

Adabas for Linux, UNIX and Windows

Adabas REST Administration

Version 6.7

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This document applies to Adabas for Linux, UNIX and Windows Version 6.7 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Preface

Adabas RESTful administration is a server that provides the REST interface for Adabas monitoring and Adabas administration tasks. Any RESTful client can connect to the server and use standard web techniques to retrieve Adabas information.

The Adabas REST Administration document is organized as follows:

<i>General Information</i>	Describes in short concepts and components of the Adabas RESTful administration.
<i>Installation and First Steps</i>	Contains information on how to install and configure Adabas RESTful administration.
<i>Authentication</i>	Contains information on the authentication concept and configuration for Adabas RESTful administration.
<i>Adding Support for Multiple Adabas Versions</i>	Contains information on how to enable support for multiple Adabas versions in the Adabas RESTful administration.

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Monospace font	Identifies service names and locations in the format <i>folder.subfolder.service</i> , APIs, Java classes, methods, properties.
<i>Italic</i>	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the symbol.
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

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- Link to external websites that discuss open standards and web technology.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 General Information

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Adabas RESTful administration supports two types of response formats:

- JSON is the standard supported response format you can use.
- XML can be used for read requests.

Adabas RESTful administration uses HTTP or SSL-secured HTTPS connections. HTTPS connections are recommended. To validate certificates, you may exchange the SSL certificate to fit to your environment.

Adabas RESTful administration provides the following HTTP request types:

- GET: Retrieve administration or monitor information
- PUT: Change an administration value or parameter in the Adabas database configuration
- PUSH: Create new objects like Adabas database files or an Adabas database itself
- DELETE: Delete a resource inside the Adabas database

The Adabas REST administration server is open to be used by any RESTful client. There are no restriction by Software AG components.

The RESTful definition is provided in the Swagger file located in the product installation. You can use the Swagger/OpenAPI infrastructure to use the Swagger file.

Adabas RESTful administration contains three main access parts:

Adabas Administration and Monitor Handler

The Adabas administration and monitor handler supports:

Resource	Description
Adabas Database	An Adabas database can be created or deleted on the server .
Adabas Runtime	Adabas can be started or stopped according to the settings Adabas provides. User queue and UCB entries can be managed. Provides Adabas Nucleus log.
Monitor	Display Adabas user queue, command queue and hold queue. Adabas high water mark and buffer pool statistics are available. All possible monitor features can be found in the Swagger definition.
Adabas Files	Provide the creation and deletion of new Adabas files (online) .
Adabas Fields	Inside the Adabas file, Adabas fields can be modified in the frame of the Adabas functionality.

Job Control

Inside the RESTful server it is possible to start scripts for Adabas utilities. The scripts can be triggered asynchronously. After the job is finished, the corresponding log output can be retrieved using a RESTful access.

Detailed information about the RESTful interface is described in the Swagger definition.

File Transfer Handler

The RESTful server provides an interface to upload or download files to or from the server. The server only provides access to restricted defined directories. The directories have to be configured in the configuration file.

Each configuration entry can be accessed via a given name. All sub directories under the configured one can be accessed and files can be transferred.

If a job creates output, the created file can be transferred to the HTTP client (browser or RESTful client).

File Access

The configuration of file access through the Adabas RESTful server is managed manually. There is no tool to add a new location. Because of security reasons it is not intended to add new locations remotely using the REST interface.

Inside the *config.xml* file new location entries can be added to the `<Directories>` node. By default, the ADADATADIR is defined here:

```
<Directories role="fileadmin" use_role="false">
  <Directory name="adadatadir" location="${ADADATADIR}" />
</Directories>
```

Any new `<Directory>` entry requires a name and location attribute. The value of the location attribute defines the root access point such as `"C:\", "C:\transfer"` or `"/home/<user>"` etc.

The name will reference the location inside the RESTful transfer or in Adabas Manager.

Example Windows:

```
<Directories role="fileadmin" use_role="false">
  <Directory name="adadatadir" location="${ADADATADIR}" />
  <Directory name="Ddrive" location="D:\" />
</Directories>
```

Example Unix:

```
<Directories role="fileadmin" use_role="false">
  <Directory name="adadatadir" location="${ADADATADIR}" />
  <Directory name="part" location="/data/transfer" />
</Directories>
```

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Installation and First Steps

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Installation is done using the Software AG Installer. The Adabas REST administration is part of Adabas but does not have to be installed with Adabas. If another Adabas installation is on the installation host, this can be used, if the Adabas version is greater or equal to Adabas Version 6.5. This chapter is organized as follows:

Changing the Password

After the installation the default user is *admin* and the default password is "manage". To create a new password entry, you may delete the configuration file *realm.properties* in the *configuration* directory. After the deletion a new file can be created using the service script as follows:

```
./service.bat init
```

Starting the Server

Inside the installation directory of the Adabas REST administration, a *bin* directory can be found. Inside the *bin* directory all start scripts required to start the Adabas REST administration are located. All scripts will provide reference information about valid parameters in case no argument is entered.

For example, to start the REST server on Windows just start:

```
./service.bat run
```

Ensuring that the Server is Working

To check if the server works correctly, you can either use your favorite web browser or use curl. By default, the username is *admin* and the password is "manage".

To check please enter the following:

```
http://<host>:<port>/adabas/database
```

where *<host>* and *<port>* correspond to your environment. The following are some example REST calls:

URL	Function	Result
<i>http://localhost:8120/adabas/database</i>	List databases	List all databases known to the REST server
<i>http://localhost:8120/adabas/database/24</i>	Database Info	Returns the database information for database 24
<i>http://localhost:8120/adabas/database/24/file</i>	List database files	List all files defined in the database 24

Using curl, the following line would correspond to the first example:

```
`curl -vv --user admin:manage http://localhost:8120/adabas/database`
```


4 Authentication

Adabas REST administration uses the JAAS standard for authentication. The JAAS server module requires configuration. To configure the module, simply adapt the configuration file *security.conf* in the *configuration* directory.

There are a number of additional JAAS modules to support LDAP or other authentication methods. The following is a sample configuration using Java:

```
/** Realm Login Configuration **/  
Adabas {  
    com.softwareag.adabas.rest.jaas.RealmPropertyLoginModule required ↵  
    file="configuration/realm.properties";  
};  
  
AdabasLDAP {  
    com.sun.security.auth.module.LdapLoginModule REQUIRED  
    userProvider="ldap://mydomain:389/OU=users,DC=my,DC=domain,DC=com"  
    authIdentity="{USERNAME}"  
    useSSL=false  
    debug=true;  
};
```

In the file *config.xml* in the *configuration* directory the `LoginService` tag handles the corresponding module name. In the following example the default "Adabas" login configuration is used for authentication:

```
<LoginService class="" module="Adabas" reference="configuration/security.conf" ↵  
type="jaas"/>
```

To use the "AdabasLDAP" or any other JAAS configuration, you need to adapt the `module` attribute of the `LoginService` element according to your requirements. For example:

```
<LoginService class="" module="AdabasLDAP" reference="configuration/security.conf" ↵  
type="jaas"/>
```

5 Adding Support for Multiple Adabas Versions

This version of Adabas RESTful server supports administration of multiple Adabas version. At the moment Adabas Version 6.5 with internal structure level 19 and Adabas Version 6.6 with internal structure level 20 are supported. To support additional Adabas versions the relevant Adabas version installations need to be registered in the configuration of the RESTful server.

To register the Adabas version installation in *config.xml*, the *service.sh* script (or *service.bat* respectively) has an additional feature.

With the following command you may add the current Adabas installation, if you are in an Adabas command prompt shell:

```
service.bat add_env
```

To register an Adabas version installation outside the current environment, you can add the corresponding directory:

```
service.bat add_env <Adabas version installation directory>
```

where *<Adabas version installation directory>* is the name of the directory where the Adabas version installation is located.

