What's New in Corticon

Copyright

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Overview of Progress Corticon

Progress® Corticon® is the Business Rules Management System with the patented rules engine that enables you to automate sophisticated decision processes—without having to write code.

Progress Corticon products

Progress Corticon distinguishes its development toolsets from its server deployment environments.

- **Corticon Studio** is the Windows-based development environment for creating and testing business rules:

    - When installed as a standalone application, Corticon Studio provides a complete Eclipse development environment for Corticon in the **Corticon Designer** perspective. You can use this Eclipse installation as the basis for adding other Eclipse tools.

    - When installed into an appropriate existing Eclipse environment, Corticon integrates with installed Eclipse tools to enable you to develop Corticon applications in the **Corticon Designer** perspective.

    Note: Refer to the *Corticon Installation Guide* for details about integrating Corticon Studio into an existing Eclipse environment.

- **Corticon Servers** implement web services and in-process servers for deploying business rules defined in Corticon Studio:

    - **Corticon Server for Java** is supported on various application servers, and client web browsers. After you install it on a supported Windows platform, its deployment artifacts can be redeployed on various UNIX and Linux web service platforms as Corticon Decision Services.

    - **Corticon Server for .NET** facilitates deployment of Corticon Decision Services on Windows .NET Framework and Microsoft Internet Information Services (IIS).

- **Corticon Web Console** enables administration of multiple remote Corticon Servers. A Web Console server is deployed into a Progress Application Server, and then is accessed by users through authenticated web browser connections.

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What's new and changed in Corticon 5.7

This section summarizes the new, enhanced, and changed features in Progress® Corticon® 5.7.0.

For details, see the following topics:

- Enhanced access to external databases

- Batch rule processing

- Datasource Configuration File

- Ability to richly document rule assets

- Ability to refactor element names in a Vocabulary

- Usability improvements

- Access to HTTP Headers in Extended Operators and Service Callouts

- Bundled plugins that support management of project assets

- Other changes

- Deprecated Features

Enhanced access to external databases

A Decision Service can now use multiple instances of Corticon's Advanced Data Connector (ADC) to access data in multiple databases. An example would be a Decision Service that reads data from two database and writes to a third. The Corticon Vocabulary editor has been enhanced to allow you to map entities and attributes to more than one database.

See the *Corticon Server: Data Integration Guide* for comprehensive information about access to external databases.

Batch rule processing

Corticon Server now makes it easy to perform batch rule processing of database data. This is for rule processing of large data sets such as healthcare records or financial transactions either on-demand or on a recurring schedule, such as nightly or quarterly.

Corticon Server now accepts requests to start a batch process. It will efficiently retrieve the specified data from a database and pass it to the indicated Decision Service for processing. Batch rule processing is designed for use with Decision Services that use ADC. You can start and manage batch processes through the Corticon Web Console, or use the Corticon Server REST API to integrate batch processing with other scheduling tools you use.

To learn more about batch processing in Corticon, see the Corticon *Data Integration Guide* section *"Getting Started with Batch".*

Datasource Configuration File

A new file has been added for the configuration of Datasources used by a Decision Service, the Datasource Configuration File. This XML file can be created manually or exported from Corticon Studio when editing a Vocabulary. When deploying a Decision Service that accesses external Datasources, you provide the EDS file for the Decision Service and its Datasource Configuration File. By editing the configuration file when you deploy a Decision Service, you can adjust the connections and their credentials so that they use test or production databases.

The Datasource Configuration File replaces the `database.properties` file previously used with EDC Decision Services. While you can still deploy using the `database.properties` file, you are encouraged to move to the using Datasource Configuration Files.

To learn more about Datasource Configuration Files, see the Corticon *Data Integration Guide* section *"Deploying projects that use data integration".*

Ability to richly document rule assets

Commenting files as you design and develop them is considered a professional best practice. It provides essential information to current and future stakeholders of projects, including colleagues that will maintain and enhance them to meet the inevitable changing business requirements of a project.

You can now add comments to all rule assets and the discrete components within them. Example include comments on entities and attributes in a Vocabulary and individual rules and cells in a Rulesheet. A new **Comments** View provides a flexible way to view the comments in a rule asset.

For more information about this feature, see the section *"Documenting Rule Assets" in the Quick Reference Guide.*

Ability to refactor element names in a Vocabulary

Corticon now lets you *refactor* a Vocabulary name of an entity, attribute, or association so that each change is automatically applied to all instances of the name in all assets in the project.

Choose the **Refactor** option on the right-click context menu of any entity, attribute, or association name to initiate the process.

For more information about this feature, see *"Refactoring entity, attribute, or association names in a project" in the Quick Reference Guide.*

Usability improvements

The behavior of several Corticon Studio features has changed to improve their usability. Significant usability improvements in this release include:

Numerical equality applied during validation

When comparing expected results with output results during the validation stage of testing, two values that have a different number of trailing zeros to the right of the decimal place now validate correctly. **Note:** Avoid introducing rounding errors and inconsistent use of big decimal data types. These can still lead to differences during comparisons. This information was added to *Techniques that refine rule testing* in the *Rule Modeling Guide*

Double-click to rename a Testsheet

In the Ruletest editor, you can change the name of a Testsheet by double-clicking on its tab, as illustrated:
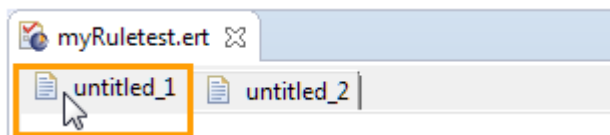
The **Rename Testsheet** dialog opens where you enter your preferred name for the Testsheet.

This improvement updates the topic *"Renaming Testsheets" in the Quick Reference Guide.*

Collapse All and Expand All items in Testsheet trees

Right-click in a Ruletest view to select **Expand All** or **Collapse All** the items in a test tree. These menu options operate on each tree separately. The previous expansion state of any children is lost by using these options.

Exclude Transients when exporting Testsheets to XML, SOAP, or JSON

You can chose to exclude transients when you export Testsheets to XML, SOAP, or JSON using the Exclude Transients option. For example, select **Ruletest > Testsheets > Data > Output > Exclude Transients** to set your preference to exclude transients. Toggle the option off to include transients in the exported document.

Ignore Validation applies to all instances of a node in a view

In Testsheets, when you right-click on a node and chose **Ignore Validation** from the pop-up menu, all instances of that node in that view are ignored during the validation stage of testing, not just the single instance you selected. Each occurrence of that node that appears in the view is grayed out to indicate that all of them are ignored during validation. You can toggle **Ignore Validation** on or off.

File Selection dialogs filter only files from the parent project

To prohibit you from creating cross-project assets and the inevitable confusion associated with them, file selection dialogs filter and display only files from the parent project. For example, the **Select Vocabulary** dialog only lists the Vocabularies for the parent project.

Add Vocabulary attributes by data type

When you use the **Add Attribute >** option to add an attribute to an entity from the vocabulary tree, a list of data types now displays. Select the appropriate data type for the new attribute, and the properties for the new attribute are set to that data type. This speeds the process of building a vocabulary by eliminating the separate step of setting the data type of attributes after being added.

See *the Vocabularies topic "Attribute nodes: Adding adding and editing attributes and their properties" in the Quick Reference Guide* for additional information.

Publish selected Ruleflows from Project Explorer

You can now select specific Ruleflows for packaging and deployment from the Project Explorer view, and then publish only those Ruleflows. In projects with large number of Ruleflows, you can place your main Ruleflows in a separate folder to make it easy to locate them and select them for deployment.

See *"Publishing Ruleflows from Project Explorer" in the Quick Reference Guide* for additional information.

Access to HTTP Headers in Extended Operators and Service Callouts

You can now create extensions (extended operators or service callouts) that access the HTTP headers included on the call to execute a Decision Service deployed as a SOAP or REST web service. One use of this mechanism is to pass a user security token from the client making the request to the Decision Service where an extension can use the token to access an external data source as the client. This is useful when Corticon is behind a SaaS or other multi-tenant service and a Decision Service needs to access external data as a specific tenant.

Corticon only makes the HTTP headers available--their interpretation is dependent on the extension that uses them.

For more information, see the topic *"Accessing HTTP Headers in Extended Operators and Service Callouts" in the Corticon Extensions Guide.*

Bundled plugins that support management of project assets

Corticon Studio bundles plugins for two popular software version control systems in use by many developers today, Apache Subversion (SVN) and Git. Corticon Studio bundles Eclipse plugins for Subversive SVN version 4.0.5. and EGit version 4.0. If you are using Subversion or Git to manage your rule assets, you can now do this directly from Corticon Studio without the need to install additional plugins..

For more information about this feature, see the section *"Using SVN or Git to manage project assets" in the Quick Reference Guide.*

Other changes

The following changes are also noteworthy:

- **Corticon Studio now supports Java 1.8 and Eclipse 4.5**

- **Studio can run in different languages** You can run Corticon Studio in French, Japanese, Brazilian Portuguese, or Spanish. Corticon Studio now bundles the Eclipse language packs for these languages. See *"Setting Studio to run in another language" in the Installation Guide* for more information.

- **Changes to OpenEdge and Corticon Eclipse Environment** - Corticon Studio no longer supports installation directly into Progress Developers Studio for OpenEdge. To jointly develop business applications with OpenEdge and Corticon, use separate Eclipse instances for Progress Developers Studio and Corticon Studio.

- **Ruletests can remove invalid nodes** - The Ruletest menu provides the command **Remove Invalid Nodes** that discards all invalid nodes in Input, Output, and Expected columns in all testsheets in the Ruletest.

- **Changes to Documentation Delivery** - Several changes have been made to how documentation is presented and how it is accessed:

  - A new guide, the *Data Integration Guide*, gathers the information on EDC and ADC from other guides to expand on the ways you can use Corticon features to read and write from remote databases.

  - Corticon Studio no longer includes all documentation content in its installed help. Instead, a single page provides online access to all the 5.7 documentation components in PDF and HTML formats.

Deprecated Features

With the release of Corticon 5.7, we are announcing the deprecation of several features. These features will be removed in a future release of Corticon. If you use any of these features, you are encouraged to begin preparation to use the identified alternatives.

- **CDD deployment of ERF files** - Deployment of uncompiled ERF files to an application server places the requirement on the application server to compile the Ruleflow and associated Rulesheets into a deployable Decision Service. This places a significant load on the application server during compilation and is not supported on all application servers. The best practice is to deploy precompiled EDS files. This eliminates the need for the server to perform compilation and better fits into modern Continuous Integration and Continuous Deployment practices. Recent Corticon features – such as the ability to export EDS files from

Corticon Studio, and to perform compilation in build scripts such as ant -- provide flexible options for producing EDS files, eliminating the need for ERF deployment.

- **Download of Decision Services** - Corticon Studio retains a legacy capability to download a Decision Service from a Corticon Server. If the rule assets used to create the Decision Service were included in the deployed EDS for the Decision Service, this feature could be used to access the rule assets. The best practice for managing your rule assets is to store them in a source code control system such as SVN or Git. Corticon Studio now includes plugins for using both SVN and Git with your rule projects.

- **SOAP Management API** - Corticon Server has both SOAP and REST APIs for managing the Corticon Server. Given the prevalence of REST, no new additions were made to the SOAP APIs in Corticon 5.7. If you use the SOAP API to deploy or manage Decision Services, you will need to migrate to using the equivalent REST APIs. Note that the ability to execute a Decision Service with a SOAP request will not be removed -- only the management APIs are affected. Corticon Server's REST APIs are accessible via Swagger on your deployed Corticon Server at `http://localhost:8850/axis/swagger` (use your appropriate host name and port number).

- **Deployment Console** - The Corticon Deployment Console bundled with Corticon Server provides a GUI mechanism for creating CDD files, compiling Decision Services, and generating WSDL files for Decision Services. These tasks can each be performed in other ways. The CDD file format is a simple text file manifest describing a Decision Service. The most common practice is to copy a sample CDD file bundled with Corticon, and then make modifications to it in a text editor. The compiling of Decision Services can be achieved in a few ways -- export from Corticon Studio, bundled ant macros for scripted builds, and Corticon Server APIs. WSDLs are now generated and bundled with Decision Services on compilation. The WSDL for a Decision Service can be accessed via the Corticon Web Console or the Corticon Server REST API.

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Corticon 5.7 Online Tutorials and Documentation

TUTORIALS: Learn about Corticon from online lessons at the Corticon Learning Center.

DOCUMENTATION: About this release	
What's New in Corticon PDF HTML	Describes the enhancements and changes to the product since its last point release.
Corticon Installation Guide PDF HTML	Step-by-step procedures for installing Corticon Studio and Servers in this release on Windows and Linux platforms.

DEVELOPMENT DOCUMENTATION: Define and Model Business Rules	
Rule Modeling Guide PDF HTML	Introduces how business rules are modeled in Corticon Studio including the creation of Vocabularies, Rulesheets, Ruleflows, and Ruletests. This is the starting point for new rule modelers.
Quick Reference Guide PDF HTML	Reference guide to the Corticon Studio user interface, including descriptions of all menu options, buttons, and actions.
Rule Language Guide PDF HTML	Reference information for all operators available in the Corticon Studio Vocabulary.

Guide to Creating Extensions PDF HTML	Detailed technical information about the Corticon extension framework for extended operators and service callouts.
Javadoc for Extensions API HTML	Complete Java API reference for Corticon Extensions.

DEPLOYMENT DOCUMENTATION: Run Decision Services on Servers	
Integration and Deployment Guide PDF HTML	Provides details on deploying and managing Corticon decision services. Start here to learn about the options for deploying Corticon, the best practices for managing your deployment, and the APIs for integrating Corticon with clients executing rules.
Data Integration Guide PDF HTML	Provides details on how to integrate Corticon with external data sources and how to use Corticon for batch rule processing. Includes details on Corticon EDC and ADC features for accessing data from decision services.
Web Console Guide PDF HTML	Presents the Corticon Web Console which can be used to manage your Corticon deployment. This GUI interface simplifies the management and monitoring of Corticon servers and decision services.
Deploying Web Services with Java PDF HTML	Provides details on deploying Corticon as a REST or SOAP web service on Java application servers.
Deploying Web Services with .NET PDF HTML	Provides details on deploying Corticon as a REST or SOAP web service on Microsoft IIS.
Javadoc for Corticon Server API HTML	Complete Java API reference for Corticon Server.