Studio with Java 17. When running ruletests against remote Corticon servers, rule execution would fail.

Item	Details
COR-14191	Fixed the default LDAP configuration shipped for Corticon WebConsole. Added the missing "memberOf" attribute in attributesToReturn to allow users to login with LDAP as Active Directory user.
COR-14415	Fixed an issue with the Corticon upgrade wizard where during the upgrade of rulesheet that uses extensions an error was written into the rulesheet file.
COR-14143	Fixed a decision service compilation error that could occur in rulesheets using limited filters with unrelated entities in the conditions and actions of a rule.
COR-13766	Fixed an issue where if a user was part of both admin and user groups for IBM Open LDAP the user was not granted admin access for Web Console. Now, if a user is part of admin and user groups in IBM Open LDAP, the user will be logged in as an admin in Web Console.
COR-13778	<p>Fixed a problem where a specific sequence of edits to a rulesheet could result in the rulesheet displaying incorrectly in Corticon Studio. In a rulesheet, assignment expressions in an action can be either partial or complete assignment expressions. A partial assignment expression identifies an attribute to update but does not provide the value, the value is specified in individual rules. By contrast, a complete assignment expression identifies both an attribute to update and the value to assign. The assignment occurs for any rule in the rulesheet where the action is selected.</p> <p>Adding a partial assignment expression to a rulesheet and later switching it to be a complete assignment expression could result in one or more corresponding rule cells for the action being corrupted. The Corticon Studio rulesheet editor would appear to show the correct value for the cells even though the underlying definition for the cells are incorrect. This could result in rule execution not matching what is shown in the rulesheet.</p> <p>Example: A rulesheet contains a partial assignment action to set <code>Order.approved</code>. For rule 1 (the column) the value is set to <code>T</code>:</p> <pre>   Action   1   -----   Order.approved   T   </pre> <p>Edit the action to set make it a full assignment and set <code>Order.approved</code> to <code>F</code>:</p> <pre>   Action   1   -----   Order.approved = F     </pre> <p>This would result in a corrupt definition for the action in rule 1. This corrupt state can be seen in the Corticon Studio Rule Canonical Model view as:</p> <pre>Order.approved = F = T</pre> <p>The double assignment is invalid.</p> <p>Corticon Studio now prevents this sequence of actions from causing the corruption of action rule cells.</p> <p>This problem dates back to Corticon 5.6 or earlier. Running the Corticon upgrade wizard will check for this condition and correct any corrupted cells.</p>

Item	Details
COR-13781	Fixed potential problems in the use of Corticon Studio's Upgrade Wizard to upgrade rulesheets using extension operators. The Upgrade Wizard now uses project information to correctly resolve the location of extensions.
COR-13728	Restored ADC supported execution of UPDATE/DELETE that do not include a WHERE clause. This behavior was modified where it only supported UPDATE/DELETE for entities with non-null primary keys. Due to this restriction SQL without WHERE clause were not executed. This fix restores earlier behavior of allowing UPDATE/DELETE SQL statements that do not include WHERE clause
COR-13475	Fixed an issue where EDC vocabulary did not display 'Extend to Database' in Scope section and/or 'Database Filter' in the filter section.
COR-13471	Fixed a regression issue where an extra rule was firing in Corticon Studio 6.3 versus 5.6 when a collection operator is used with a filter that references a collection operator with an unrelated entity when the rule does not also reference the unrelated entity.
COR-13457	Fixed an issue where different rule message results were returned in Studio version 5.6.1.40 compared to 6.3.1.9 if rulesheet had combination of filters, collection operators and remove operator on the same rulesheet.
COR-13442	Fixed the error message logged in the WebConsole log file when deploying a decision Service to a Corticon Server with an expired license.
COR-13428	The Web Console Decision Service list page now retains the correct expansion state of page sections if the page contains both discrete decision services and applications.
COR-13402	The WebConsole now correctly displays an error message when setting an invalid max pool for a decision Service.
COR-10081	Fixed an issue with the Corticon Studio extended operator sample project. Dragging a sample collection extended operator from the operator list into a rulesheet now correctly will drop the operator using the collection notation





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## Known issues in Corticon 7.0

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### Known Issues in 7.0.0.0

Item	Details
COR-13442	When using the Web Console to deploy a decision service to a Corticon Server with an expired license, the operation will fail with an obscure 'error 400 encountered...' error message in the Web Console log file.
COR-13434	In Corticon Studio, when editing a rulesheet, Corticon is not marking as errors invalid assignments to Date, Time and Datetime attributes. For example, a rule action which assigns an integer value to a Date attribute should be marked as an error. This data type mismatch can result in errors during decision service execution.
COR-13428	In the Web Console, refresh of the decision service list page will not retain the correct expansion state of page sections if the page contains both discrete decision services and applications.
COR-13402	In the Web Console, setting an invalid Max Pool size for a decision service will not display an error.
COR-13381	The Web Console can only be deployed to Tomcat. Deployment to other applications servers is not currently supported. The Web Console can manage decision services running in Corticon Server in any application server.

Item	Details
COR-13218	When mapping a Corticon Vocabulary to the schema in a Snowflake database, Corticon Studio may generate validation errors if one or more of the mappings is to a prepared statement. Despite this error, execution of the decision service may be correct.
COR-12394	When using Corticon EDC with database names containing Kanji and other extended character sets, database error messages will be corrupted, rendering them unreadable.
COR-12108	Using Corticon ADC with HDP to access a MySQL database will generate errors accessing bit datatypes.
COR-11864	When performing an overlay install of Corticon Studio, for example installing 7.0 over an existing install of 6.3, the error "Artifact repository out of sync" may be recorded in the install log. This error stems from updating the Corticon eclipse plugins. This error can be ignored.
COR-11225	The 'sort' operator cannot be used in rulesheet filters. Doing so will result in a compilation error when running ruletests on the rulesheet or otherwise generating code for decision services that use the rulesheet.
COR-10981	Corticon decision services using ADC or EDC for database access may log c3p0 warnings to the Corticon Server console. These warnings can be safely ignored.
COR-10074	The corticonManagement utility option to extract diagnostic information from a Corticon Server log file for a specific decision service by name will produce zero records for decision services with names containing Kanji and similar characters. Example, the following command will fail to extract diagnostic records for the decision service named "工事積算": > corticonManagement.bat -e -ds 工事積算 -i
COR-10070	The Corticon REST datasource may fail OAUTH2 authentication when using non ASCII characters in the REFRESH_TOKEN, EXPECTED_CLIENT_ID, or EXPECTED_CLIENT_SECRET.
COR-8002	Corticon Studio will display an exception when displaying a ruleflow and from the "Navigate" menu selecting "Show In > Properties". To display the properties for a ruleflow select the tab for the "Properties" view.
COR-6467	The Corticon Server installs corticon.war even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete corticon.war from "<install>\Server\tomcat\webapps" prior to starting the Corticon Server.
COR-6059	Corticon Server .NET license file cannot be updated via the Corticon Web Console when deployed to IIS. To set the license file you will need to 1) Update the CcLicense.jar that is under c:\inetpub\wwwroot\axis\lib and 2) Restart IIS
COR-5343	Query parameters to the REST service call-out cannot match SQL reserved words. Reserved words are remapped by the Autonomous REST Connector and do not work with Corticon.

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## Issues fixed in Corticon 7.0

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### Issues Fixed in Corticon 7.0.0.4

Item	Details
COR-15532	Tomcat version has been updated to 9.0.91 in Corticon 7.0 version to remediate any vulnerability concerns.
COR-15432	Fixed an issue where different associations from a Parent entity with multiple filters was not filtering a rule that uses an association with the same parent entity. Now this rule configuration is working correctly.
COR-15270	Fixed an issue with inconsistent uses of <Internal Name> id# and <External Name> id# in the returned JSON response. Now, newly created entities are using the .new operator and will be assigned <External Name> id#
COR-14873	<p>Updated multiple bundled Progress DataDirect Connect drivers. The updated driver versions are now:</p> <ul style="list-style-type: none"><li>• SQLServer JDBC Driver Version: 6.0.0.001525</li><li>• Oracle JDBC Driver Version: 6.0.0.001235</li><li>• PostgreSQL JDBC Driver Version: 6.0.0.001395</li><li>• MySQL JDBC Driver Version: 5.1.4.000266</li><li>• DB2 JDBC Driver Version: 5.1.4.000413</li></ul> <p>Consult the <a href="#">DataDirect Connect documentation</a> for more information.</p>

Item	Details
COR-14191	Fixed the default LDAP configuration shipped for Corticon WebConsole. Added the missing "memberOf " attribute in attributesToReturn to allow users to login with LDAP as Active Directory user.
COR-14143	Fixed a decision service compilation error that could occur in rulesheets using limited filters with unrelated entities in the conditions and actions of a rule.

**Issues Fixed in Corticon 7.0.0.3**

Item	Details
COR-13766	Fixed an issue where if a user was part of both admin and user groups for IBM Open LDAP the user was not granted admin access for Web Console. Now, if a user is part of admin and user groups in IBM Open LDAP, the user will be logged in as an admin in Web Console.

Item	Details
COR-13778	<p>Fixed a problem where a specific sequence of edits to a rulesheet could result in the rulesheet displaying incorrectly in Corticon Studio. In a rulesheet, assignment expressions in an action can be either partial or complete assignment expressions. A partial assignment expression identifies an attribute to update but does not provide the value, the value is specified in individual rules. By contrast, a complete assignment expression identifies both an attribute to update and the value to assign. The assignment occurs for any rule in the rulesheet where the action is selected.</p> <p>Adding a partial assignment expression to a rulesheet and later switching it to be a complete assignment expression could result in one or more corresponding rule cells for the action being corrupted. The Corticon Studio rulesheet editor would appear to show the correct value for the cells even though the underlying definition for the cells are incorrect. This could result in rule execution not matching what is shown in the rulesheet.</p> <p>Example: A rulesheet contains a partial assignment action to set <code>Order . approved</code>. For rule 1 (the column) the value is set to <code>T</code>:</p> <pre>   Action            1   -----   Order . approved   T   </pre> <p>Edit the action to set make it a full assignment and set <code>Order . approved</code> to <code>F</code>:</p> <pre>   Action            1   -----   Order . approved = F       </pre> <p>This would result in a corrupt definition for the action in rule 1. This corrupt state can be seen in the Corticon Studio Rule Canonical Model view as:</p> <pre>Order . approved = F = T</pre> <p>The double assignment is invalid.</p> <p>Corticon Studio now prevents this sequence of actions from causing the corruption of action rule cells.</p> <p>This problem dates back to Corticon 5.6 or earlier. Running the Corticon upgrade wizard will check for this condition and correct any corrupted cells.</p>
COR-13728	<p>Restored ADC supported execution of UPDATE/DELETE that do not include a WHERE clause. This behavior was modified where it only supported UPDATE/DELETE for entities with non-null primary keys. Due to this restriction SQL without WHERE clause were not executed. This fix restores earlier behavior of allowing UPDATE/DELETE SQL statements that do not include WHERE clause.</p>

**Issues Fixed in Corticon 7.0.0.2**

Item	Details
COR-13707	<p>Corticon Server now enforces version check on EDS deployment. When an EDS is deployed, Corticon Server will inspect the EDS to determine which version of Corticon it was generated with. If this version is not the same major.minor version of Corticon Server, the EDS will not be deployed.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>- 7.0.0.0 EDS deployed to 7.0.0.1 Corticon Server: Allowed</li> <li>- 6.3.4.0 EDS deployed to 7.0.0.1 Corticon Server: Disallowed</li> </ul> <p>Enforcing this version check ensures compatibility between the EDS and Corticon Server. The generated EDS code is dependent on internal Corticon Server APIs which may change across major.minor releases. This could result in an EDS failing to execute despite initially reporting successful deployment.</p> <p>When deploying an incompatible EDS file with:</p> <ul style="list-style-type: none"> <li>- Corticon Web Console, the user will be presented an error</li> <li>- Corticon Studio, the user will be presented an error</li> <li>- CDD file, the error will be logged</li> <li>- REST API, an error will be returned</li> <li>- Java API, an error will be returned</li> </ul> <p>In all cases, Corticon Server is performing the validation check and will log the deployment error.</p>
COR-13704	Removed snakeyaml-1.33.jar from the default Server packaging. It is now part of the optional Swagger jar. Snakeyaml library is only used by swagger.
COR-13533	Updated the bundled logback libraries (logback-classic and logback-core) from version 1.2.9 to 1.4.14 to address the potential vulnerability identified in CVE-2023-6378

**Issues Fixed in Corticon 7.0.0.1**

Item	Details
COR-13481	MAX_REACTORS was removed from our Corticon Licensing in 7.0. Fixed the incorrect references to LICENSE_MAX_REACTORS in ServerState.xml and CcServer.log files since Corticon Server should not be reporting LICENSE_MAX_REACTORS in the logs.
COR-13477	CcSwagger.jar is now added to the PROGRESS_CORTICON_xx_SERVER.zip —PROGRESS_CORTICON_xx_WAR_CONTAINER.zip>Swagger—CcSwagger.jar
COR-13475	Fixed an issue where EDC vocabulary did not display 'Extend to Database' in Scope section and/or 'Database Filter' in the filter section.

Item	Details
COR-13471	Fixed a regression issue where an extra rule was firing in Corticon Studio 6.3 versus 5.6 when a collection operator is used with a filter that references a collection operator with an unrelated entity when the rule does not also reference the unrelated entity.
COR-13457	Fixed an issue where different rule message results were returned in Studio version 5.6.1.40 compared to 6.3.1.9 if rulesheet had combination of filters, collection operators and remove operator on the same rulesheet.
COR-13434	<p>In Corticon Studio, when editing a rulesheet, Corticon is not marking as errors invalid assignments to Date, Time and Datetime attributes.</p> <p>For example, a rule action which assigns an integer value to a Date attribute should be marked as an error. This data type mismatch can result in errors during decision service execution.</p>

### Issues Fixed in Corticon 7.0.0.0

Item	Details
COR-11600	Modified the corticonManagement utility to work with either a Corticon Studio or Corticon Server license.
COR-12947	Fixed a regression in rulesheet filter behavior introduced in Corticon 6.3. If a rulesheet contained filters on an entity and within a rule, the entity is used in an assignment action but not the rule conditions, the filter would yield an incorrect set of matching entities
COR-12855	Fixed a problem in the Corticon Web Console when displaying Corticon Server log files. Some log entries could be duplicated multiple times in the log file viewer.
COR-12858	Fixed an issue where Corticon Server was not honoring the passed in Entity id value which contained a zero at the end (Child_id_0). This confused the algorithm that assigned new ids to newly created instances through a .new call in Rules.
COR-12841	Modified the default logging configurations of the Webconsole database to have trace logging disabled. This is a change from the previous configuration, in which trace logging was enabled by default.
COR-12592	Fixed an issue when user overrides loglevel through WebConsole. Updated value was not properly being interpreted by CcServer during CcServer startup.

Item	Details
COR-12567	Fixed a problem where using the remove operator to remove an entity and it's children could result in broken associations. This would occur when passing an input JSON payload that contained one or more references to a child entity and the entities parent is removed. Example: A JSON payload with entities A, B, and C may all have an association to entity X. A fully denormalized JSON payload would have a full definition of X under each of A, B, and C. To reduce duplication, it's possible for the JSON to have a single definition of X under one of A, B, or C and for the others to have references to this instance of X. The problem was that using the remove operator with the option to remove children set could delete a referenced child entity. In our example, if the input JSON had the full definition of X under A and references to X under B and C, a remove of A and it's child X would break the references from B and C to X. The new behavior is that X will not be removed but moved to either B or C. Which entity contains the full definition of a child entity and which contain the references is irrelevant to rule processing. The new behavior maintains reference integrity.
COR-12542	Fixed the issue where integer literals enclosed by parenthesis were not universally supported in rule expressions. Previously deeply nested parenthesis containing integer literals could result in erroneous code generation.
COR-12434	Fixed the behavior where collection filter was creating duplicate tuples. This would occur if using a collection operator in a filter with child entities in the parameters
COR-12402	Updated the bundled cxf library from version 3.4.5 to 3.4.10 to address the potential vulnerability identified in CVE-2022-46363 and CVE-2022-46364.
COR-12270	Fixed a problem where Corticon EDC would incorrectly store the string "null" for String attributes mapped to CHAR database fields when the attribute was null. The null value is now stored in the database.
COR-12416	Fixed a problem when using Corticon EDC with rule projects where the vocabulary has nested domains. When an EDC mapped vocabulary contained the domains D1 and below it the domain D2, rule sheet filters on entities in D2 would fail with the error "Filter expression cannot be processed by the database".
COR-12242	Fixed a problem where in some situations the Corticon rule test editor would not allow the test subject to be set on a test sheet when there were multiple test sheets in a rule test.
COR-12239	Improved decimal precision comparison in rule test. Previously for Decimal data types, the output and expected values may not be flagged as different when they are. As an example the value 111.100002 would not be flagged as different from 111.100001. These values will now be flagged as differences in rule tests.
COR-11961	Improved runtime performance of rulesheets containing filters that uses entities not also used in a rule condition or action.
COR-12178	Modified Corticon Studio and Server logging to archive any prior day log data on restart. Previously, when Studio or Server are restarted the prior day log data would not be archived even if logDailyRollover were true. Log data was only archived if Studio or Server were running at end-of-day.



Item	Details
COR-12141	Fixed a problem where the Corticon Server MultipleCompilation utility would recompile a Decision Service if an EDS file existed for the Decision Service and the property OverrideIfExists=false was set. The OverrideIfExists property is set in the multipleCompilation.xml used to configure the utility. If OverrideIfExists is set to false, the utility should not recompile the Decision Service. If false, the existing EDS file should be retained. The utility was ignoring this property and always recompiling the Decision Service.
COR-11966	Fixed a problem where rulesheet filters were not executing correctly. If a rulesheet contained: 1. Three or more filters on root entities (entities without associations between them) 2. A filter that uses an association traversal to another entity 3. A rule that uses two or more entities in filter #1 and does not use the associated entity from #2 When such a combination occurs the rule from #3 when executed will not include results from the filter of #2.
COR-11827	Updated the Corticon Web Console's LDAP authentication to support OpenLDAP. The Web Console supports both Microsoft Active Directory and OpenLDAP.
COR-11523	Fixed an error in the upgrade of disabled filters in a Corticon 5.3 rulesheet to Corticon 6.x and later. The disabled filter would incorrectly be enabled in the upgraded rulesheet.
COR-11108	Fixed a problem when using ADC to write a Date value to a database. When the database Date value was read into ADC memory and stored into a Vocabulary Attribute with datatype Date Only, ADC time shifted the Date value to local timezone, which is expected behavior. But when ADC wrote that value back to the database, the Date value was not time shifted back to UTC, which would cause the storing of an incorrect Date value. This was not an issue with a Vocabulary Attribute with a DateTime datatype because no time shifting is needed.
COR-11827	Updated the Corticon Web Console's LDAP authentication to support OpenLDAP. The Web Console supports both Microsoft Active Directory and OpenLDAP.
COR-11240	Modified Corticon Server to correctly reject the deployment of an .eds file produced with a version of Corticon prior to 5.6, while also logging an error message stating that the .eds needs to be regenerated. An .eds file produced with Corticon 5.6 or earlier must be regenerated for use with Corticon 6.1 and later. It is best practice to regenerate all .eds files whenever moving to a new Corticon major.minor version.
COR-11294	Fixed a problem in Corticon Server execution where the execution thread would not terminate after execution timeout. Execution would cease but the thread would not terminate. This would eliminate the thread from availability to Corticon Server, reducing the number of threads available for execution.

Item	Details
COR-11792	When using Corticon Server in-process, the ICcServer.execute methods now optionally throw as exceptions any runtime exception which occurs. Previously any exception which occurred once rule execution began would be returned as a rule message with severity violation in the response payload. This is still the default behavior. Setting the property: <code>com.corticon.server.execution.processing.throw.exceptions=true</code> will cause the exceptions to be thrown and not returned in the response payload. For in-process usage, this makes it easier to catch and handle runtime exceptions.
COR-11779	Improved the performance of rule sheet operators on Integer attributes. Previously Corticon used the Java BigInteger type for these operators, it now uses Long. Long is a 64 bit integer with a range of values from $-2^{63}$ to $2^{63}-1$ . The Long type provides substantially better performance than BigInteger. This change is internal to Corticon and will have no visible effect, other than improved performance.
COR-11615	Fixed a problem where Corticon Server would fail to process JSON input payloads if the following conditions were met: 1) an Entity or Association in the JSON payload had a defined #id value in the __metadata object, 2) the #id value contained "_id_", and 3) the value to the right of the "_id_" was not a number (Entity_id_1a). Previously a "NumberFormatException" would be generated.
COR-11596	Fixed a problem where Corticon Server would not accept JSON payloads with "null" entity definitions when executing a decision service. Passing a "null" entity definition would result in a JSONArray[n] is not a JSONObject exception. Any "null" entities are discarded when parsing the input payload and will be excluded from response payload.
COR-11516	Fixed the issue where files names generated for reports created from Corticon Studio have '%20' in the generated file names in place of any spaces in the asset name. Now the generated file names contain spaces correctly.
COR-11292	Fixed a problem where rulesheet filters could produce incorrect results. If a rulesheet contains a collection operator and a filter that references the collection operator alias as well as an entity outside the collection alias scope, the filter would fail to correctly filter the collection content.
COR-11291	Improved Corticon Studio performance when validating ruleflows. Previously redundant validations could occur when using nested ruleflows. The performance improvement can have significant benefits when working on large rule projects in Corticon Studio.
COR-10986	Fixed a problem where the Web Console would fail to delete and undeploy a decision service when authentication was enabled. This would occur both in the Web Console browser UI and the corticonWebConsole command line utility.
COR-7927	Fixed a problem where using the Corticon Foundation API would generate errors if Corticon Studio was installed with a work directory selected that contained spaces in the directory path.

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## Known issues in Corticon 6.3

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### Known Issues in Corticon 6.3.3.0

Item	Details
COR-12394	While using Corticon EDC, Japanese error message gets garbled when the provided database name as incorrect .
COR-11576	Corticon Server cannot be deployed to Wildfly version 25 and later. If deploying with Wildfly, you must use version 24 or earlier.
COR-11516	The files names generated for reports created from Corticon Studio have "%20" in the generated file names in place of any spaces in the asset name. The generated file names should contain spaces.
COR-11227	Corticon Server's Swagger usage for API documentation is not supported on WebSphere. To deploy Corticon Server to WebSphere you must use the axis.war for WebSphere in PROGRESS_CORTICON_6.3_SERVER.zip available on Progress Corticon ESD. The axis.war bundled with the Corticon Server install includes Swagger and cannot be deployed to WebSphere.

Item	Details
COR-11210	<p>The Java 11 version bundled with Corticon Studio is not automatically detected by Studio when building Java projects. To build a Java project in Corticon Studio you need to add the JRE for use in building Java projects. To do this:</p> <ol style="list-style-type: none"> <li>1. Select <b>Windows-&gt;Preferences</b>.</li> <li>2. In the Preferences window select <b>Java-&gt;Installed JREs</b>.</li> <li>3. In the <b>Installed JREs</b> panel, select <b>Add</b>.</li> <li>4. Choose <b>Standard VM</b>, and then press <b>Next</b>.</li> <li>5. In the <b>JRE Definition window</b>, press <b>Directory</b>.</li> <li>6. Select the <code>Studio/JRE</code> folder in your Corticon install, and then press <b>Select Folder</b>.</li> <li>7. In the <b>JRE Definition</b> window, press <b>Finish</b>.</li> <li>8. In the <b>Installed JREs</b> panel, select the JRE you just added, and then press <b>Apply and Close</b>.</li> </ol> <p>This will add the JRE to your workspace for use in building Java projects. This must be done if you want to build the Java projects in the Corticon samples.</p>
COR-11150	<p>EDC enabled decision services cannot be deployed to Corticon Server hosted on WildFly due to incompatible versions of Hibernate. If using EDC and deploying to WildFly, you will not be able to upgrade to Corticon 6.3 until resolved.</p>
COR-11120	<p>In the Rule Trace Viewer, the Location is not shown for any attribute or association changes performed by service callouts. This includes the Corticon ADC and REST datasources.</p>
COR-10981	<p>Corticon decision services using ADC or EDC for database access may log c3p0 warnings to the Corticon Server console. These warnings can be safely ignored.</p>
COR-10074	<p>The corticonManagement utility option to extract diagnostic information from a Corticon Server log file for a specific decision service by name will produce zero records for decision services with names containing Kanji and similar characters. Example, the following command will fail to extract diagnostic records for the decision service named "å·¥ã°ç©□ç®—":</p> <pre>&gt; corticonManagement.bat -e -ds å·¥ã°ç© □ç®— -i</pre>
COR-10070	<p>The Corticon REST datasource may fail OAUTH2 authentication when using non ASCII characters in the <code>REFRESH_TOKEN</code>, <code>EXPECTED_CLIENT_ID</code>, or <code>EXPECTED_CLIENT_SECRET</code>.</p>

Item	Details
COR-9469	The Web Console does not preserve context for inner tables on page refresh or redisplay. This is evident in the display of Applications containing Decision Services. Filter, sort and other display preferences on the inner table listing Decision Services within the Application are lost on page refresh or redisplay.
COR-8002	Corticon Studio will display an exception when displaying a ruleflow and from the "Navigate" menu selecting "Show In > Properties". To display the properties for a ruleflow select the tab for the "Properties" view.
COR-7927	Using the Corticon Foundation API may generate errors if Corticon Studio was installed with a work directory selected that contained spaces in the directory path.
COR-6467	The Corticon Server installs corticon.war even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete corticon.war from "<install>\Server\tomcat\webapps" prior to starting the Corticon Server.

### Known Issues in Corticon 6.3.2.0

Item	Details
COR-12394	While using Corticon EDC, Japanese error message gets garbled when the provided database name is incorrect .
COR-11576	Corticon Server cannot be deployed to Wildfly version 25 and later. If deploying with Wildfly, you must use version 24 or earlier.
COR-11516	The files names generated for reports created from Corticon Studio have "%20" in the generated file names in place of any spaces in the asset name. The generated file names should contain spaces.
COR-11227	Corticon Server's Swagger usage for API documentation is not supported on WebSphere. To deploy Corticon Server to WebSphere you must use the axis.war for WebSphere in PROGRESS_CORTICON_6.3_SERVER.zip available on Progress Corticon ESD. The axis.war bundled with the Corticon Server install includes Swagger and cannot be deployed to WebSphere.

Item	Details
COR-11210	<p>The Java 11 version bundled with Corticon Studio is not automatically detected by Studio when building Java projects. To build a Java project in Corticon Studio you need to add the JRE for use in building Java projects. To do this:</p> <ol style="list-style-type: none"> <li>1. Select <b>Windows-&gt;Preferences</b>.</li> <li>2. In the Preferences window select <b>Java-&gt;Installed JREs</b>.</li> <li>3. In the <b>Installed JREs</b> panel, select <b>Add</b>.</li> <li>4. Choose <b>Standard VM</b>, and then press <b>Next</b>.</li> <li>5. In the <b>JRE Definition window</b>, press <b>Directory</b>.</li> <li>6. Select the <code>Studio/JRE</code> folder in your Corticon install, and then press <b>Select Folder</b>.</li> <li>7. In the <b>JRE Definition</b> window, press <b>Finish</b>.</li> <li>8. In the <b>Installed JREs</b> panel, select the JRE you just added, and then press <b>Apply and Close</b>.</li> </ol> <p>This will add the JRE to your workspace for use in building Java projects. This must be done if you want to build the Java projects in the Corticon samples.</p>
COR-11150	<p>EDC enabled decision services cannot be deployed to Corticon Server hosted on WildFly due to incompatible versions of Hibernate. If using EDC and deploying to WildFly, you will not be able to upgrade to Corticon 6.3 until resolved.</p>
COR-11120	<p>In the Rule Trace Viewer, the Location is not shown for any attribute or association changes performed by service callouts. This includes the Corticon ADC and REST datasources.</p>
COR-10981	<p>Corticon decision services using ADC or EDC for database access may log c3p0 warnings to the Corticon Server console. These warnings can be safely ignored.</p>
COR-10074	<p>The corticonManagement utility option to extract diagnostic information from a Corticon Server log file for a specific decision service by name will produce zero records for decision services with names containing Kanji and similar characters. Example, the following command will fail to extract diagnostic records for the decision service named "ã·¥ã°&lt;ç©□ç®—":</p> <pre>&gt; corticonManagement.bat -e -ds ã·¥ã°&lt;ç© ç®— -i</pre>
COR-10070	<p>The Corticon REST datasource may fail OAUTH2 authentication when using non ASCII characters in the <code>REFRESH_TOKEN</code>, <code>EXPECTED_CLIENT_ID</code>, or <code>EXPECTED_CLIENT_SECRET</code>.</p>

Item	Details
COR-9469	The Web Console does not preserve context for inner tables on page refresh or redisplay. This is evident in the display of Applications containing Decision Services. Filter, sort and other display preferences on the inner table listing Decision Services within the Application are lost on page refresh or redisplay.
COR-8002	Corticon Studio will display an exception when displaying a ruleflow and from the "Navigate" menu selecting "Show In > Properties". To display the properties for a ruleflow select the tab for the "Properties" view.
COR-7927	Using the Corticon Foundation API may generate errors if Corticon Studio was installed with a work directory selected that contained spaces in the directory path.
COR-6467	The Corticon Server installs corticon.war even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete corticon.war from "<install>\Server\tomcat\webapps" prior to starting the Corticon Server.

### Known Issues in Corticon 6.3.1.0

Item	Details
COR-11576	Corticon Server cannot be deployed to Wildfly version 25 and later. If deploying with Wildfly, you must use version 24 or earlier.
COR-11227	Corticon Server's Swagger usage for API documentation is not supported on WebSphere. To deploy Corticon Server to WebSphere you must use the axis.war for WebSphere in PROGRESS_CORTICON_6.3_SERVER.zip available on Progress Corticon ESD. The axis.war bundled with the Corticon Server install includes Swagger and cannot be deployed to WebSphere.

Item	Details
COR-11210	<p>The Java 11 version bundled with Corticon Studio is not automatically detected by Studio when building Java projects. To build a Java project in Corticon Studio you need to add the JRE for use in building Java projects. To do this:</p> <ol style="list-style-type: none"> <li>1. Select <b>Windows-&gt;Preferences</b>.</li> <li>2. In the Preferences window select <b>Java-&gt;Installed JREs</b>.</li> <li>3. In the <b>Installed JREs</b> panel, select <b>Add</b>.</li> <li>4. Choose <b>Standard VM</b>, and then press <b>Next</b>.</li> <li>5. In the <b>JRE Definition window</b>, press <b>Directory</b>.</li> <li>6. Select the <code>Studio/JRE</code> folder in your Corticon install, and then press <b>Select Folder</b>.</li> <li>7. In the <b>JRE Definition</b> window, press <b>Finish</b>.</li> <li>8. In the <b>Installed JREs</b> panel, select the JRE you just added, and then press <b>Apply and Close</b>.</li> </ol> <p>This will add the JRE to your workspace for use in building Java projects. This must be done if you want to build the Java projects in the Corticon samples.</p>
COR-11150	EDC-enabled decision services cannot be deployed to Corticon Server hosted on WildFly due to incompatible versions of Hibernate. If using EDC and deploying to WildFly, you will not be able to upgrade to Corticon 6.3 until resolved.
COR-11120	In the Rule Trace Viewer, the Location is not shown for any attribute or association changes performed by service callouts. This includes the Corticon ADC and REST datasources.
COR-10981	Corticon decision services using ADC or EDC for database access may log c3p0 warnings to the Corticon Server console. These warnings can be safely ignored.
COR-10070	The Corticon REST datasource may fail OAUTH2 authentication when using non ASCII characters in the REFRESH_TOKEN, EXPECTED_CLIENT_ID, or EXPECTED_CLIENT_SECRET.
COR-9469	The Web Console does not preserve context for inner tables on page refresh or redisplay. This is evident in the display of Applications containing Decision Services. Filter, sort and other display preferences on the inner table listing Decision Services within the Application are lost on page refresh or redisplay.



Item	Details
COR-7927	Using the Corticon Foundation API may generate errors if Corticon Studio was installed with a work directory selected that contained spaces in the directory path.
COR-6467	The Corticon Server installs corticon.war even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete corticon.war from "<install>\\Server\\tomcat\\webapps" prior to starting the Corticon Server.

### Known Issues in Corticon 6.3.0.0

Item	Details
COR-11227	Corticon Server's Swagger usage for API documentation is not supported on WebSphere. To deploy Corticon Server to WebSphere you must use the axis.war for WebSphere in PROGRESS_CORTICON_6.3_SERVER.zip available on Progress Corticon ESD. The axis.war bundled with the Corticon Server install includes Swagger and cannot be deployed to WebSphere.
COR-11150	EDC enabled decision services cannot be deployed to Corticon Server hosted on WildFly due to incompatible versions of Hibernate. If using EDC and deploying to WildFly, you will not be able to upgrade to Corticon 6.3 until resolved.
COR-10981	Corticon decision services using ADC or EDC for database access may log c3p0 warnings to the Corticon Server console. These warnings can be safely ignored.
COR-7426	The Corticon Server linux installer does not set execute permissions on the shell scripts in "\$CORTICON_HOME/Server/tomcat/bin". This must be set after installation.
COR-6467	The Corticon Server installs corticon.war even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete corticon.war from "<install>\\Server\\tomcat\\webapps" prior to starting the Corticon Server.

Item	Details
COR-11210	<p>The Java 11 version bundled with Corticon Studio is not automatically detected by Studio when building Java projects. To build a Java project in Corticon Studio you need to add the JRE for use in building Java projects. This is done by:</p> <ol style="list-style-type: none"> <li>1. Select Windows-&gt;Preferences</li> <li>2. In the Preferences window select Java-&gt;Installed JREs</li> <li>3. In the Installed JREs panel, select Add</li> <li>4. Choose Standard VM and press Next</li> <li>5. In the JRE Definition window, press Directory</li> <li>6. Select the "Studio/JRE" folder in your Corticon install and press Select Folder</li> <li>7. In the JRE Definition window, press Finish</li> <li>8. In the Installed JREs panel, select the JRE you just added and press Apply and Close</li> </ol> <p>This will add the JRE to your workspace for use in building Java projects. This must be done if you want to build the Java projects in the Corticon samples.</p>
COR-11209	<p>The Rule Trace Viewer in the Corticon Studio Tester displays the rolename for associated entities on "Add Association", "Set Association", and "Remove Association" actions. If the rolename differs from the entity name, selecting that row in the Rule Trace Viewer will not highlight the entity association in the Tester.</p>
COR-11120	<p>In the Rule Trace Viewer, the Location is not shown for any attribute or association changes performed by service callouts. This includes the Corticon ADC and REST datasources.</p>
COR-10070	<p>The Corticon REST datasource may fail OAUTH2 authentication when using non ASCII characters in the REFRESH_TOKEN, EXPECTED_CLIENT_ID, or EXPECTED_CLIENT_SECRET.</p>
COR-7927	<p>Using the Corticon Foundation API may generate errors if Corticon Studio was installed with a work directory selected that contained spaces in the directory path.</p>
COR-9469	<p>The Web Console does not preserve context for inner tables on page refresh or redisplay. This is evident in the display of Applications containing Decision Services. Filter, sort and other display preferences on the inner table listing Decision Services within the Application are lost on page refresh or redisplay.</p>

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## Issues fixed in Corticon 6.3

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### Issues Fixed in Corticon 6.3.3.6

Item	Details
COR-15911	Fixed an issue where in some cases rule execution could produce different results when a rulesheet contained multiple filters and the filters did not overlap on the rules impacted.
COR-15907	Fixed the issue where Rule tracing in ruletests in Corticon Studio could not disambiguate rulesheets with identical names in a ruleflow. Corticon Studio will now open the correct rulesheet link in the trace results.

### Issues Fixed in Corticon 6.3.3.5

Item	Details
COR-15626	A new optimization was added to post-process the removal of Entities from the payload at the end of the rule execution rather than removing them inline during rule execution.

**Issues Fixed in Corticon 6.3.3.4**

Item	Details
COR-15432	Fixed an issue where different associations from a Parent entity with multiple filters was not filtering a rule that uses an association with the same parent entity. Now this rule configuration is working correctly.

**Issues Fixed in Corticon 6.3.3.3**

Item	Details
COR-15270	Fixed an issue with inconsistent uses of <Internal Name> id# and <External Name> id# in the returned JSON response. Now, newly created entities are using the .new operator, and will be assigned <External Name> id#.

**Issues Fixed in Corticon 6.3.3.2**

Item	Details
COR-14873	<p>Updated multiple bundled Progress DataDirect Connect drivers. The updated driver versions are now:</p> <ul style="list-style-type: none"> <li>* SQLServer JDBC Driver Version: 6.0.0.001525</li> <li>* Oracle JDBC Driver Version: 6.0.0.001235</li> <li>* PostgreSQL JDBC Driver Version: 6.0.0.001395</li> <li>* MySQL JDBC Driver Version: 5.1.4.000266</li> <li>* DB2 JDBC Driver Version: 5.1.4.000413</li> </ul> <p>Consult the DataDirect Connect documentation for more information.</p>
COR-14839	Optimized decision service code generation to improve rule execution performance when running with Java 11. Previously, some rule operations ran significantly faster with Java 8 vs Java 11. With the new optimizations, performance with Java 11 is generally on-par with or better than with Java 8.
COR-14143	Fixed a decision service compilation error that could occur in rulesheets using limited filters with unrelated entities in the conditions and actions of a rule.

**Issues Fixed in Corticon 6.3.3.1**

Item	Details
COR-14193	Fixed an issue where collection conversion resulted in an error when generating an EDS file.

## Issues Fixed in Corticon 6.3.3.0

Item	Details
COR-13778	<p>Fixed a problem where a specific sequence of edits to a rulesheet could result in the rulesheet displaying incorrectly in Corticon Studio. In a rulesheet, assignment expressions in an action can be either partial or complete assignment expressions. A partial assignment expression identifies an attribute to update but does not provide the value, the value is specified in individual rules. By contrast, a complete assignment expression identifies both an attribute to update and the value to assign. The assignment occurs for any rule in the rulesheet where the action is selected.</p> <p>Adding a partial assignment expression to a rulesheet and later switching it to be a complete assignment expression could result in one or more corresponding rule cells for the action being corrupted. The Corticon Studio rulesheet editor would appear to show the correct value for the cells even though the underlying definition for the cells are incorrect. This could result in rule execution not matching what is shown in the rulesheet.</p> <p>Example: A rulesheet contains a partial assignment action to set <code>Order.approved</code>. For rule 1 (the column) the value is set to T:</p> <pre>   Action            1   -----   Order.approved    T   </pre> <p>Edit the action to set make it a full assignment and set <code>Order.approved</code> to F:</p> <pre>   Action            1   -----   Order.approved = F       </pre> <p>This would result in a corrupt definition for the action in rule 1. This corrupt state can be seen in the Corticon Studio Rule Canonical Model view as:</p> <pre>Order.approved = F = T</pre> <p>The double assignment is invalid.</p> <p>Corticon Studio now prevents this sequence of actions from causing the corruption of action rule cells.</p> <p>This problem dates back to Corticon 5.6 or earlier. Running the Corticon upgrade wizard will check for this condition and correct any corrupted cells.</p>
COR-13704	Removed snakeyaml-1.33.jar from the default Server packaging. It is now part of the optional Swagger jar. Snakeyaml library is only used by Swagger.
COR-13622	Fixed a decision service compilation error impacting rulesheets that use an alias as both a singleton reference and a collection reference and a rule that uses that same alias as a collection. This was a regression from Corticon 6.3.2.
COR-13533	Updated the bundled logback libraries (logback-classic and logback-core) from version 1.2.9 to 1.4.14 to address the potential vulnerability identified in CVE-2023-6378.

Item	Details
COR-13472	Updated the bundled jackson libraries from version from 2.12.7 from 2.15.2 to address the potential vulnerability identified in PRISMA-2023-0067.
COR-11516	Fixed an issue where files names generated for reports created from Corticon Studio have '%20' in the generated file names in place of any spaces in the asset name. Now the generated file names contain spaces correctly.

### Issues Fixed in Corticon 6.3.2.3

Item	Details
COR-13728	Restored ADC supported execution of UPDATE/DELETE that do not include a WHERE clause. This behavior was modified where it only supported UPDATE/DELETE for entities with non-null primary keys. Due to this restriction SQL without WHERE clause were not executed. This fix restores earlier behavior of allowing UPDATE/DELETE SQL statements that do not include WHERE clause.

### Issues Fixed in Corticon 6.3.2.1

Item	Details
COR-13471	Fixed a regression issue where an extra rule was firing in Corticon Studio 6.3 versus 5.6 when a collection operator is used with a filter that references a collection operator with an unrelated entity when the rule does not also reference the unrelated entity.
COR-13457	Fixed an issue where different rule message results were returned in Studio version 5.6.1.40 compared to 6.3.1.9 if rulesheet had combination of filters, collection operators and remove operator on the same rulesheet.
COR-13395	Updated the bundled Tomcat from version 9.0.75 to 9.0.82 to address the potential vulnerability identified in CVE-2023-44487.

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### Issues Fixed in Corticon 6.3.2.0

Item	Details
COR-12947	Fixed a regression in rulesheet filter behavior introduced in Corticon 6.3. If a rulesheet contained filters on an entity and within a rule, the entity is used in an assignment action but not the rule conditions, the filter would yield an incorrect set of matching entities.
COR-12855	Fixed a problem in the Corticon Web Console when displaying Corticon Server log files. Some log entries could be duplicated multiple times in the log file viewer.
COR-11592	Fixed a problem where the Corticon Server installer would log an InvocationTargetException for the file "setrunas.exe". This error did not affect the validity of your Corticon installation.

### Issues Fixed in Corticon 6.3.1.9

Item	Details
COR-12858	Fixed an issue where Corticon Server was not honoring the passed in Entity id value which contained a zero at the end (Child_id_0). This confused the algorithm that assigned new ids to newly created instances through a .new call in Rules.
COR-12854	Fixed an issue where combination use of alias as singleton and collection was being ignored in filters and non-conditional rules.

### Issues Fixed in Corticon 6.3.1.8

Item	Details
COR-12841	Modified the default logging configurations of the Web Console database to have trace logging disabled. This is a change from the previous configuration, in which trace logging was enabled by default.
COR-12628	Fixed an issue with nested ruleflows not working for embedded branch nodes where branch is on the same parent entity but different associations. Now association filters are applied to all data layers.

### Issues Fixed in Corticon 6.3.1.7

Item	Details
COR-12647	Fixed an issue with the vocabulary search attribute function in Corticon Studio. If a space existed in a folder name, the search function would not find matching attributes in rulesheets within the folder. Corticon Studio now decodes the vocabulary URI before comparing and provide the 'Find references' search results correctly.

Item	Details
COR-12623	Fixed a rulesheet compilation issue. If a rulesheet utilized a filter where an alias was used in conjunction with an equal or not equal operator and the only other reference to the alias within rules was with a collection operator, previously this would result in a compilation error.
COR-12592	Fixed an issue when user overrides loglevel through Web Console. Updated value was not properly being interpreted by CcServer during CcServer startup.
COR-12569	Resolved an issue where user was unable to deploy axis.war in JBoss 7.4. Thirdparty library cxf-jaxrs.ear has been reverted back to 3.4.5 from earlier packaged version of 3.4.10 since it was not working with JBOSS 7.4 in 6.3.1.6 hotfix but worked in version 6.3.1.0.

### Issues Fixed in Corticon 6.3.1.6

Item	Details
COR-12567	Fixed a problem where using the remove operator to remove an entity and its children could result in broken associations. This would occur when passing an input JSON payload that contained one or more references to a child entity and the entities parent is removed. Example: A JSON payload with entities A, B, and C may all have an association to entity X. A fully denormalized JSON payload would have a full definition of X under each of A, B, and C. To reduce duplication, it is possible for the JSON to have a single definition of X under one of A, B, or C and for the others to have references to this instance of X. The problem was that using the remove operator with the option to remove children set could delete a referenced child entity. In our example, if the input JSON had the full definition of X under A and references to X under B and C, a remove of A and it's child X would break the references from B and C to X. The new behavior is that X will not be removed but moved to either B or C. Which entity contains the full definition of a child entity and which contain the references is irrelevant to rule processing. The new behavior maintains reference integrity.
COR-12560	Fixed the typographical error of 'variables' in the Swagger Batch API definition.
COR-12542	Fixed the issue where integer literals enclosed by parenthesis were not universally supported in rule expressions. Previously deeply nested parenthesis containing integer literals could result in erroneous code generation.

### Issues Fixed in Corticon 6.3.1.5

Item	Details
COR-12530	Fixed the problem where Corticon Batch Processing would improperly accumulate cached entities across executions potentially resulting in increased payload size.



### Issues Fixed in Corticon 6.3.1.4

Item	Details
COR-12434	Fixed the behavior where collection filter was creating duplicate tuples. This would occur if using a collection operator in a filter with child entities in the parameters
COR-12402	Updated the bundled cxf library from version 3.4.5 to 3.4.10 to address the potential vulnerability identified in CVE-2022-46363 and CVE-2022-46364.
COR-12270	Fixed a problem where Corticon EDC would incorrectly store the string "null" for String attributes mapped to CHAR database fields when the attribute was null. The null value is now stored in the database.

### Issues Fixed in Corticon 6.3.1.3

Item	Details
COR-12416	Fixed a problem when using Corticon EDC with rule projects where the vocabulary has nested domains . When an EDC mapped vocabulary contained the domains D1 and below it the domain D2, rule sheet filters on entities in D2 would fail with the error "Filter expression cannot be processed by the database".
COR-12398	Removed the jettison library from Corticon CcThirdPartyJars.jar. This library is no longer needed by Corticon.
COR-12242	Fixed a problem where in some situations the Corticon rule test editor would not allow the test subject to be set on a test sheet when there were multiple test sheets in a rule test.
COR-12239	Improved decimal precision comparison in rule test. Previously for Decimal data types, the output and expected values may not be flagged as different when they are. As an example the value 111.100002 would not be flagged as different from 111.100001. These values will now be flagged as differences in rule tests.

### Issues Fixed in Corticon 6.3.1.2

Item	Details
COR-11961	Improved runtime performance of rulesheets containing filters that uses entities not also used in a rule condition or action.

### Issues Fixed in Corticon 6.3.1.1

Item	Details
COR-12151	Updated the bundled jackson-databind library to version 2.13.4.2 to address the potential vulnerabilities identified in CVE-2022-42003 and CVE-2022-42004.

Item	Details
COR-12141	Fixed a problem where the Corticon Server MultipleCompilation utility would recompile a Decision Service if an EDS file existed for the Decision Service and the property OverrideIfExists=false was set. The OverrideIfExists property is set in the multipleCompilation.xml used to configure the utility. If OverrideIfExists is set to false, the utility should not recompile the Decision Service. If false, the existing EDS file should be retained. The utility was ignoring this property and always recompiling the Decision Service.
COR-12140	Fixed a problem where the REST datasource would incorrectly add duplicate HREF associations for bi-directional associations during import. The REST datasource now only adds an association if it does not already exist.
COR-12126	Related to COR-11180. Fixed a problem when using ADC to write a Date value to a database when performing Batch Insert operations. When the database Date value was read into ADC memory and stored into a Vocabulary Attribute with datatype Date Only, ADC time shifted the Date value to local timezone, which is expected behavior. But when ADC wrote that value back to the database, the Date value wasn't time shifted back to UTC, which would cause the storing of an incorrect Date value. This was not an issue with a Vocabulary Attribute with a DateTime datatype because no time shifting is needed.
COR-11966	Fixed a problem where rulesheet filters were not executing correctly. If a rulesheet contained: <ol style="list-style-type: none"> <li>1. Three or more filters on root entities (entities without associations between them)</li> <li>2. A filter that uses an association traversal to another entity</li> <li>3. A rule that uses two or more entities in filter #1 and does not use the associated entity from #2</li> </ol> When such a combination occurs the rule from #3 when executed will not include results from the filter of #2.
COR-11827	Updated the Corticon Web Console's LDAP authentication to support OpenLDAP. The Web Console supports both Microsoft Active Directory and OpenLDAP.

### Issues Fixed in Corticon 6.3.1.0

Item	Details
COR-11965	Updated Corticon Server's bundled Apache Tomcat to version 9.0.65.
COR-11964	Improved ADC handling of INSERT operations with database generated primary keys. Previously when using database generated primary keys, the generated keys were not retrieved by ADC after an INSERT operation resulting in an inability to INSERT associated child entities into the database, which are dependent on its parent's generated key value. ADC properly pushes the generated key value from the parent to the associated children when needed through the Vocabulary Association Join Expression definition.

Item	Details
COR-11523	Fixed an error in the upgrade of disabled filters in a Corticon 5.3 rulesheet to Corticon 6.x. The disabled filter would incorrectly be enabled in the upgraded rulesheet.
COR-11108	Fixed a problem when using ADC to write a Date value to a database. When the database Date value was read into ADC memory and stored into a Vocabulary Attribute with datatype Date Only, ADC time shifted the Date value to local timezone, which is expected behavior. But when ADC wrote that value back to the database, the Date value wasn't time shifted back to UTC, which would cause the storing of an incorrect Date value. This was not an issue with a Vocabulary Attribute with a DateTime datatype because no time shifting is needed.
COR-11591	Updated the bundled Data Direct JDBC drivers PostgreSQL. The current bundled versions are: * [Oracle JDBC Driver]Driver Version: 6.0.0.000707 (F001549.U000777) * [SQLServer JDBC Driver]Driver Version: 6.0.0.000998 (F001590.U000791) * [DB2 JDBC Driver]Driver Version: 5.1.4.000336 (F000525.U000273) * [MySQL JDBC Driver]Driver Version: 5.1.4.000223 (F000438.U000209) * [PostgreSQL JDBC Driver]Driver Version: 6.0.0.000318 (F001235.U000640) * [OpenEdge JDBC Driver]Driver Version: 5.1.4.000161 (F000502.U000252)
COR-11457	Fixed a problem where user supplied database drivers could not be configured in Corticon Studio when using Java 11. User supplied drivers can now be specified as Corticon Extensions in the Studio Project Properties. Corticon Studio 6.3 bundles OpenJDK 11.

### Issues Fixed in Corticon 6.3.0.3

Item	Details
COR-11860	Updated the bundled jackson-databind library from version from 2.12.1 from 2.12.7 to address the potential vulnerability identified in CVE-2020-36518.
COR-11859	Updated the bundled Data Direct JDBC drivers for Oracle, SQLServer, and PostgreSQL. The current bundled versions are: * [Oracle JDBC Driver]Driver Version: 6.0.0.000707 (F001549.U000777) * [SQLServer JDBC Driver]Driver Version: 6.0.0.000998 (F001590.U000791) * [DB2 JDBC Driver]Driver Version: 5.1.4.000336 (F000525.U000273) * [MySQL JDBC Driver]Driver Version: 5.1.4.000223 (F000438.U000209) * [PostgreSQL JDBC Driver]Driver Version: 5.1.4.000352 (F000548.U000290) * [OpenEdge JDBC Driver]Driver Version: 5.1.4.000161 (F000502.U000252)

Item	Details
COR-11827	Updated the Corticon Web Console's LDAP authentication to support OpenLDAP. The Web Console supports both Microsoft Active Directory and OpenLDAP.
COR-11240	Modified Corticon Server to correctly reject the deployment of an .eds file produced with a version of Corticon prior to 5.6, while also logging an error message stating that the .eds needs to be regenerated. An .eds file produced with Corticon 5.6 or earlier must be regenerated for use with Corticon 6.1 and later. It is best practice to regenerate all .eds files whenever moving to a new Corticon major.minor version.
COR-11294	Fixed a problem in Corticon Server execution where the execution thread would not terminate after execution timeout. Execution would cease but the thread would not terminate. This would eliminate the thread from availability to Corticon Server, reducing the number of threads available for execution.

### Issues Fixed in Corticon 6.3.0.2

Item	Details
COR-11792	<p>When using Corticon Server in-process, the ICcServer.execute methods now optionally throw as exceptions any runtime exception which occurs.</p> <p>Previously any exception which occurred once rule execution began would be returned as a rule message with severity violation in the response payload. This is still the default behavior.</p> <p>Setting the property:</p> <pre>com.corticon.server.execution.processing.throw.exceptions=true</pre> <p>will cause the exceptions to be thrown and not returned in the response payload. For in-process usage, this makes it easier to catch and handle runtime exceptions.</p>
COR-11516	Fixed a problem where the files names generated for service contracts and reports created from Corticon Studio would have "%20" in the generated file names in place of any spaces in the rule flow name. The generated file names will now contain spaces.
COR-11615	<p>Fixed a problem where Corticon Server would fail to process JSON input payloads if the following conditions were met:</p> <ol style="list-style-type: none"> <li>1) an Entity or Association in the JSON payload had a defined #id value in the __metadata object,</li> <li>2) the #id value contained "_id_", and</li> <li>3) the value to the right of the "_id_" was not a number (Entity_id_1a).</li> </ol> <p>Previously a "NumberFormatException" would be generated.</p>

Item	Details
COR-11779	Improved the performance of rule sheet operators on Integer attributes. Previously Corticon used the Java BigInteger type for these operators, it now uses Long. Long is a 64 bit integer with a range of values from $-2^{63}$ to $2^{63}-1$ . The Long type provides substantially better performance than BigInteger. This change is internal to Corticon and will have no visible effect, other than improved performance.
COR-11597	Added the default brms.properties to PROGRESS_CORTICON_6.x.x.x_DOCKER.zip file.  The "DOCKER.zip" distribution is available on Progress ESD. It's a limited distribution of Corticon Server, providing just the components required for Docker deployment. Including brms.properties makes it easier to customize properties such as log settings when deploying Corticon Server with Docker.

### Issues Fixed in Corticon 6.3.0.1

Item	Details
COR-11596	Fixed a problem where Corticon Server would not accept JSON payloads with "null" entity definitions when executing a decision service. Passing a "null" entity definition would result in a JSONArray[n] is not a JSONObject exception. Any "null" entities are discarded when parsing the input payload and will be excluded from response payload.
COR-11524	Fixed the Corticon Studio and Corticon Server installers to support installation on Windows 11 systems. Previously installation would generate a "Flexeraaxd\$aaa: Windows DLL failed to load" exception.
COR-11291	Improved Corticon Studio performance when validating ruleflows. Previously redundant validations could occur when using nested ruleflows. The performance improvement can have significant benefits when working on large rule projects in Corticon Studio.
COR-11247	Fixed a problem where rulesheet filters with EDC were not executed if the filtered entities were within a user defined domain in the vocabulary. When using EDC, rulesheet filters on a table are executed in the database for efficiency. Previously the filters would not run if the entity mapped to the table was in a user defined vocabulary domain.

Item	Details
COR-11292	Fixed a problem where rulesheet filters could produce incorrect results. If a rulesheet contains a collection operator and a filter that references the collection operator alias as well as an entity outside the collection alias scope, the filter would fail to correctly filter the collection content.
COR-10986	Fixed a problem where the Web Console would fail to delete and undeploy a decision service when authentication was enabled. This would occur both in the Web Console browser UI and the corticonWebConsole command line utility.

### Issues Fixed in Corticon 6.3.0.0

Item	Details
COR-10036	Incorrect results with Replace elements operator using XML payload in 5.7
COR-10037	Fixed a problem where a Corticon Server execution thread would be orphaned if a server execution timeout occurred. When Corticon Server is servicing an execution request a timeout will occur if the execution time exceeds the server execution timeout. The timeout protects against execution requests hanging or dominating the server. The most frequent cause of timeouts is databases queries exceeding expected response times. When a server timeout occurs, the executing thread was not returned to the execution thread pool and thus would be unavailable to service future requests. This could reduce the overall throughput of the server.
COR-10110	Fixed a problem where Corticon could add a spurious duplicate entity at the root of the result payload. This would occur for associations where the XML/JSON mapping name for the association was overridden and the association was used in a filter. In processing the payload Corticon would erroneously add the associated entity to the root of the payload being processed causing the entity to be duplicated in the result payload, once on the association and once at the root.
COR-11168	Fixed a problem where Corticon Server would handle non vocabulary entities incorrectly. Corticon Server is designed to ignore entities, attributes, and associations not defined in the vocabulary. In some cases, a non vocabulary entity could cause Corticon Server to interpret the hierarchical relationship of an XML payload incorrectly.
COR-11201	Modified the Corticon Studio Rule Message View to persist column widths when changing views.

Item	Details
COR-8657	<p>Updated the bundled Progress DataDirect Connect drivers. This delivers multiple driver level fixes. Consult the DataDirect Connect documentation for more details. The bundled Connect driver versions are now:</p> <ul style="list-style-type: none"> <li>* \[progress]\[Oracle JDBC Driver]Driver Version: 6.0.0.000479 (F001351.U000677)</li> <li>* \[progress]\[DB2 JDBC Driver]Driver Version: 5.1.4.000336 (F000525.U000273)</li> <li>* \[progress]\[SQLServer JDBC Driver]Driver Version: 6.0.0.000694 (F001336.U000671)</li> <li>* \[progress]\[MySQL JDBC Driver]Driver Version: 5.1.4.000223 (F000438.U000209)</li> <li>* \[progress]\[PostgreSQL JDBC Driver]Driver Version: 5.1.4.000334 (F000530.U000278)</li> <li>* \[DataDirect]\[OpenEdge JDBC Driver]Driver Version: 5.1.4.000161 (F000502.U000252)</li> </ul>
COR-8665	<p>Modified Corticon Studio to allow composite filters in a rulesheet where the filter performs a tabulation on a collection such as: Order.total -&gt; sum &gt;100 Although Corticon Studio allows it, when using EDC not all databases support such filters.</p>
COR-9495	<p>Modified Corticon Studio Tester to support updates to REST datasource configurations after a Tester window is opened. Previously, changing a REST datasource configuration would require a ruletest to be closed and reopened for the REST change to be recognized.</p>
COR-9587	<p>Fixed a rulesheet code generation error which would occur when using truncate and other extended operators in complex expressions where the operator was used following another operator in the expression. For example here truncate is in a complex expression and used after the toDecimal operator: entity.decimal1 = (entity.int1 * 2).toDecimal.truncate</p>
COR-9674	<p>Corticon now supports deployment to JBoss 7.3. See the supported platform matrix for details.</p>
COR-9696	<p>Fixed a problem in executing corticonManagement.bat provided with Corticon Server. Previously it would generate an invalid .eds file when the output directory was specified as a relative path. Relative paths can now be used.</p>
COR-9697	<p>Fixed a problem in executing multipleCompilation.bat provided with Corticon Server. Previously it could generate a class not found error.</p>

Item	Details
COR-9733	Fixed the deployment of decision services from Corticon Studio to the Corticon Web Console where the decision service contains one or more datasources. Previously the deployment would fail. Deployment to a Corticon Server was unaffected.
COR-9739	Updated the Corticon Studio operator tool tip for the Date.toDateTime operator to match the documentation.
COR-9755	Fixed a potential code generation problem which would result in a "toDecimal symbol not found" error when compiling a rulesheet . This problem could occur in rulesheets using Decimal attributes in complex expressions.
COR-9928	Fixed a problem where Corticon Server deployed to IIS would not self-register with the Corticon Web Console.



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## Known Issues in Corticon 6.2

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Item	Details	Knowledge Base
COR-9469	The Web Console does not preserve context for inner tables on page refresh or redisplay. This is evident in the display of Applications containing Decision Services. Filter, sort and other display preferences on the inner table listing Decision Services within the Application are lost on page refresh or redisplay.	<a href="#">Click for more information.</a>
COR-8787	When using <code>edd</code> files for deploying Decision Services to Corticon Server, the <code>eds</code> file for a Decision Service using EDC cannot be deleted once deployed without stopping the Corticon Server. This prevents update of the Decision Service with a new <code>eds</code> file.	
COR-8629	If Corticon Studio is run with Java 11, the Corticon Studio Tester cannot execute Ruletests against a remote server using XML/SOAP. The default REST/JSON must be used.	
COR-7927	Using the Corticon Foundation API may generate errors if Corticon Studio was installed with a work directory selected that contained spaces in the directory path.	<a href="#">Click for more information.</a>

Item	Details	Knowledge Base
COR-7426	The Corticon Server Linux installer does not set execute permissions on the shell scripts in <code>\$CORTICON_HOME/Server/tomcat/bin</code> . The execute permissions must be set after installation.	
COR-6467	The Corticon Server installs <code>corticon.war</code> even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete <code>corticon.war</code> from <code>&lt;install&gt;\\Server\\tomcat\\webapps</code> prior to starting the Corticon Server.	

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## Issues fixed in Corticon 6.2

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Item	Details
COR-7359	Corrected translation errors in Corticon Studio on the operator tooltips for the "and" and "or" operators.
COR-7360	Added missing translations in Corticon Studio for the tooltips on the <code>replaceString</code> , <code>regexReplaceString</code> , <code>matches</code> and <code>random</code> operators.
COR-9384	Fixed a problem in the sorting of collections when the attribute used for the sort is null in two or more entity instances. This could result in the error Comparison method violates its general contract.
COR-9382	Modified Corticon Studio rulesheets to allow the comparison and assignment of CDT enumerated values to non CDT attributes. For example, a CDT of String type named Tier might have the enumerated values bronze, silver and gold. You can now compare a String attribute to a CDT value if the String attribute is not defined to be of type Tier. You may also assign a String attribute a CDT value the String attribute is not defined to be of type Tier.
COR-9248	Fixed a problem in the Corticon Studio Tester where the count of the number of differences in the test could be obscured when the number of differences is large, typically greater than 1000.
COR-9144	Fixed a problem in Corticon Studio where the size of EDS files packaged by the Package Rules for Deployment wizard would increase when overwriting an existing EDS file.
COR-9129	Fixed a problem where case was being enforced at runtime on the 'not' operator but not in Corticon Studio. Runtime no longer enforces case on the 'not' operator.

Item	Details
COR-8383	Fixed a potential <code>ClassCastException</code> on <code>ICcDataObject</code> when using Corticon Server in-process. The error would occur when rules updated a vocabulary attribute that was not mapped to a Business Object <code>get/set</code> method.
COR-8707	<p>Modified the Corticon Web Console option to enable automatic page refresh on top-level pages by default. This default was incorrectly modified in a prior hotfix to disable automatic page refresh by default. To disable automatic page refresh, add the following in the file <code>CorticonServerConsoleConfig.groovy</code>:</p> <pre> corticon \{   view \{     reload = false   } }</pre>
COR-8623	<p>Modified the <code>corticonManagement</code> utility to honor the property</p> <pre>com.corticon.servicecontracts.global.use.vocabulary.filename</pre> <p>When using the utility to generate a WSDL and the property is set to true in your <code>brms.properties</code>, the generated WSDL will have the vocabulary filename in the "portType", "binding", and "service" names.</p>
COR-8532	Modified the Corticon Web Console to display all Decision Services within an Application. Previously the display within an Application was limited to 10 Decision Services.
COR-8533	<p>Added an option to the Corticon Web Console to disable automatic page refresh on top-level pages. This option applies to the pages listing Decision Services, Servers, Batch Configurations, Users, and the Activity Log. To disable automatic page refresh, add the following in the <code>CorticonServerConsoleConfig.groovy</code>:</p> <pre> corticon \{   view \{     reload = false //default; Change to true to enable it.   } }</pre>
COR-8538	Fixed a potential null pointer exception that could occur when executing a Rulesheet where the entity referenced in the filter is used within a new operator in a rule action.
COR-8537	Fixed a null pointer exception that could occur executing a Rulesheet when the Rulesheet contains a rule combining the <code>isEmpty</code> operator with two or more filtered aliases.
COR-8352	Fixed a potential out of bounds exception that could occur in Corticon Studio when editing a rulesheet containing comments.

Item	Details
COR-8342	Fixed a problem in the generation of vocabulary WSDLs. The values for the WSDL properties "portType", "binding" and "service" were not being translated in the WSDL when translations were available.
COR-8329	Fixed a problem in the install of the Corticon Server .NET sample clients. The C-sharp.csproj and App.configs files in the folder \\Samples\\Clients\\InProcess\\C-sharp contained corrupted data when installed on a Japanese OS.
COR-8286	Fixed a problem with XML or JSON payloads where some, but not all, entities had the entity id specified. Corticon could erroneously allocate ids for entities without ids that conflicted with an input entity which had an id. This problem would not occur if all the input entities had ids or did not have ids. In practical terms this problem would only be seen if taking the output from one decision service, adding entities to it, and then passing it as input to another decision service.
COR-8212	Optimized the import of XML into a ruletest by eliminating unnecessary validation steps. This optimization allows the input of a ruletest to be set using large XML files. Note, for very large XML files it may still be necessary to increase the maximum amount of memory by setting -Xmx to a value of 4g or higher in the Corticon Studio eclipse.ini file.
COR-7865	Fixed a problem in the newUnique operator where a duplicate entry could be created due to differences in the values of Integer and Decimal parameters. At the Java level, this problem was due to differences in the value of BigInteger and Long data types for the same parameter value.
COR-8208	Fixed a problem in the install of the Corticon Server .NET sample clients. The C-sharp.csproj and App.configs files in the folder \\Samples\\Clients\\InProcess\\C-sharp contained corrupted data when installed on a Japanese OS.
COR-8004	Improved the ADC error messages when there is a Read ID value in the CORTICON_ADC_READ_DEFS table that does not map to an ID in the CORTICON_ADC_READ table.
COR-8183	Fixed a potential null pointer exception at runtime in rulesheets that are using the remove operator.
COR-7112	Fixed a problem where erroneous extra rule executions could occur on rulesheets when using the operator "+=" in combination with a collection operator in a filter.
COR-8152	Fixed incorrect error messages in the Corticon Server REST API where error messages could incorrectly state dsName, dsMajorVersion or dsMinorVersion where they should state name, majorVersion and minorVersion.
COR-7802	Fixed a problem where setting the property com.corticon.reactor.rulestatement.metadata=true would cause rulesheet names containing hyphens to show incorrectly in rule messages. The hyphen would be replaced with the number 45. Corticon now preserves the original rulesheet name for use in rule messages.

Item	Details
COR-7374	Fixed a problem in Corticon Studio where disabling multiple columns at one time in the rulesheet editor could take an excessive amount of time. This operation now completes quickly.
COR-7333	Fixed a problem where setting "Restrict Violation Message" in the Corticon Studio Tester was also enabling "Restrict Info Messages"
COR-8011	Fixed a problem when using the Corticon Web Console to set the license file for a Corticon Server. Upon restart of the Corticon Server, the license information was resetting to its prior value. Changing the license from the Web Console now persists when a Corticon Server is restarted.
COR-7998	<p>Added a property to use the Vocabulary name as the Reference Name in a Vocabulary level WSDL generated with Corticon.</p> <pre>com.corticon.servicecontracts.global.use.vocabulary.filename=true</pre> <p>This property is for compatibility with an older version of Corticon. To create a WSDL identical to Corticon 5.4.1 set the properties:</p> <pre>com.corticon.servicecontracts.global.use.vocabulary.filename=true com.corticon.servicecontracts.append.usagelabel=true</pre> <p>This new property is intended only for users migrating from old versions of Corticon.</p>
COR-7803	Fixed a problem in ruletests where an erroneous "value for attribute must be set" warning could be shown after exporting the input for a ruletest from Corticon Studio even though the attribute had a value.
COR-7872	Fixed a problem migrating Corticon 5.2 rulesheets to Corticon 5.7 rulesheets in the use of filters. In some cases, a filter containing an entity reference where the entity was not used in the rule could result in the filter not being applied to the rule.
COR-7870	Improved Corticon ADC error messages when an error occurs performing an ADC database operation. Detailed errors are written to the Corticon log file.
COR-7866	Fixed a problem where the Corticon Web Console would fail downloading the Corticon Server log file from a managed Corticon Server.
COR-7625	<p>Remove the description of the property</p> <pre>com.corticon.server.monitoring.decisionservice.trackingattribute</pre> <p>from CcServer.properties file</p>
COR-7566	Fixed a Null Pointer Exception that could occur when using limited filters in rulesheets upgraded from Corticon 5.2 to 5.7.
COR-7326	Fixed problems using the newUnique operator in a rulesheet where the vocabulary had been mapped to a database for EDC. Execution of the newUnique operator would produce a Hibernate exception.

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Item	Details
COR-7176	Fixed an issue in usage of the <code>forAll</code> operator in a rulesheet in conjunction with an attribute operator being passed a null parameter. This could result in a Null Pointer Exception.
COR-7114	Modified the Mixed Connectivity sample bundled with Corticon Studio such that the vocabulary could be reimported from a database without errors.





## Known Issues in Corticon 6.1

### Known Issues in Corticon 6.1.4

Item	Details
COR-14752	Corticon's optional Swagger facility for exploring Corticon's REST API is not supported with JBoss 7.1, 7.1 or 7.2 due to incompatibilities in third party libraries. If Swagger is required, use JBoss 7.3 or later.

### Known Issues in Corticon 6.1.3

There are no known issues in Corticon 6.1.3.

### Known Issues in Corticon 6.1.2

There are no known issues in Corticon 6.1.2.

### Known Issues in Corticon 6.1.1

Item	Details	Knowledge Base
COR-7426	The Corticon Server linux installer does not set execute permissions on the shell scripts in "\$CORTICON_HOME/Server/tomcat/bin. This must be set after installation.	

Item	Details	Knowledge Base
COR-7360	In Corticon Studio, the tooltips on the replaceString, regexReplaceString, matches and random operators are not translated.	
COR-7359	In Corticon Studio, the operator tooltips for the and and or operators are translated incorrectly.	
COR-7210	Deploying a Decision Service from Corticon Studio to the Web Console may fail if the Decision Service Vocabulary has a datasource name containing Japanese (or similar) characters.	
COR-6705	In some instances while importing Database Metadata from a MySQL Datasource, the Association metadata is invalid. Because of this, the Populate Vocabulary feature will not auto generate these Associations. These associations will need to be manually added.	
COR-6467	The Corticon Server installs corticon.war even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete corticon.war from <install>\Server\tomcat\webapps prior to starting the Corticon Server.	

### Known Issues in Corticon 6.1.0.0

Item	Details	Knowledge Base
COR-6826	When using Populate Vocabulary to create a vocabulary from a datasource, selecting the checkbox in the wizard to create vocabulary domains for the catalog and schema will lead to duplicate entries in the vocabulary if run a second time on the same datasource. These duplicate entries will need to be manually deleted.	
COR-6705	In some instances while importing Database Metadata from a MySQL Datasource, the Association metadata is invalid. Because of this, the Populate Vocabulary feature will not auto generate these Associations. These associations will need to be manually added.	
COR-6467	The Corticon Server installs corticon.war even if the Corticon Web Console option is not selected during installation. If you do not want the Web Console, delete corticon.war from "<install>\Server\tomcat\webapps" prior to starting the Corticon Server.	

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## Issues fixed in Corticon 6.1

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### Issues fixed in Corticon 6.1.4

Item	Details
COR-14873	<p>Updated multiple bundled Progress DataDirect Connect drivers. The updated driver versions are now:</p> <ul style="list-style-type: none"><li>* SQLServer JDBC Driver Version: 6.0.0.001525</li><li>* Oracle JDBC Driver Version: 6.0.0.001235</li><li>* PostgreSQL JDBC Driver Version: 6.0.0.001395</li><li>* MySQL JDBC Driver Version: 5.1.4.000266</li><li>* DB2 JDBC Driver Version: 5.1.4.000413</li></ul> <p>Consult the <a href="#">DataDirect Connect documentation</a> for more information.</p>

Item	Details
	<p>Fixed a problem where a specific sequence of edits to a rulesheet could result in the rulesheet displaying incorrectly in Corticon Studio. In a rulesheet, assignment expressions in an action can be either partial or complete assignment expressions. A partial assignment expression identifies an attribute to update but does not provide the value, the value is specified in individual rules. By contrast, a complete assignment expression identifies both an attribute to update and the value to assign. The assignment occurs for any rule in the rulesheet where the action is selected.</p> <p>Adding a partial assignment expression to a rulesheet and later switching it to be a complete assignment expression could result in one or more corresponding rule cells for the action being corrupted. The Corticon Studio rulesheet editor would appear to show the correct value for the cells even though the underlying definition for the cells are incorrect. This could result in rule execution not matching what is shown in the rulesheet.</p> <p>Example: A rulesheet contains a partial assignment action to set <code>Order . approved</code>. For rule 1 (the column) the value is set to <code>T</code>:</p> <pre>  Action            1   -----   Order . approved   T  </pre> <p>Edit the action to set make it a full assignment and set <code>Order . approved</code> to <code>F</code>:</p> <pre>  Action            1   -----   Order . approved = F      </pre> <p>This would result in a corrupt definition for the action in rule 1. This corrupt state can be seen in the Corticon Studio Rule Canonical Model view as:</p> <pre>Order . approved = F = T</pre> <p>The double assignment is invalid.</p> <p>Corticon Studio now prevents this sequence of actions from causing the corruption of action rule cells.</p> <p>This problem dates back to Corticon 5.6 or earlier. Running the Corticon upgrade wizard will check for this condition and correct any corrupted cells.</p>
COR-14117	Fixed an issue where the Corticon Studio Find References feature could generate an internal error. The Find References feature finds all references to a vocabulary element in a rule project.

### Issues fixed in Corticon 6.1.3

Item	Details	Knowledge Base
COR-9502	The Web Console was enhanced to preserve the display context of tables on page refresh or redisplay. The context includes the page of data displayed in a table, state of what is expanded or collapsed, sort order, and more.	

Item	Details	Knowledge Base
COR-9445	The Corticon REST API is available in Server's install directory for Java and .NET. This provides an alternative to the Swagger REST API documentation bundled with Corticon Server for Java.	
COR-9129	Fixed a problem where case was being enforced at runtime on the 'not' operator but not in Corticon Studio. Now Corticon Studio enforces case on the 'not' operator.	
COR-8004	Improved the ADC error messages when there is a Read ID value in the CORTICON_ADC_READ_DEFS table that does not map to an ID in the CORTICON_ADC_READ table.	
COR-7360	Added missing translations in Corticon Studio for the tooltips on the replaceString, regexReplaceString, matches and random operators.	
COR7359	Corrected translation errors in Corticon Studio on the operator tooltips for the "and" and "or" operators.	

### Issues fixed in Corticon 6.1.2.x

Item	Details	Knowledge Base
COR-8533	<p>Added an option to the Corticon Web Console to disable automatic page refresh on top-level pages. This option applies to the pages listing Decision Services, Servers, Batch Configurations, Users, and the Activity Log. To disable automatic page refresh , add the following in the CorticonServerConsoleConfig.groovy</p> <pre> corticon \{ view \{ reload = false //default; Change this value to true to enable it. } } </pre>	
COR-8613	Fixed a problem in the Corticon Studio Vocabulary editor when using multiple Domains. If the same entity name present in more than one domain, erroneous vocabulary validation warnings would be indicated.	
COR-8591	Fixed a problem in the Corticon Studio Tester where the test subject in a Testsheet could not be changed if the directory path name for the vocabulary contained a space.	
COR-8538	Fixed a potential null pointer exception that could occur executing a Rulesheet where the entity referenced in the filter is used within a new operator in a rule action.	

Item	Details	Knowledge Base
COR-8537	Fixed a null pointer exception that could occur executing a Rulesheet when the Rulesheet contains a rule combining the isEmpty operator with 2 or more filtered aliases.	
COR-8532	Modified the Corticon Web Console to display all Decision Services within an Application. Previously the display within an Application was limited to 10 Decision Services.	
COR-8352	Fixed a potential out of bounds exception that could occur in Corticon Studio when editing a rulesheet containing comments.	
COR-8623	Modified the corticonManagement utility to honor the property com.corticon.servicecontracts.global.use.vocabulary.filename. When using the utility to generate a WSDL and the property is set to true in your brms.properties, the generated WSDL will have the vocabulary filename in the "portType", "binding", and "service" names.	
COR-8620	<p>Modified Corticon Server's logging of errors to include the triggering decisions service's name and version. This makes it easy to identify the decision service which triggered the error. Example:</p> <pre>2020-11-16 08:53:43.414 ERROR [main] d._.1.x.e.0.0 com.corticon.reactor.CcJavaReactor - CcJavaReactor.run() Decision Service == (1(AllocateTrade-0.0)) java.lang.ArithmeticException: BigInteger divide by zero</pre> <p>Here, the decision service name is AllocateTrade and the version is 0.0.</p>	
COR-8941	Fixed a potential error when executing a rulesheet a very large number of action rows. The error could occur when the number of action rows exceeded "ZZ" or 676 rows. The problem has been fixed but it is recommended that any rulesheet with such a large number of rows be refactored for simplification.	
COR-8866	Fixed a potential problem with code generation for rulesheets containing cell values such as "(0)/(1.234)". The presence of the unnecessary parenthesis could generate invalid code and prevent compilation of an EDS file.	
COR-8747	Fixed a problem in Ruletest and Ruleflow reports where some rule statements would be ignored and not included in the report. Rule Statements that used value sets (for example, \{1,2\}) or value ranges (for example, 3:4) would be excluded from the report.	
COR-8745	Fixed a problem in ruletest reports where the entire output or expected trees would not be shown if they exceeded the length of the input tree. The input tree length was dictating the maximum length of any tree show in the report.	

Item	Details	Knowledge Base
COR-8707	<p>Modified the Corticon Web Console option to enable automatic page refresh on top-level pages by default. This default was incorrectly modified in a prior hotfix to disable automatic page refresh by default. To disable automatic page refresh, add the following in the file CorticonServerConsoleConfig.groovy</p> <pre> corticon   \{     view \{       reload = false     }   } </pre>	
COR-9144	Fixed a problem in Corticon Studio where the size of EDS files packaged by the Package Rules for Deployment wizard would increase when overwriting an existing EDS file.	
COR-8383	Fixed a potential ClassCastException on ICcDataObject when using Corticon Server in-process. The error would occur when rules updated a vocabulary attribute that was not mapped to a Business Object get/set method.	
COR-9382	Modified Corticon Studio rulesheets to allow the comparison and assignment of CDT enumerated values to non CDT attributes. For example a CDT of String type named Tier might have the enumerated values bronze, silver and gold. You can now compare a String attribute to a CDT value if the String attribute is not defined to be of type Tier. You may also assign a String attribute a CDT value the String attribute is not defined to be of type Tier.	
COR-9384	Fixed a problem in the sorting of collections when the attribute used for the sort is null in two or more entity instances. This could result in the error Comparison method violates its general contract.	

### Issues fixed in Corticon 6.1.2

Item	Details	Knowledge Base
COR-8411	Added a "PROGRESS_CORTICON_<version>_DOCKER.zip" file to the Corticon distribution available on ESD. This zip file contains the components necessary to deploy Corticon Server in a Docker container. The Dockerfile will need to be modified to include the EDS files for the Decision Services you want to deploy and your Corticon license.	

Item	Details	Knowledge Base
COR-8410	<p>Modified the "corticonManagement -test" command to accept a comma-separated, wildcarded, list of ruletest file names on the "-input" parameter.</p> <p>This allows multiple ruletests to be executed in a single invocation of the command. This can significantly improve the performance when running multiple tests by eliminating the need to load decision services multiple times.</p>	
COR-8409	<p>Improved the performance of several operations in Corticon Studio including the loading of extensions, ruleflow report generation, and ruletest execution when the project vocabulary hasn't changed. These optimizations are limited to Corticon Studio, they have no impact on Corticon Server.</p>	
COR-8342	<p>Fixed a problem in the generation of vocabulary WSDLs. The values for the WSDL properties "portType", "binding" and "service" were not being translated in the WSDL when translations were available.</p>	
COR-8329	<p>Fixed a problem in the install of the Corticon Server .NET sample clients. The C-sharp.csproj and App.configs files in the folder \\Samples\\Clients\\In Process\\C-sharp contained corrupted data when installed on a Japanese OS.</p>	
COR-8286	<p>Fixed a problem with XML or JSON payloads where some, but not all, entities had the entity id specified. Corticon could erroneously allocate ids for entities without ids that conflicted with an input entity which had an id.</p> <p>This problem would not occur if all the input entities had ids or did not have ids. In practical terms this problem would only be seen if taking the output from one decision service, adding entities to it, and then passing it as input to another decision service.</p>	
COR-7176	<p>Fixed an issue in usage of the forAll operator in a rulesheet in conjunction with an attribute operator being passed a null parameter. This could result in a Null Pointer Exception.</p>	
COR-8183	<p>Fixed a potential null pointer exception at runtime in rulesheets using the remove operator.</p>	
COR-7872	<p>Fixed a problem migrating Corticon 5.2 rulesheets to Corticon 5.7 Rulesheets in the use of filters. In some cases a filter containing an entity reference where the entity was not used in the rule could result in the filter not being applied to the rule.</p>	



Item	Details	Knowledge Base
COR-7802	Fixed a problem where setting the property com.corticon.reactor.rulestatement.metadata=true Would cause rule sheet names containing hyphens to show incorrectly in rule messages. The hyphen would be replaced with the number 45. Corticon now preserves the original rulesheet name for use in rule messages.	
COR-7265	Modified the Corticon Studio rulesheet editor to detect entry of newline characters in string values in expressions. Such expressions will be marked as invalid. Existing rulesheets containing string values in expressions should be modified to remove the new line character. Executing rules where a rulesheet contains such strings will result in an exception.	
COR-7112	Fixed a problem where erroneous extra rule executions could occur on rulesheets when using the operator "+=" in combination with a collection operator in a filter.	

### Issues fixed in Corticon 6.1.1

Item	Details	Knowledge Base
COR-7184	Fixed a problem in the corticonManagement command with the -entitiesreturn option with --createcdd. The PROPERTY_DATABASE_ACCESS_RETURN_ENTITIES_MODE property was not being set in the generated CDD file.	
COR-7200	Fixed a potential HashSet exception which could occur when using limited filters in combination with the sortBy operator in a rulesheet.	
COR-7195	The same results are observed when passing negative values for "To date Timezone offset".	
COR-7176	Fixed an issue in usage of the forAll operator in a rulesheet in conjunction with an attribute operator being passed a null parameter. This could result in a Null Pointer Exception.	
COR-7151	Fixed a problem in the use of the Locale setting in Corticon Studio when running ruletests against remote servers. The Locale setting was ignored for JSON execution (the default).	
COR-7082	Fixed a potential exception when using integer literals in database filters where the database type was a long integer. Corticon now casts such attributes to long data types for filtering.	
COR-7096	Fixed an error in the startServer.sh and stopServer.sh scripts in the Corticon Server linux installer. A file case error was preventing execution.	

Item	Details	Knowledge Base
COR-7110	Increased the default setting of the property <code>com.corticon.ccserver.compile.memorysettings</code> to <code>Xms256m -Xmx1g</code> . This provides additional memory for compiling large decision services.	
COR-7108	Fixed a problem in the deployment of Corticon .NET decision services to IIS that used extension jar files. Previously the extensions would not load and the decision service would fail to deploy.	
COR-7097	Added the missing <code>+=</code> operator to the String attribute operators in Corticon Studio.	
COR-6862	Fixed a problem with the Corticon Web Console and Microsoft Internet Explorer. The displayed status icons could be incorrect due to use of stale cached icons.	
COR-5781	Updated the bundled Progress DataDirect Connect drivers. This delivers multiple driver level fixes. Consult the DataDirect Connect documentation for more details. The bundled Connect driver versions are now: <pre> * \[progress]\[Oracle JDBC Driver]Driver Version: 5.1.4.000493 (F000451.U000214) * \[progress]\[DB2 JDBC Driver]Driver Version: 5.1.4.000288 (F000439.U000210) * \[progress]\[SQLServer JDBC Driver]Driver Version: 5.1.4.000254 (F000453.U000216) * \[progress]\[MySQL JDBC Driver]Driver Version: 5.1.4.000223 (F000438.U000209) * \[progress]\[PostgreSQL JDBC Driver]Driver Version: 5.1.4.000244(F000453.U000216) * \[DataDirect]\[OpenEdge JDBC Driver]Driver Version: 5.1.4.000142 (F000376.U000183) </pre>	
COR-6905	Fixed a problem in the Corticon Studio EDC sample when used with a Postgres database. When importing metadata from the database into the sample vocabulary, erroneous mapping errors on Date data types would be produced.	
COR-6906	Partially fixed a problem with use of the remove operator to delete entities in a rulesheet. In some cases deleting multiple entities within a single rule would yield inconsistent results by not deleting all instances of the target entities.	
COR-6907	Fixed a regression in the behavior of collection operators when used as discrete filters in a rulesheet.	
COR-6856	Modified Corticon Studio to allow the use of operators in range expressions. Previously this was disallowed because it invalidates rulesheet completeness checks. The use of operators in range expressions is now allowed but is discouraged. Completeness checks on rulesheets using operators in range expressions will not be accurate.	

Item	Details	Knowledge Base
COR-6860	Fixed a regression in rule execution where the use of discrete filters in combination with multiple operators could result in incorrect rule results with empty collections.	
COR-6674	Fixed an issue with clone operator handling null values. If there is a clone like A.clone[attr=B.attr] and B.attr is null it will not override the value of the cloned A.attr. A new property com.corticon.reactor.rulebuilder.DisableNullCheckingOnClone has been added to handle removal of null checks. If the property is set to true, null checks will be ignored and the value of the cloned A.attr will be null. Default value of the property is false.	
COR-6699	Fixed a problem in rulesheet and ruleflow reports where rule actions previously selected for a rule would still be included in reports even if they were later unselected for the rule. This would give the false impression the action was still executed for the rule.	
COR-6649	Fixed an issue in the Corticon Web Console where a custom ping polling frequency set in CorticonServerConsoleConfig.groovy was not being honored.	

### Issues fixed in Corticon 6.1.0

Item	Details	Knowledge Base
COR-6674	Fixed an issue with clone operator handling null values. If there is a clone like A.clone[attr=B.attr] and B.attr is null it will not override the value of the cloned A.attr. A new property com.corticon.reactor.rulebuilder.DisableNullCheckingOnClone has been added to handle removal of null checks. If the property is set to true, null checks will be ignored and the value of the cloned A.attr will be null. Default value of the property is false.	
COR-6699	Fixed a problem in rulesheet and ruleflow reports where rule actions previously selected for a rule would still be included in reports even if they were later unselected for the rule. This would give the false impression the action was still executed for the rule.	
COR-6695	Fixed an issue with getDecisionServiceProperties REST API where decision service major and minor version was wrongly handled as mandatory parameters to retrieve Decision service properties.	

Item	Details	Knowledge Base
COR-6481	<p>Fixed an issue impacting the ADC and REST service callouts and potentially custom callouts which used the method <code>ICcDataObjectManager.getEntitiesByName(String)</code></p> <p>The method would not return entities which had an XML override name defined. For ADC and REST service callouts this could result in some entities not being processed. The impact on custom callouts depends on their usage of the method.</p>	
COR-6468	Fixed an error when using <code>corticonManagement -test</code> with a ruletest containing rulesheets where the test subject is a remote Corticon server. Previously it would generate a <code>ClassNotFoundException</code> .	
COR-6469	Updated documentation and tooltip for the usage of AND/OR operators to clarify they can be used in filters, conditions or actions.	
COR-6449	Fixed a problem in the use of Corticon ADC in service callouts within a ruleflow branch. Usage of ADC outside the branch would succeed but usage within a branch could fail.	
COR-6341	Fixed problems in the handling of rulesheet expressions containing multiple collection operators and multiple aliases. Rule execution could produce incorrect results.	
COR-6290	Fixed issue where idle database connections failed to re-connect to the database when needed during an ADC call. With new default settings the connection pool will timeout and reset the database connection cleanly, which will avoid connection problems during executions. These settings are now <code>CcProperties</code> , which can be overridden in the <code>brms.properties</code> .	
COR-6232	Fixed an issue where Corticon Server was not logging updated license information. After a new license was deployed to Corticon Server, information from the prior license could still be logged.	
COR-6163	Fixed a resource not found: <code>/images/default_user@2x.png</code> error in <code>webconsole.log</code> when accessing the WebConsole from a high resolution display	
COR-6062	Modified the execution of Decision Services that use ADC to abort the current execution if a call to ADC generates an exception. Previously execution would continue, potentially leading to incorrect results. Decision Service execution is now aborted if any Service Call-out generates an exception.	

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Item	Details	Knowledge Base
COR-6228	Fixed a problem where Corticon Server licenses deployed through the Corticon Web Console would log an erroneous, expired, license information.	
COR-6105	Fixed a problem where you were erroneously able to delete an entity in scope even though it has a reference in the rule sheet	
COR-5411	Fixed an issue where the Corticon Server installer was not using the user supplied port number on the Web Console shortcut.	
COR-5393	Modified the Corticon Server tomcat startup procedure to honor the setting of SERVER_PORT in startServer.bat.	

