

Corticon Server:
Web Console Guide

Notices

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Preface

For details, see the following topics:

- [Progress Corticon documentation - Where and What](#)
- [Overview of Progress Corticon](#)

Progress Corticon documentation - Where and What

Corticon provides its documentation in various online and installed components.

Access to Corticon tutorials and documentation

Corticon Online Tutorials	
Tutorial: Basic Rule Modeling in Corticon Studio	Online only. Uses samples packaged in the Corticon Studio.
Tutorial: Advanced Rule Modeling in Corticon Studio	Online only.
Corticon Online Documentation	
Progress Corticon User Assistance	Updated online help for the current release.
Introducing the Progress® Pacific Application Server	The Progress Pacific Application Server (PAS) is the Web application server based on Apache Tomcat installed as the default Corticon Server. TCMAN, the command-line utility, manages and administers the Pacific Application Server.

Progress Corticon Documentation site	Access to all guides in the Corticon documentation set in PDF format and JavaDocs.
Corticon Documentation on the Progress download site	
Documentation	Package of all guides in PDF format.
What's New Guide	PDF format.
Installation Guide	PDF format.
Corticon Studio Installers	Include Eclipse help for all guides except Web Console.

Components of the Corticon tutorials and documentation set

The components of the Progress Corticon documentation set are the following tutorials and guides:

Corticon Online Tutorials	
Tutorial: Basic Rule Modeling in Corticon Studio	An introduction to the Corticon Business Rules Modeling Studio. Learn how to capture rules from business specifications, model the rules, analyze them for logical errors, and test the execution of your rules -- all without any programming.
Tutorial: Advanced Rule Modeling in Corticon Studio	An introduction to complex and powerful functions in Corticon Business Rules Modeling Studio. Learn the concepts underlying some of Studio's more complex and powerful functions such as ruleflows, scope and defining aliases in rules, understanding collections, using String/DateTime/Collection operators, modeling formulas and equations in rules, and using filters.
Release and Installation Information	
<i>What's New in Corticon</i>	Describes the enhancements and changes to the product since its last point release.
<i>Corticon Installation Guide</i>	Step-by-step procedures for installing all Corticon products in this release.
Corticon Studio Documentation: Defining and Modeling Business Rules	

<p><i>Corticon Studio: Rule Modeling Guide</i></p>	<p>Presents the concepts and purposes the Corticon Vocabulary, then shows how to work with it in Rulesheets by using scope, filters, conditions, collections, and calculations. Discusses chaining, looping, dependencies, filters and preconditions in rules. Presents the Enterprise Data Connector from a rules viewpoint, and then shows how database queries work. Provides information on versioning, natural language, reporting, and localizing. Provides troubleshooting of Rulesheets and Ruleflows. Includes <i>Test Yourself</i> exercises and answers.</p>
<p><i>Corticon Studio: Quick Reference Guide</i></p>	<p>Reference guide to the Corticon Studio user interface and its mechanics, including descriptions of all menu options, buttons, and actions.</p>
<p><i>Corticon Studio: Rule Language Guide</i></p>	<p>Reference information for all operators available in the Corticon Studio Vocabulary. Rulesheet and Ruletest examples are provided for many of the operators.</p>
<p><i>Corticon Studio: Extensions Guide</i></p>	<p>Detailed technical information about the Corticon extension framework for extended operators and service call-outs. Describes several types of operator extensions, and how to create a custom extension plug-in.</p>
<p>Corticon Enterprise Data Connector (EDC)</p>	
<p><i>Corticon Tutorial: Using Enterprise Data Connector (EDC)</i></p>	<p>Introduces Corticon's direct database access with a detailed walkthrough from development in Studio to deployment on Server. Uses Microsoft SQL Server to demonstrate database read-only and read-update functions.</p>
<p>Corticon Server Documentation: Deploying Rules as Decision Services</p>	
<p><i>Corticon Server: Integration and Deployment Guide</i></p>	<p>An in-depth, technical description of Corticon Server deployment methods, including preparation and deployment of Decision Services and Service Contracts through the Deployment Console tool. Describes JSON request syntax and REST calls. Discusses relational database concepts and implementation of the Enterprise Data Connector. Goes deep into the server to discuss state, persistence, and invocations by version or effective date. Includes troubleshooting servers through logs, server monitoring techniques, performance diagnostics, and recommendations for performance tuning.</p>

<i>Corticon Server: Deploying Web Services with Java</i>	Details setting up an installed Corticon Server as a Web Services Server, and then deploying and exposing Decision Services as Web Services on the Progress Pacific Application Server (PAS) and other Java-based servers. Includes samples of XML and JSON requests.
<i>Corticon Server: Deploying Web Services with .NET</i>	Details setting up an installed Corticon Server as a Web Services Server, and then deploying and exposing decisions as Web Services with .NET. Includes samples of XML and JSON requests.
Corticon Server: Web Console Guide	Presents the features and functions of remote connection to a Web Console installation to enable manage Java and .NET servers in groups, manage Decision Services as applications, and monitor performance metrics of managed servers.

Overview of Progress Corticon

Progress® Corticon® is the Business Rules Management System with the patented "no-coding" rules engine that automates sophisticated decision processes.

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 the complete Eclipse development environment for Corticon as the **Corticon Designer** perspective. You can use this fresh Eclipse installation as the basis for adding other Eclipse toolsets.
 - When installed into an existing Eclipse such as the **Progress Developer Studio (PDS)**, our industry-standard Eclipse and Java development environment, the PDS enables development of Corticon applications in the **Corticon Designer** perspective that integrate with other products, such as Progress OpenEdge.

Note: Corticon Studio installers are available for 64-bit and 32-bit platforms. Typically, you use the 64-bit installer on a 64-bit machine, where that installer is not valid on a 32-bit machine. The 64-bit Studio is recommended because it provides better performance when working on large projects.

Note: When adding Corticon to an existing Eclipse, the target Eclipse must be an installation of the same bit width. 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 Studios:

- **Corticon Server for Java** is supported on various application servers, and client web browsers. After installation on a supported Windows platform, that server installation's 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).

Use with other Progress Software products

Corticon releases coordinate with other Progress Software releases:

- [Progress OpenEdge](#) is available as a database connection. You can read from and write to an OpenEdge database from Corticon Decision Services. When Progress Developer Studio for OpenEdge and Progress Corticon Studio are integrated into a single Eclipse instance, you can use the capabilities of integrated business rules in Progress OpenEdge. See the OpenEdge document [OpenEdge Business Rules](#) for more information. OpenEdge is a separately licensed Progress Software product.
- [Progress DataDirect Cloud](#) (DDC) enables simple, fast connections to cloud data regardless of source. DataDirect Cloud is a separately licensed Progress Software product.
- [Progress RollBase](#) enables Corticon rules to be called from Progress Rollbase. Rollbase is a separately licensed Progress Software product.

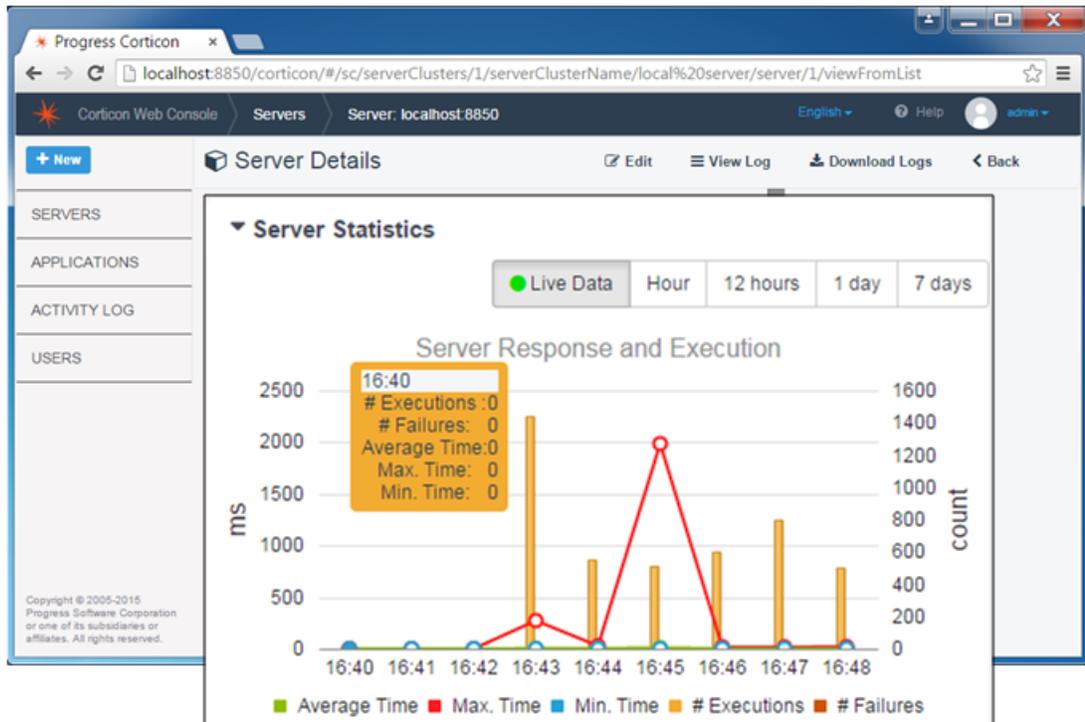
About Corticon's Web Console

Corticon's Web Console provides a central point for administering and monitoring your Java and .NET Corticon Decision Services. Through the console, you can easily deploy one or more related Decision Services to a single Corticon server or group of Corticon servers. Once deployed, you can easily monitor the performance of the Decision Services and Corticon servers and view both individual and aggregated metrics. Actions on a group of Decision Services or group of Corticon servers are automatically applied to each member of the group. For example, if you have a Decision Service deployed to a group of Corticon servers and add another server to the group, the Decision Service will be automatically deployed to the new server. This helps you scale up or scale down the servers in a deployment to meet demand.

The Web Console is a web application that can be installed in the same application server as the Corticon server for single-server environments or installed separately for multiple-server environments. The choice is yours, depending on the nature of your Corticon deployment. The Web Console maintains configuration information and historical metrics in a local data store. The historical metrics let you see changes in the performance of your Decision Services and Corticon Servers over time.

Corticon's Windows **Start** menu provides a shortcut to **Start Corticon Server**. When the Web Console is installed standalone, this starts just the Web Console. When the Web Console is installed together with the Corticon Server, this commands starts both of them. Then, the shortcut launches your default browser into the Web Console.

What's being monitored and managed? Here is a view of a Server Group with a graph of the responses and executions over a span of a several minutes:



This guide includes a user guide to the features and functions of the Web Console interface, followed by an administrator's guide that goes in depth with architectural features and management functions.

User's Guide

The Corticon Web Console User's Guide shows you how your browser connects to a running Web Console and how you navigate through the user interface to do your tasks. The following topics show the screen basics, creation of new components, and then the features and functions of each component.

Note: If you have not yet installed Corticon 5.5.1 with the Web Console component on any network-accessible machine, refer to the *Corticon Installation Guide* for more information.

To connect to a running Web Console:

- On the same machine as the Web Console installation, choose **Start > Progress > Corticon 5.5 > Corticon Web Console**
- Enter the hostname where Web Console is running followed by the port value (typically 8850) and then `/corticon`. For example:

```
http://webconsolehost:8850/corticon
```

Logging in to the Web Console

Enter your user credentials in the Web Console login page that opens. There are two user roles in the Web Console: User and Administrator. The basic administrative user is `admin` with the default password `admin`. If you are the administrator, you should change the default password right after you log in. If you are a user, obtain your user credentials from your Web Console administrator.

When you log in for the first time, you will see on-screen tips that provide an overview of the Web Console interface. Press **Esc** or click **Okay, I get it. Hide this message** to hide the tips. The **+New** button on the top left enables you to create new Servers, Server Groups, Applications, and Users (this last option is visible only to an Administrator). The breadcrumb trail on top shows where you are in the Web Console interface. The navigation pane on the left enables you to navigate to Server or Application pages where you can add new components or edit existing components. The Activity Log displays a log of all user actions and system events in the Web Console. For Administrators, the navigation pane includes a Users option that enables them to manage users.



Setting language preferences

The breadcrumb pane on top includes a setting for language preferences. Choose your preferred language from this drop-down (English is selected by default). Changing this setting enables you to view labels of components such as Servers and Applications, as well as Web Console messages, in your preferred language. It also localizes the format of dates and numbers.

Note: The online version of the Corticon documentation set, accessible from <https://documentation.progress.com/output/ua/Corticon>, has a setting provided by Google Translate that enables you to view it in different languages. To use this setting, click the 'globe' icon in the documentation website's toolbar and select your preferred language.

Automatic logout

Note that you will get logged out of the Web Console if you are inactive for a specified period of time. This setting is controlled by the Web Console administrator. You will get a warning message approximately 20 seconds before the Web Console logs you out. If you receive this message, click **OK** in the dialog box to prevent getting logged out.

For details, see the following topics:

- [Working with components](#)
- [Servers and Server groups](#)
- [Decision Services and Applications](#)
- [Viewing the Activity Log](#)

Working with components

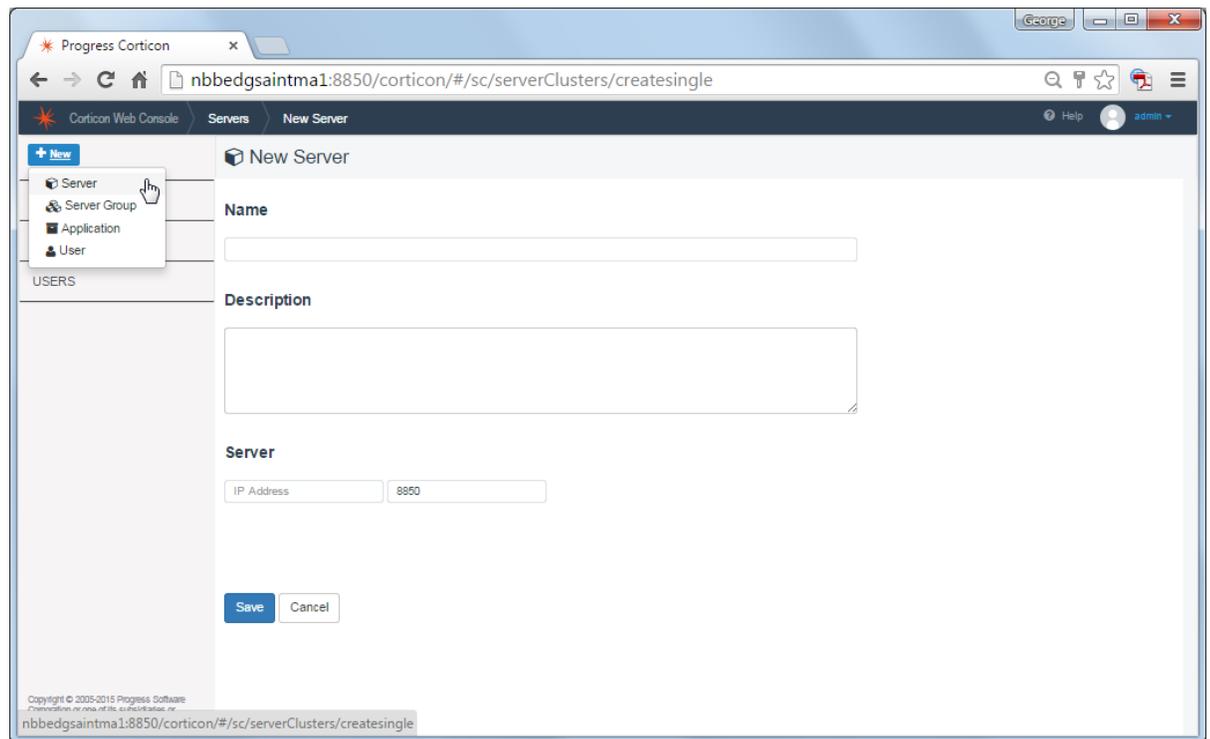
The components that you work with in the Web Console are:

- **Servers** - Licensed physical installations of Corticon Server for Java or Corticon Server for .NET.
- **Server Groups** - Collections of Servers for common deployments and monitoring.
- **Applications** - Collections of Decision Services under common management.
- **Users** - Structure of user credentials that enable access to features of the Web Console.

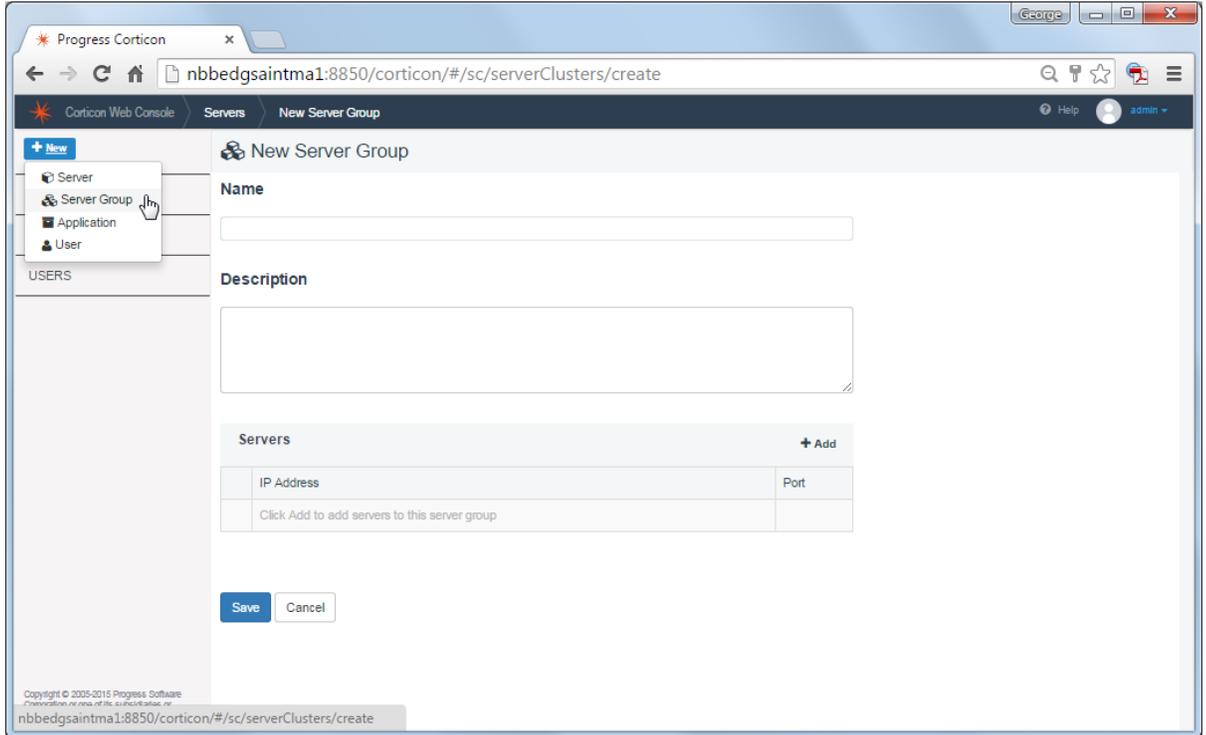
Adding new components

Servers are added through Web Console to enable deployment and monitoring of Decision Services, to monitor their performance, and to enable their membership in a group. The server's hostname or IP address, and the port on which it is receiving connections are essential; the name and description are required to provide identity.

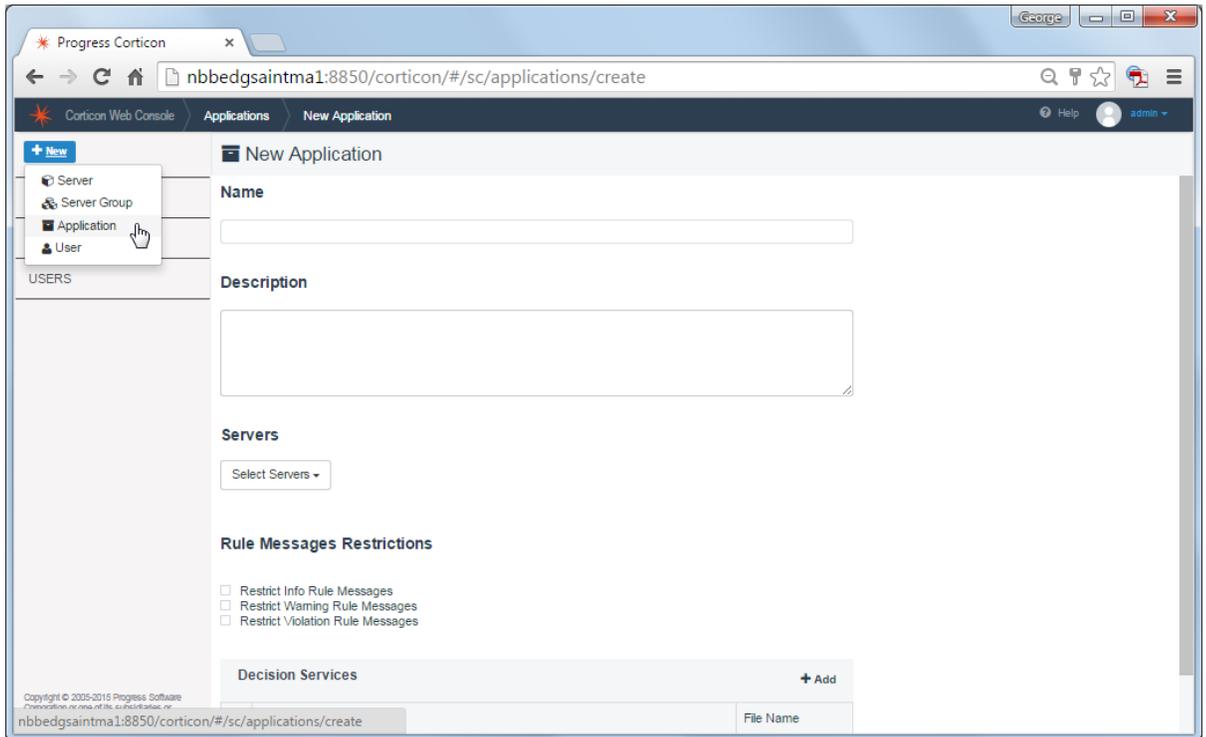
Note: While adding a server as `localhost` is practical during evaluation and testing, when you access Web Console from a remote machine that has a server installation that you want to add, you might find that references to `localhost` are distracting as it is not *this* localhost. It is a good practice to always use DNS-resolvable hostnames or static IP addresses.



Server groups let you deploy Decision Services defined in Applications, then monitor and configure them, and undeploy them. Server Groups also enable getting and setting server properties on the several servers in the group. As with Servers, each server's hostname or IP address, and the port on which it is receiving connections are essential; the group name is required to provide identity.



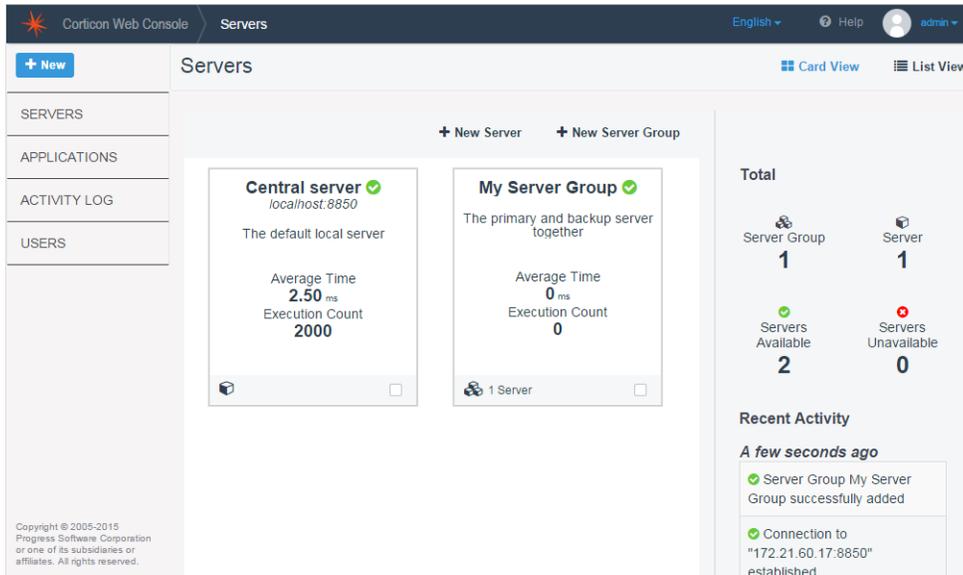
Applications are how Decision Services are grouped, and then deployed to servers that are participating in the Application. See [Decision Services and Applications](#) on page 28 for more information.



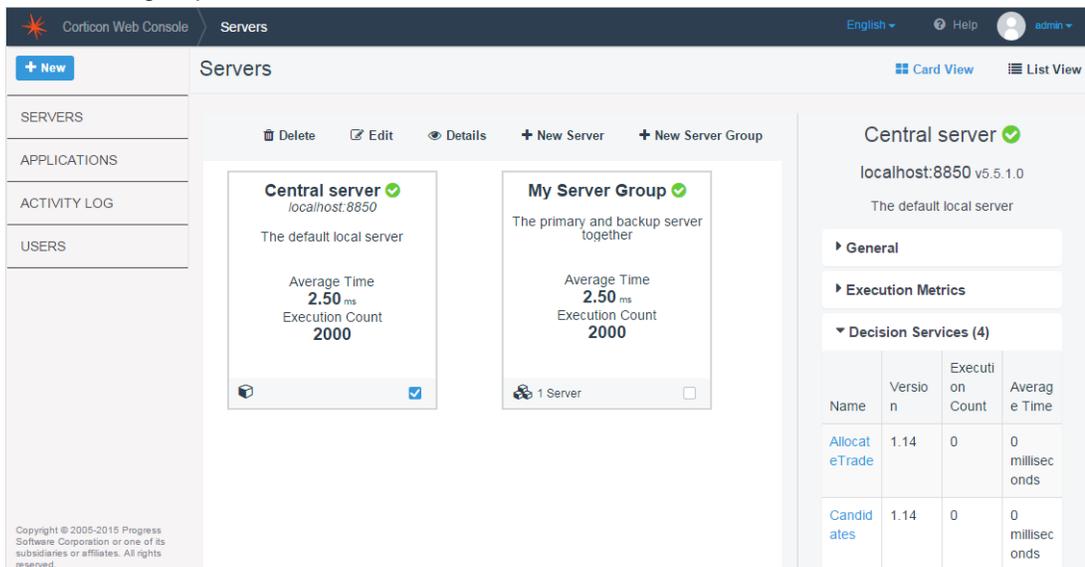
Note: User management is an administrative function. See [User management](#) on page 39 for more information.

Navigating component features

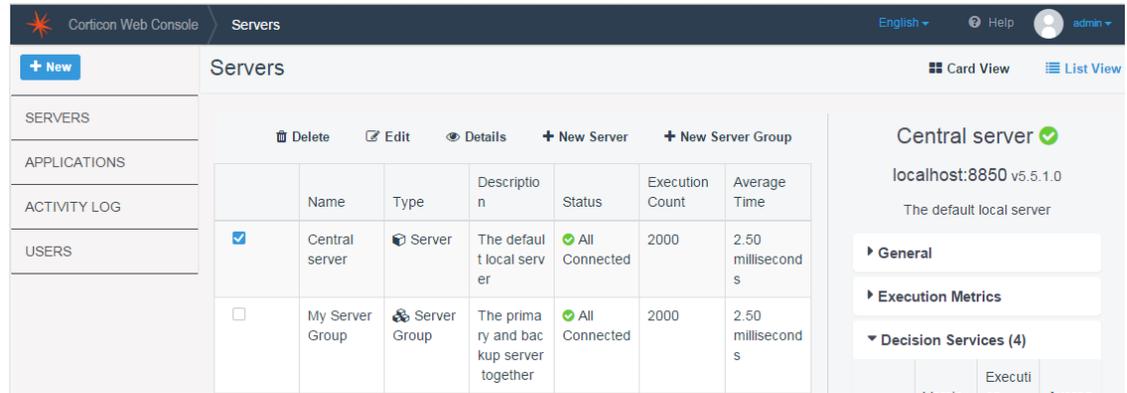
The Web Console lets you access and maintain each component's information. The following series of screens shows navigation around servers. When you click **SERVERS** in the left panel, the servers and server groups are listed in card view. The preview pane on the right displays a summary of all the servers connected to the Web Console.



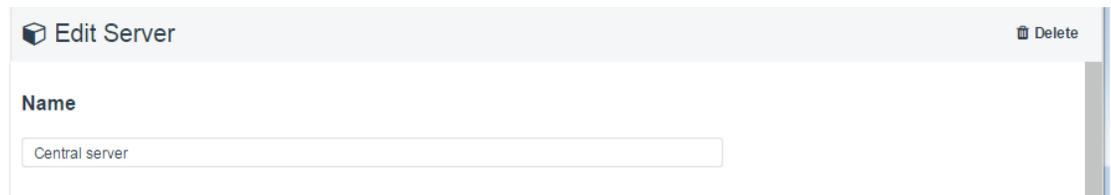
Clicking on a server selects it, showing a blue checkbox. The preview pane is now populated with information about that component, and the component navigation options show that, for a server, you can delete it, edit it, or show its details. You can also step right into creating a new server or new server group:



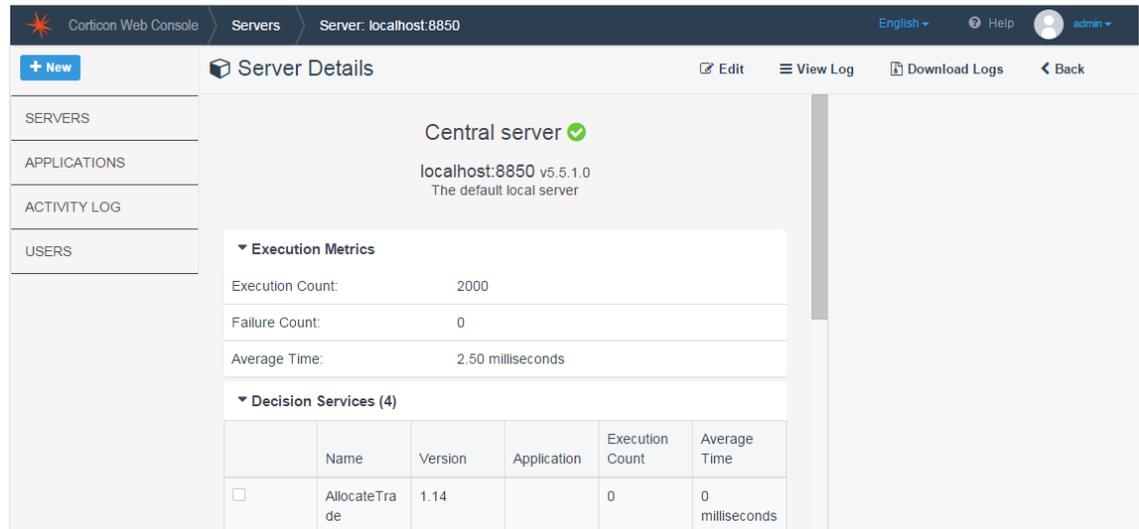
Clicking **List View** changes the layout to a table rather than cards:



Clicking **Edit** opens the [Edit Server](#) on page 22 edit dialog where you can make changes, save them, or cancel. You can even delete it from here:



Clicking **Details** displays the deployment and operational information about the selected component. For a Server, you can also choose to **Edit** the Server, **View Log**, or **Download Logs**:



Servers and Server groups

The Web Console lets you take accessible Corticon servers under management, and to group them into server groups. After a server is defined in the Web Console, you can deploy Decision Services to it using an Application which is configured on the server or group, and then monitor their performance. You can also configure the server's properties. This view shows a server and its categories of information:

The screenshot shows the 'Server Details' page for a server named 'Central server' at 'localhost:8850'. The page includes a sidebar with navigation options like 'SERVICES', 'APPLICATIONS', 'ACTIVITY LOG', and 'USERS'. The main content area displays the server name, version, and a table of 'Decision Services (4)'. One service, 'AllocateTrade', is listed with an execution count of 0 and an average time of 0 milliseconds.

▼ Execution Metrics					
Execution Count:	2000				
Failure Count:	0				
Average Time:	2.50 milliseconds				
▼ Decision Services (4)					
	Name	Version	Application	Execution Count	Average Time
<input type="checkbox"/>	AllocateTrade	1.14		0	0 milliseconds

Server Groups offer similar information including the servers in the server group. Metrics and statistics on a server group are an aggregate of the information from all servers in the group. Note that the Properties, Environment, and License information are provided only for each server:

The screenshot shows the 'Server Group Details' page for a group named 'My Server Group'. It lists two servers in the group, both with IP addresses ending in '5' and '1', and both are 'Connected' on port 8850. Below the server list are expandable sections for 'Execution Metrics', 'Decision Services (4)', and 'Server Group Statistics'.

▼ Servers			
	IP Address	Port	Status
<input type="checkbox"/>	nbbedgsaintma5	8850	✔ Connected
<input type="checkbox"/>	nbbedgsaintma1	8850	✔ Connected

The next topics cover each of these.

Edit Server

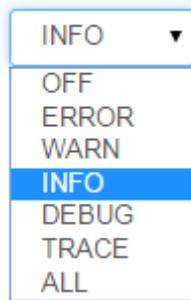
After adding a Server, when you select Edit, you can change its characteristics:

The screenshot shows the 'Edit Server' form in the Corticon Web Console. The form is titled 'Edit Server' and is located under the 'Servers' section. It contains several fields: 'Name' (Central server), 'Description' (The default local server), 'Server' (hostname: localhost, port: 8850), 'Log Level' (INFO), 'Monitoring' (Enabled), and 'License File' (Choose License File button). The form is displayed in a sidebar menu with options for '+ New', 'SERVERS', 'APPLICATIONS', 'ACTIVITY LOG', and 'USERS'.

What you can edit on a Server record:

- **Name**
- **Description**
- **Server** hostname/IP address and port
- **Log level** - The log level on the selected server. The default level is INFO. When you change the level and save the edits, it is immediately applied to that server without stopping and restarting the server. The logs promptly reflect the changed level of detail.

Log Level



- **Monitoring** - Determines whether the statistics from this server are gathered by the Web Console and stored for later analysis.
- **License File** - Copies the selected `CcLicense.jar` (or its preferred name) from the machine where the browser is connected to the Web Console (or a network-accessible location) to the `CcServerSandbox` on the machine hosting this server.

Decision Services on a Server

The Server page displays a list of Decision Services that are deployed on it. This includes:

- Managed Decision Services that are defined in Applications in the Web Console and then deployed to the Server. These Decision Services provide a link to the Application as shown in the image below. Deploying Decision Services through Applications is discussed in the topic: [Decision Services and Applications](#) on page 28.
- Unmanaged Decision Services that are deployed through a CDD file or published from Corticon Studio.

When you select a Decision Service on this page, you can view its information in the preview pane on the right and perform the following operations on it:

- [Decision Service Details](#) on page 31
- [Application Details](#) on page 30
- [Test Execution](#) on page 33
- [WSDL](#) on page 34

Additionally, you can undeploy Decision Services that were published to the Server from Corticon Studio by selecting the Decision Service and clicking **Undeploy**. Performing this operation on a managed Decision Service takes you to the Application details page, which has options to remove individual Decision Services or undeploy the Application altogether.

Note: You cannot undeploy a Decision Service that has been deployed using a CDD file from the Web Console.

▼ Decision Services (6)					
	Name	Version	Application	Execution Count	Average Time
<input type="checkbox"/>	AllocateTrade	1.14		0	0 milliseconds
<input type="checkbox"/>	Candidates	1.14		0	0 milliseconds
<input type="checkbox"/>	Cargo	1.0		0	0 milliseconds
<input checked="" type="checkbox"/>	GrandParent	1.0		0	0 milliseconds
<input type="checkbox"/>	ProcessOrder	1.10		2000	2.50 milliseconds
<input type="checkbox"/>	Validate Applications	1.0	Insurance Application	0	0 milliseconds

For a Server Group, the information does not allow the same server actions yet does enable links to servers where each Decision Service is deployed:

▼ Decision Services (5)				
Name	Version	Execution Count	Average Time	Deployed on
ProcessOrder	1.10	3411	3.28 ms	nbbedgsaintma5 : 8850 nbbedgsaintma1 : 8850
Candidates	1.14	11109	0.84 ms	nbbedgsaintma5 : 8850 nbbedgsaintma1 : 8850
Cargo	1.0	787	0.67 ms	nbbedgsaintma5 : 8850 nbbedgsaintma1 : 8850
AllocateTrade	1.14	4356	2.92 ms	nbbedgsaintma5 : 8850 nbbedgsaintma1 : 8850
Allocation	1.14	0	0 ms	nbbedgsaintma5 : 8850 nbbedgsaintma1 : 8850

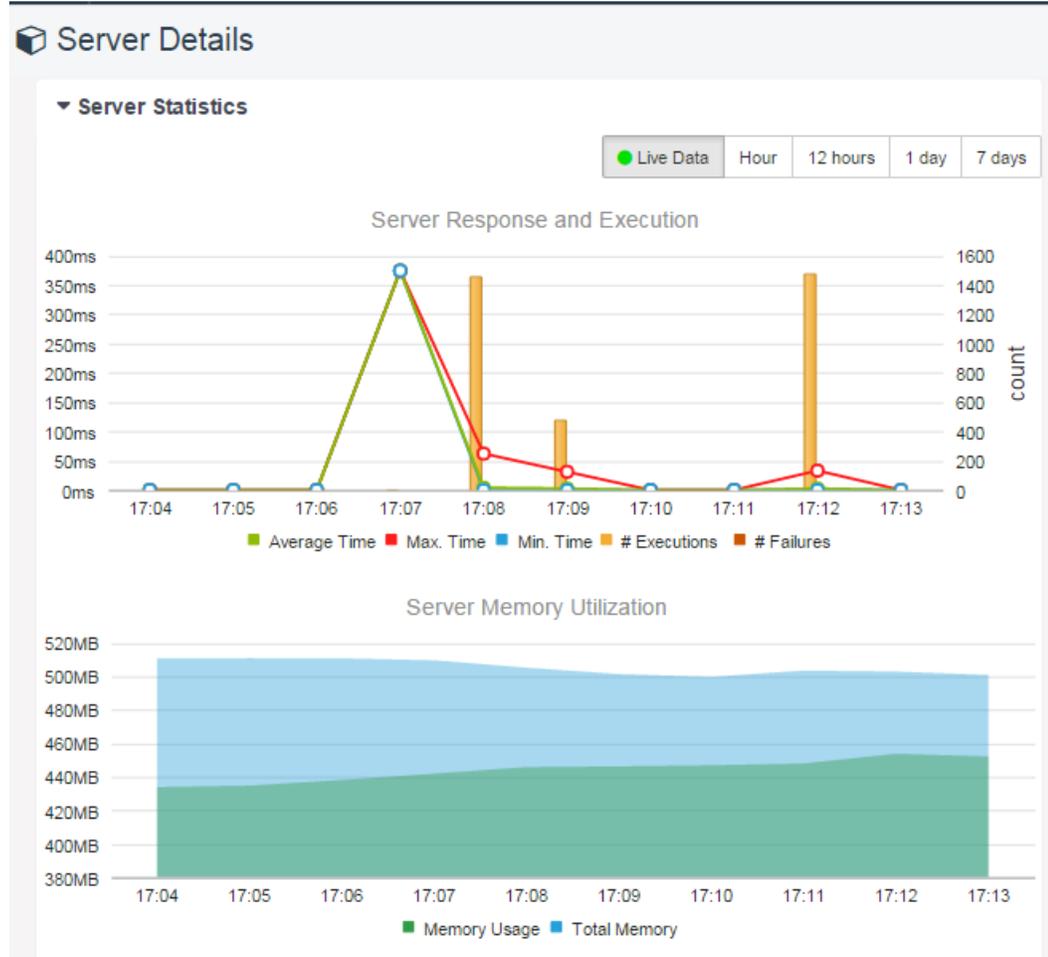
Execution Metrics

Execution metrics are a simple table of the count of all request executions on the selected server plus the count of failures. The average time is average execution time for execution of all the Decision Services on this server.

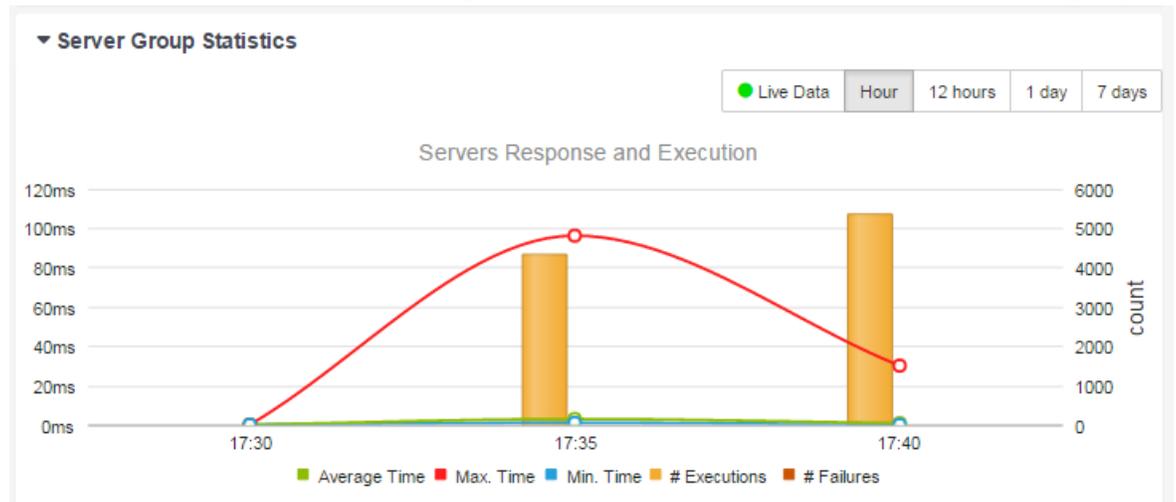
▼ Execution Metrics	
Execution Count:	13115
Failure Count:	0
Average Time:	2.15 ms

Server Statistics

For the selected Server, shows live or historical data for executions and memory utilization:



When the current selection is a server group, the data is compiled for all the servers in the group:



Properties

A Server's Properties lists several key properties of the server, from its point-of-view:

▼ Properties	
Maintenance Service Enabled	false
Maintenance Service Interval	30000
Monitoring Service Enabled	true
Autoload Directory	C:/_55x_install_dir/work_dir/Server/cdd
Sandbox Directory	C:/_55x_install_dir/work_dir/Server/SER/CcServerSandbox

Environment

A Server's Environment lists several key properties of the machine that is running the server:

▼ Environment	
Java Version	1.7.0_05
Java Vendor	Oracle Corporation
Operating System	Windows 7
Operating System Version	6.1
Architecture	amd64
Number Of Cores	4
Maximum Memory	1002MB
Total Memory	510MB
Free Memory	151MB

License

License information shows the location of the Corticon license that the server is using, as well as essential information about that license:

▼ License	
License Path	C:/_55x_install_dir/work_dir/Server/pas/server/webapps/axis/WEB-INF/lib/CcLicense.jar/CcLicense.lic
Licensed To	Evaluation
License Deactivation Date	3/1/2016
License Database Access	false

The license file that enabled the server to run is typically updated only when a new license has been provided that changes the expiration and enabled features for that server.

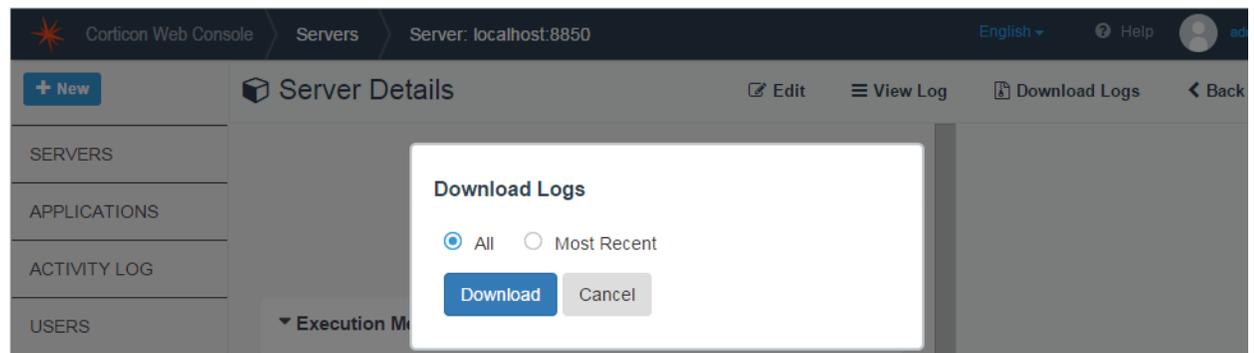
View log

Servers lets you access the tail of the current `CcServer.log` file that the server is using:

	Timestamp	Level	Logger	Marker	Message
SERVERS	Sep 17, 2015 1:45:36 AM	INFO	Cc	DIAGNOSTIC	id=1442434536124,ds=Validate Applications.1.0,ec=0,aex=0.0,awt=0.0,fc=0
APPLICATIONS	Sep 17, 2015 1:45:36 AM	INFO	Cc	DIAGNOSTIC	id=1442434536124,ds=GrandParent.1.0,ec=1,aex=12.0,awt=2.0,fc=0
ACTIVITY LOG	Sep 17, 2015 1:45:36 AM	INFO	Cc	DIAGNOSTIC	id=1442434536124,ds=Candidates.1.14,ec=0,aex=0.0,awt=0.0,fc=0
USERS	Sep 17, 2015 1:45:36 AM	INFO	Cc	DIAGNOSTIC	id=1442434536124,shp=508.5,shp=349.20289611816406,sex=0,stq=0,sec=3001,sfc=0,saex=2.4145284905031654,sawt=0.19360213262245918
	Sep 17, 2015 1:45:36 AM	INFO	Cc	DIAGNOSTIC	id=1442434536124,ds=ProcessOrder.1.10,ec=2000,aex=2.503,awt=0.1965,fc=0
	Sep 17, 2015 1:45:36 AM	INFO	Cc	DIAGNOSTIC	id=1442434536124,ds=AllocateTrade.1.14,ec=1000,aex=2.228,awt=0.186,fc=0
	Sep 17, 2015 1:45:36 AM	INFO	Cc	DIAGNOSTIC	id=1442434536124,ds=Cargo.1.0,ec=0,aex=0.0,awt=0.0,fc=0
	Sep 17, 2015 1:45:06 AM	INFO	Cc	DIAGNOSTIC	id=1442434506121,ds=Validate Applications.1.0,ec=0,aex=0.0,awt=0.0,fc=0
	Sep 17, 2015 1:45:06 AM	INFO	Cc	DIAGNOSTIC	id=1442434506121,ds=Cargo.1.0,ec=0,aex=0.0,awt=0.0,fc=0
	Sep 17, 2015 1:45:06 AM	INFO	Cc	DIAGNOSTIC	id=1442434506121,ds=GrandParent.1.0,ec=1,aex=12.0,awt=2.0,fc=0
	Sep 17, 2015 1:45:06 AM	INFO	Cc	DIAGNOSTIC	id=1442434506121,ds=AllocateTrade.1.14,ec=1000,aex=2.228,awt=0.186,fc=0

Download log

Corticon Web Console enables you to download and view Server log files. This is especially useful when you need to locally examine a remote Server's log files to identify the source of a problem. To download a Server's log files, ensure that the Server is started and that the Web Console is connected to it. Then, click **Download Logs** in the Server page. This opens a dialog box where you can choose to download **All** log files or only the **Most Recent**. If you choose **All**, all log files that have been retained since installation will be downloaded. If you choose **Most Recent**, you will get all log files that have been modified by the Server in the last 24 hours. Select the appropriate option and click **Download**. This downloads a ZIP file named `CcServerLog.zip` that contains the Server log files.



To know more about troubleshooting a problem by examining Server logs, see *Troubleshooting Corticon Server problems in the Corticon Server: Integration & Deployment Guide*.

Decision Services and Applications

An Application is a group of Decision Services that you can deploy to a Server or Server Group. When you deploy an Application to a Server Group, all Decision Services in the Application are deployed to each of the Corticon Servers in the Server Group. Further, if a new server is added to the Server Group, the Web Console automatically deploys the Application to it. An Application is therefore, a unit of deployment. It enables you to manage a set of related Decision Services more easily.

Creating an Application

Follow these steps to create an Application:

- Click **New > Application**.
- On the **New Application** page, enter a name and optionally, a description for the Application, as shown in the image below.
- In the **Servers** drop-down, select the Server or Server Group that you want to deploy the Application to.
- In the **Rule Messages Restrictions** section, select the appropriate option.

New Application

Name

Description

Servers

Rule Messages Restrictions

Restrict Info Rule Messages
 Restrict Warning Rule Messages
 Restrict Violation Rule Messages

Decision Services + Add

Name	File Name
Click Add to add decision services to this application	

Adding Decision Services to the Application

The **Decision Services** section of the **New Application** page enables you to add and remove Decision Services from the Application. Before you add a Decision Service here, you should precompile the Ruleflow that you want to deploy as a Decision Service using the **Corticon Deployment Console**. To learn how to do this, see the topic *"Decision Service (EDS) files" in the Corticon Server: Integration and Deployment Guide*. For each Decision Service that you want to add, perform the following steps:

- Click **+Add** in the **Decision Services** section.
- In the **Add Decision Service** dialog box, enter a name and description for the Decision Service.
- Click **Choose EDS File**, and specify the EDS file of the Decision Service.
- In the **Maximum Pool Size** field, specify how many execution threads for this Decision Service will be added to the execution queue. If you leave this field blank, the Web Console will set a default value of 1.
- In the **XML message style** section, choose whether request messages for this Decision Service should contain a **Flat** or **Hierarchical** payload structure. **Auto Detect** accepts either style.

The screenshot shows the "Add Decision Service" dialog box. It has a title bar with "Add Decision Service" and a close button. The dialog is divided into several sections:

- Name:** A text input field containing "Allocation".
- Description:** A text area containing "Allocate trade".
- EDS File:** A file selection area showing "AllocateTrade_v1_0.eds" and a "Choose EDS File" button.
- Maximum Pool Size:** An empty text input field.
- XML message style:** Radio buttons for "Auto-detect" (selected), "Flat", and "Hierarchical".
- Database Access Mode:** Radio buttons for "None" (selected), "Read Only", and "Read/Update".

At the bottom right, there are "Add" and "Cancel" buttons.

- In the **Database Access Mode**, choose the appropriate database access option. This is effective only if your Corticon license enables EDC. This setting controls whether the deployed Decision Service has direct access to a database, and if so, whether it will be **Read Only** or **Read/Update** access. If you select Read Only or Read/Update, you will see a few additional settings that you need to configure:
 - **Database Access Properties File:** Specify a property file that contains the database access properties. To learn how to generate this file from Corticon Studio, see the topic: *"Creating a database access properties file" in Corticon EDC: Using Enterprise Data Connector*.

- **Database Entities Returned Mode:** Choosing **All Entities** returns all records from the database when the Decision Service executes. Choosing **Incoming and New Entities** returns entities that were in the request message and only those entity records that are added or modified in the database when the Decision Service executes. Select the appropriate option.
- **Database Caching:** Database caching enables Corticon to store often-used data in a cache. This improves the performance of the Decision Service since it can read and write data in the cache faster than if this data was in the database. If you choose **Enabled**, database caching will be enabled for the Decision Service. To learn more about database caching, see the topic: *"Database caching" in the Corticon Server: Integration and Deployment Guide.*

Database Access Mode

None Read Only Read/Update

Database Access Properties File

DB_Access.properties

[Choose Database Access Property File](#)

Database Entities Returned Mode

All Entities Incoming and New Entities

Database Caching

Enabled Disabled

- Click **Add** to return to the **New Application** page where you can add more Decision Services.

When you have added all the Decision Services to the Application, click the **Save & Deploy** button



to save the application and deploy the Decision Services to all servers in the Server Group.

Note: For more information on some of these Decision Service properties, refer to the details and references in the topic *"Using the Deployment Console tool's Decision Services" in the Corticon Integration and Deployment Guide.*

Application Details

On the Applications page, when you double-click on an application, or select an application and then click **Details**, its details panel opens. You can follow the link to the server group where the application is deployed. If you select a Decision Service, its information displays in the preview pane.

Clicking on a Decision Service line opens its [Decision Service Details](#) on page 31 panel.

Application Details

Trade allocation ✔

The pair of Decision Services for the brokerage buy-side.

▼ General

Servers:	My Server Group ✔
Deployed:	2015-06-02T16:49:28Z
Created By:	admin
Created On:	2015-06-01T21:48:18Z
Last Modified On:	2015-06-01T21:48:18Z

▼ Execution Metrics

Execution Count:	11109
Failure Count:	0
Average Time:	.84 ms

▼ Decision Services 👁 Details ▶ Test Execution

	Name	File Name	Status
<input checked="" type="checkbox"/>	Allocation	AllocateTrade_v1_14.eds	✔
<input type="checkbox"/>	Candidates	Candidates_v1_14.eds	✔

▶ Rule Messages Restrictions

Decision Service Details

Decision Service details displays a specific server's operational and performance data on that deployed Decision Service.

When you access Decision Service details from an Application, you see aggregated metrics and statistics from all the servers where the application is deployed. The actions available include **Test Execution**

When you access Decision Service details from a Server, you see the metrics and statistics from that particular server. Note that the actions available include **Test Execution** and, if available, access to its **WSDL**:

Decision Service
▶ Test Execution ◀ Back

AllocateTrade v1.14 ✔

▼ **General**

Deployed:	Sep 16, 2015 10:53:32 PM
Effective Start:	
Effective Stop:	
Auto Reload:	Yes
Message Style:	Auto-detect
Maximum Pool Size:	1
Rule Count:	24
Last Execution Time:	long

▶ **Execution Metrics**

▼ **Decision Service Statistics**

● Live Data
Hour
12 hours
1 day
7 days

Decision Service Response and Execution

■ Average Time
 ■ Max. Time
 ■ Min. Time
 ■ # Executions
 ■ # Failures

▶ **File**

Test Execution

The Web Console lets you test deployed Decision Services by executing their SOAP or REST interfaces with a user specified request in XML or JSON format, and then displaying the results.

The screenshot displays the Corticon Web Console interface for testing a Decision Service. The breadcrumb navigation shows 'Servers' > 'Server: localhost:8850' > 'Decision Service: Alloc...'. The main title is 'Test Execute: AllocateTrade'. On the left sidebar, there are navigation links: '+ New', 'SERVERS', 'APPLICATIONS', 'ACTIVITY LOG', and 'USERS'. The main content area shows the following details:

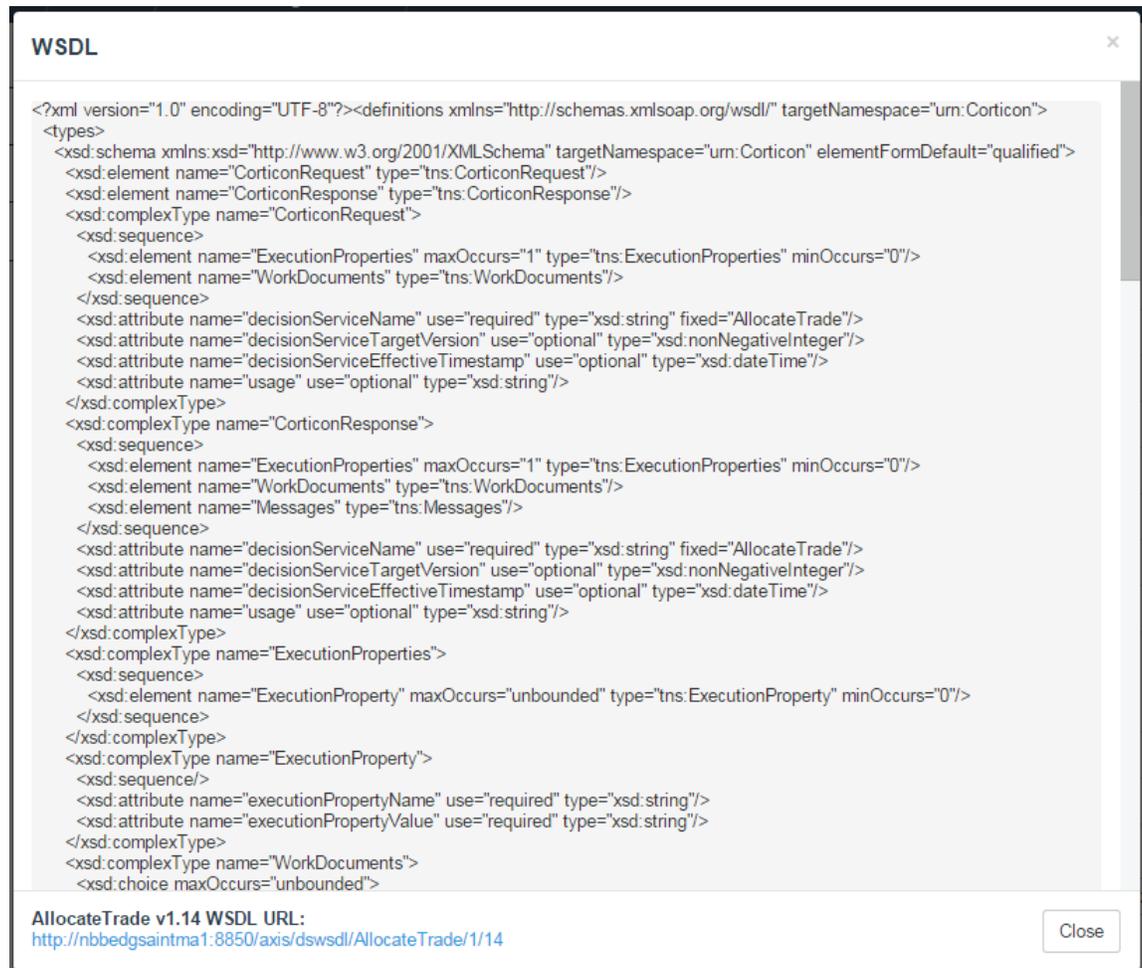
- Server:** localhost:8850
- Request File:** AllocateTrade.xml
- Choose Request File:** A blue button with a red arrow pointing to it from the callout box '1. Supply a Request File'.
- Request Type:** REST/JSON (unselected) and SOAP/XML (selected).
- Request:** A text area containing XML code for a security instrument request.
- Execute:** A blue button with a right-pointing arrow and the text 'Execute', with a red arrow pointing to it from the callout box '2. Click Execute'.
- Response:** A text area containing XML code for the service response, with a red arrow pointing to it from the callout box '3. See results'.

```
<CorticonRequest decisionServiceName="AllocateTrade">
  <WorkDocuments>
    <Security id="Security_id_4">
      <symbol>AVBND</symbol>
      <issuer>Aventis</issuer>
      <sin>N</sin>
      <rating>A</rating>
      <dProfile>HI-GRD</dProfile>
      <price>100.0</price>
      <faceValue>1000.0</faceValue>
      <yield>8.0</yield>
      <daysInHolding>10</daysInHolding>
      <id>4</id>
      <dAnnualInterestAmt/>
      <dAccruedInterest>2.24</dAccruedInterest>
      <dMarketValue>102.24</dMarketValue>
    </Security>
  </WorkDocuments>
</CorticonRequest>
```

```
<?xml version="1.0" encoding="UTF-8"?><CorticonResponse xmlns="urn:Corticon"
decisionServiceName="AllocateTrade" decisionServiceTargetVersion="1.14">
  <WorkDocuments>
    <Security id="Security_id_4">
      <dAccruedInterest>2.24</dAccruedInterest>
      <dAnnualInterestAmt/>
      <daysInHolding>10</daysInHolding>
      <dMarketValue>102.24</dMarketValue>
      <dProfile>HI-GRD</dProfile>
    </Security>
  </WorkDocuments>
</CorticonResponse>
```

WSDL

The WSDL option brings an available Decision Service WSDL into a display and provides access to the WSDL in an editor:



The screenshot shows a window titled "WSDL" with a close button in the top right corner. The main area contains XML code defining a service named "AllocateTrade". The code includes definitions for "CorticonRequest" and "CorticonResponse" complex types, and "ExecutionProperties" and "ExecutionProperty" complex types. The "CorticonRequest" type has attributes for "decisionServiceName", "decisionServiceTargetVersion", "decisionServiceEffectiveTimestamp", and "usage". The "CorticonResponse" type has attributes for "decisionServiceName", "decisionServiceTargetVersion", "decisionServiceEffectiveTimestamp", and "usage". The "ExecutionProperties" type has an attribute "executionPropertyName" and a choice of "WorkDocuments". The "ExecutionProperty" type has attributes "executionPropertyName" and "executionPropertyValue". The "WorkDocuments" type has a choice of "Messages".

```
<?xml version="1.0" encoding="UTF-8"?><definitions xmlns="http://schemas.xmlsoap.org/wsdl/" targetNamespace="urn:Corticon">
  <types>
    <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" targetNamespace="urn:Corticon" elementFormDefault="qualified">
      <xsd:element name="CorticonRequest" type="tns:CorticonRequest"/>
      <xsd:element name="CorticonResponse" type="tns:CorticonResponse"/>
      <xsd:complexType name="CorticonRequest">
        <xsd:sequence>
          <xsd:element name="ExecutionProperties" maxOccurs="1" type="tns:ExecutionProperties" minOccurs="0"/>
          <xsd:element name="WorkDocuments" type="tns:WorkDocuments"/>
        </xsd:sequence>
        <xsd:attribute name="decisionServiceName" use="required" type="xsd:string" fixed="AllocateTrade"/>
        <xsd:attribute name="decisionServiceTargetVersion" use="optional" type="xsd:nonNegativeInteger"/>
        <xsd:attribute name="decisionServiceEffectiveTimestamp" use="optional" type="xsd:dateTime"/>
        <xsd:attribute name="usage" use="optional" type="xsd:string"/>
      </xsd:complexType>
      <xsd:complexType name="CorticonResponse">
        <xsd:sequence>
          <xsd:element name="ExecutionProperties" maxOccurs="1" type="tns:ExecutionProperties" minOccurs="0"/>
          <xsd:element name="WorkDocuments" type="tns:WorkDocuments"/>
          <xsd:element name="Messages" type="tns:Messages"/>
        </xsd:sequence>
        <xsd:attribute name="decisionServiceName" use="required" type="xsd:string" fixed="AllocateTrade"/>
        <xsd:attribute name="decisionServiceTargetVersion" use="optional" type="xsd:nonNegativeInteger"/>
        <xsd:attribute name="decisionServiceEffectiveTimestamp" use="optional" type="xsd:dateTime"/>
        <xsd:attribute name="usage" use="optional" type="xsd:string"/>
      </xsd:complexType>
      <xsd:complexType name="ExecutionProperties">
        <xsd:sequence>
          <xsd:element name="ExecutionProperty" maxOccurs="unbounded" type="tns:ExecutionProperty" minOccurs="0"/>
        </xsd:sequence>
      </xsd:complexType>
      <xsd:complexType name="ExecutionProperty">
        <xsd:sequence/>
        <xsd:attribute name="executionPropertyName" use="required" type="xsd:string"/>
        <xsd:attribute name="executionPropertyValue" use="required" type="xsd:string"/>
      </xsd:complexType>
      <xsd:complexType name="WorkDocuments">
        <xsd:choice maxOccurs="unbounded">

```

AllocateTrade v1.14 WSDL URL:
<http://nbbcdgsaintma1:8850/axis/dswsdl/AllocateTrade/1/14> Close

Viewing the Activity Log

Corticon Web Console maintains a log of its activities. The log includes:

- User actions such as deploying or undeploying Decision Services and creating or modifying Applications and Servers.
- System events such as deployment failures and lost connections to Servers.

To view the Web Console log, click **ACTIVITY LOG** on the left pane. The Activity Log page opens and displays the log in a three-column table:

Activity Log

User Component Action Status Page Size

From To

Time	User Name	Message
Sep 2, 2015 11:28:05 AM	admin	✔ User "TestUser1" successfully modified
Sep 2, 2015 11:25:24 AM		✘ Connection to "172.21.60.38:8850" failed
Sep 2, 2015 11:25:08 AM		✘ Connection to "172.21.72.39:8850" failed
Sep 2, 2015 11:24:47 AM		✘ Connection to "172.21.74.12:8850" failed
Sep 2, 2015 11:24:46 AM		✘ Connection to "172.21.60.38:8850" failed
Sep 2, 2015 11:24:24 AM		✘ Connection to "172.21.74.12:8850" failed
Sep 2, 2015 11:24:23 AM		✔ Connection to "localhost:8850" established
Sep 1, 2015 6:32:16 PM		✘ Connection to "172.21.60.76:8850" failed
Sep 1, 2015 5:19:09 PM	admin	✘ Retrieving metrics for Decision Service "ProcessFlow1" failed
Sep 1, 2015 5:04:45 PM	admin	✔ Application "Application1" successfully modified

Some log messages, such as those relating to failed deployment of Decision Services, have additional information about the problem that is not displayed in the table. To view this information, hover over a log message and click on the information icon  that gets displayed. A pop-up window opens, containing the additional information.

You can filter the table to view a subset of the log messages. To do this, select the desired filters from the drop-down lists as shown below and then click **Filter**. For example, to view all failed Decision Services deployments by a user, select the username from the **User** drop-down, select **Decision Service** in **Component**, select **Deploy** in **Action** and finally, select **Failed** in the **Status** drop-down. You can also add a date range to the filter if you are interested in viewing log messages between specific dates.

User Component Action Status

From To

Time	User Name	Message
Sep 1, 2015 4:59:25 PM	admin	✘ Deployment of Decision Service "ProcessFlow1" on "172.21.74.12:8850" failed
Sep 1, 2015 4:59:25 PM	admin	✘ Deployment of Decision Service "ProcessFlow1" on "172.21.72.39:8850" failed
Sep 1, 2015 4:59:25 PM	admin	✘ Deployment of Decision Service "ProcessFlow2" on "172.21.74.12:8850" failed
Sep 1, 2015 4:59:25 PM	admin	✘ Deployment of Decision Service "ProcessFlow2" on "172.21.72.39:8850" failed
Sep 1, 2015 4:59:03 PM	admin	✘ Deployment of Decision Service "ProcessFlow2" on "172.21.72.39:8850" failed
Sep 1, 2015 4:59:03 PM	admin	✘ Deployment of Decision Service "ProcessFlow2" on "172.21.74.12:8850" failed
Sep 1, 2015 4:59:03 PM	admin	✘ Deployment of Decision Service "ProcessFlow1" on "172.21.72.39:8850" failed
Sep 1, 2015 4:59:03 PM	admin	✘ Deployment of Decision Service "ProcessFlow1" on "172.21.74.12:8850" failed

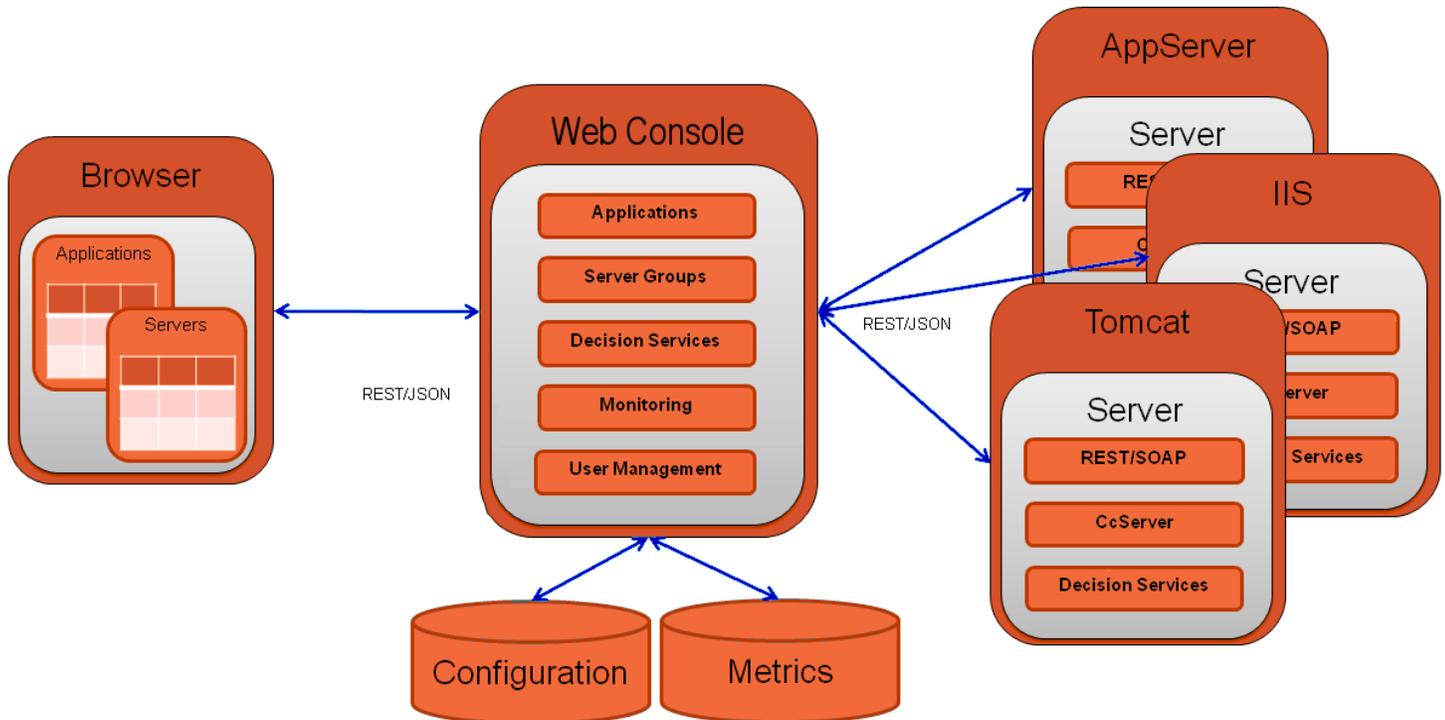
The Web Console maintains this log for a configurable period of time. This setting is visible only to Web Console Administrators. To know more about configuring the Activity Log, see the topic [Configuring the Activity Log](#) on page 40.

Administrator's Guide

Architecture Overview

The Web Console is a separate web application from the Corticon server (axis.war), deployable to either the same or separate application server as the Corticon server. When managing a group of Corticon servers the recommended practice is to deploy the Web Console to a separate application server as depicted in this diagram:

Figure 1: Architecture of the Corticon Web Console



Key aspects of this diagram:

- There is a single application server hosting the Web Console and three application servers hosting Corticon servers. The Web Console is agnostic to the application server hosting a Corticon server, this includes a mix of Java and .NET servers.
- REST/JSON is used for communication between the browser and the Web Console and between the Web Console and the Corticon server. A new REST management API is being added to the Corticon server to support managing a server. See REST Management API.
- The Web Console stores all configuration in a local datastore. This includes definition of server groups, applications, and Decision Services (including the EDS file).
- The Web Console stores historical metrics in a local datastore. A retention policy will be supported for determining how long to keep historical metrics.

Installation

The Corticon Java and .NET Server installers have been merged into a single installer, together with the new Web Console. See the *Corticon Installation Guide* for more information. See the Progress Software web page [Progress Corticon 5.5 - Supported Platforms Matrix](#) to review the currently supported browsers, platforms and application servers.

For details, see the following topics:

- [User management](#)
- [Configuring the Activity Log](#)
- [Configuring auto logout](#)
- [Resetting the administrator password](#)

User management

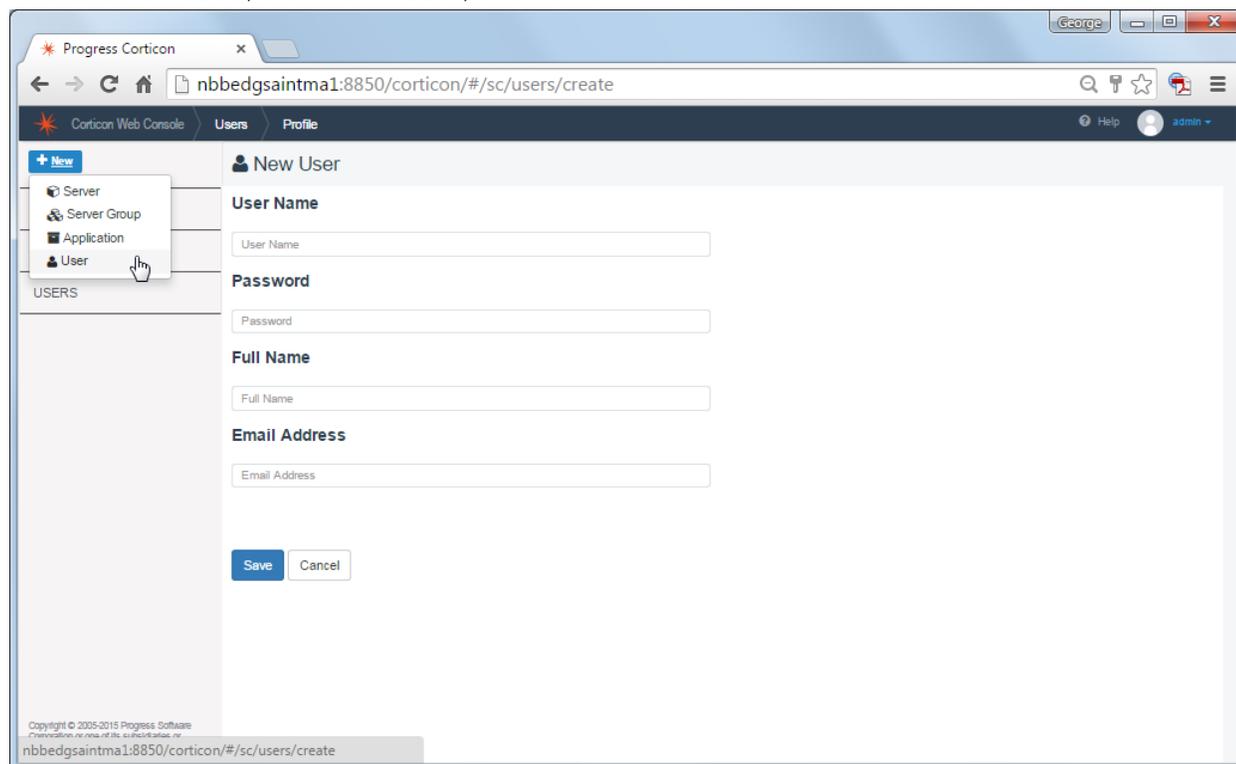
The Web Console provides secure access. The administrator (User Name `admin`) is a preset user that cannot be deleted. You can change the administrator's password -- that's a task you should do as soon as you get started with the Web Console and take the administrator's role.

The administrator is the only user that can access user management to create, edit, and delete other users. Note that the case matters in the user name and password.

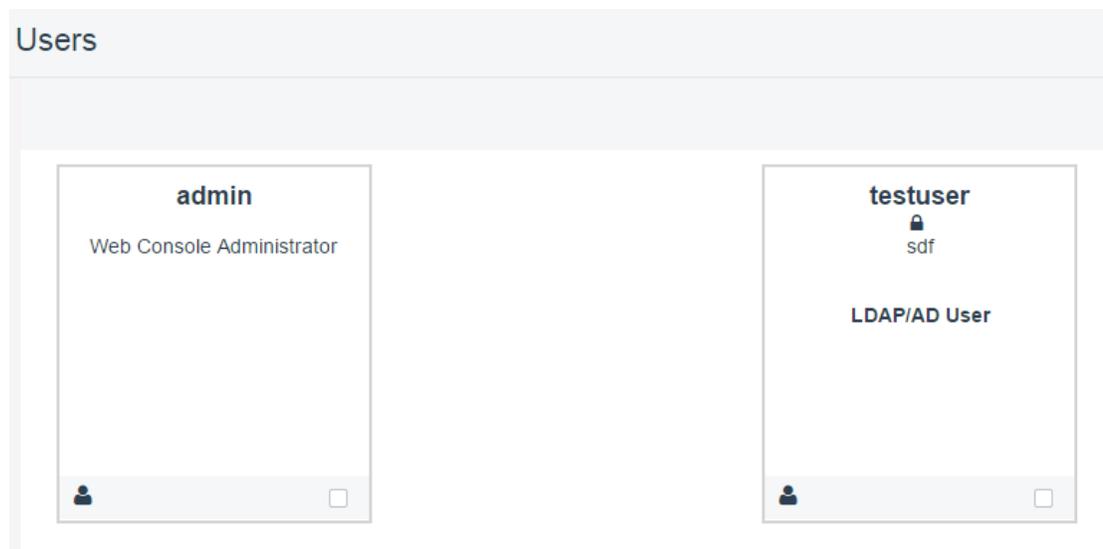
To review defined users, the `admin` user can click **USERS**:

Users			
	Name	Full Name	Email Address
<input checked="" type="checkbox"/>	admin	Web Console Administrator	
<input type="checkbox"/>	AI	Albert Einstein	chico@princeton.edu

To create new users, click **New > User**, and then enter the user information and click **Save**:



You can also set up LDAP authentication, if business needs require your users to be authenticated through an LDAP server. This is covered in the topic *"Additional tasks to set up LDAP for Web Console" in the Corticon Installation Guide*. After LDAP authentication is set up, LDAP users who log in to the Web Console are added to the **Users** page. LDAP users are differentiated from other users by the **LDAP/AD** annotation as shown in the image below. Note that while LDAP users can be deleted from the **Users** page, their details cannot be modified in the Web Console.

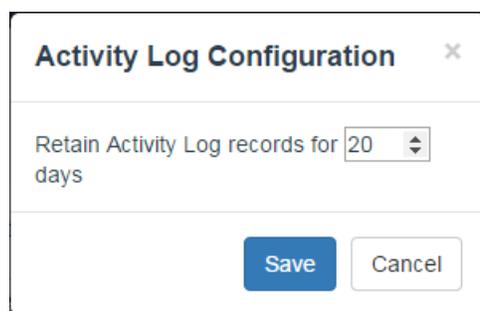


Configuring the Activity Log

Corticon Web Console maintains a log of its activities. The log includes:

- User actions such as deploying or undeploying Decision Services and creating or modifying Applications and Servers.
- System events such as deployment failures and lost connections to Servers.

A Web Console Administrator can view the Activity Log as well as configure the duration for which Corticon Web Console maintains log records. To view the Activity Log, click **ACTIVITY LOG** on the left pane. To configure the duration for which Web Console keeps log records, click **Configuration** on the Activity Log page and set the number of days for which Web Console maintains log records.

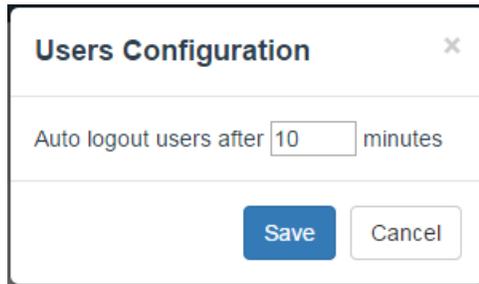


To know more about viewing and filtering the Activity Log, see the topic [Viewing the Activity Log](#) on page 34.

Note: The Web Console Activity Log is different from a Server log, which logs user actions, system events, and other information for a specific instance of Corticon Server based on configurable log levels.

Configuring auto logout

As part of user management, you can define a period of inactivity (in minutes) after which a user is automatically logged out of the Web Console. To configure this setting, click **Configuration** on the **Users** page. In the **User Configuration** dialog box, enter the duration of inactivity, as shown below:



The screenshot shows a dialog box titled "Users Configuration" with a close button (X) in the top right corner. Below the title bar, there is a text input field labeled "Auto logout users after" containing the number "10", followed by the text "minutes". At the bottom of the dialog, there are two buttons: a blue "Save" button and a white "Cancel" button with a grey border.

Resetting the administrator password

If the Web Console administrative user (`admin`) cannot recall the password, a systems administrator can perform a task that will reset the password on the Corticon Server where the Web Console runs. See the topic "*Resetting the Web Console administrator's password*" in the *Corticon Installation Guide* for more information.

