



Funambol Exchange Connector Quick Start Guide

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1. Introduction

The purpose of this document is to describe how to manage and administer the Exchange Sync Source component using the Administration Tool console.

This document is intended to be read by the administration users.

1.1. Related Documents

The following documents are related to this design document:

- [1] Funambol Interchange Format
- [2] Internet Calendaring and Scheduling Core Object Specification - [RFC 2445]
- [3] Funambol Modules Development Guide
- [4] Funambol Sync Server 5.0.x Administration Guide
- [5] SECC Quick Start Guide
- [6] IIS Help

2. Setting Exchange Connector

2.1. Funambol Exchange Connector Installation Procedure

The Funambol Exchange Connector is distributed as a standard Funambol module [3]. The distribution contains the following files:

- funambol-exchange-<major>.<minor>.<build number>.s4j (the module)
- the release notes
- the readme.txt
- this guide

To install the module you have to follow this steps:

1. put the s4j file in the directory <installation dir>/ds-server/modules
2. modify “install.properties” file adding “funambol-exchange-3.x.x” to the modules list:
*modules-to-install=foundation-3.x.x,pdi-3.x.x,pimweb-3.x.x,,**funambol-exchange-3.x.x***
3. call modules installation command.

For more details about the Funambol module installation see [4].

During the installation the following steps are performed automatically:

1. the database is initialized creating the connector specific tables and registering the connector into the server.
2. the ExchangeOfficer.xml file is copied in the directory:

<installation dir>/ds-server/config/com/funambol/server/security

2.2. Configuring the Exchange Connector

Once the installation completed, you can use the Administration Tool to configure the Exchange connector. In the tree structure (Figure 1) at the left of the window, click on *Modules*, then click on *exchange*.



Figure 1: Connector Tree

Then click on *ExchangeConnector*. This will display the Exchange Connector Configuration Panel (Figure 2).

The configuration panel is titled 'Funambol Exchange Connector'. It contains three main sections:

- HTTP Server Configuration:** Includes a 'Server:' field with the value 'localhost' and a 'Port:' field with the value '2000'.
- WebDav Message Configuration:** Includes a 'Server:' field with the value '192.168.0.10'.
- SSL:** Includes a checkbox for 'Use SSL' (which is unchecked), a 'Key Store File:' field, and a 'Key Store Password:' field.

A 'Save' button is located at the bottom center of the panel.

Figure 2: Exchange Connector Configuration Panel

HTTP Server Configuration:

IMPORTANT: If you are not using the SECC architecture you can set the MS Exchange values (i.e. Ip address of the MS Exchange machine and port 80)

<i>Property</i>	<i>Description</i>
Server	The address of the SECC Proxy server (or of the back-end server is SECC is not used)
Port	The port of the SECC Proxy server (or of the back-end server is SECC is not used)

* For more details about SECC, refer to [5]

WebDav Message Configuration:

<i>Property</i>	<i>Description</i>
Server:	The address of the back-end server (i.e. Exchange server)

SSL:

<i>Property</i>	<i>Description</i>
Use SSL	Check this option is you want to use a secure connection between the Sync Server (Funambol) and the Back-End Server (Exchange)
Key Store File	The path to the keystore with trusted certificates
Key Store Password	The password of the keystore

* for more information refer the chapter about Setting Up a Secure Connection Using SSL

2.3. Configuring the SyncSources

To set up the Exchange Connectors SyncSources go in the Administration Console and check the following tree structure (Figure 3)

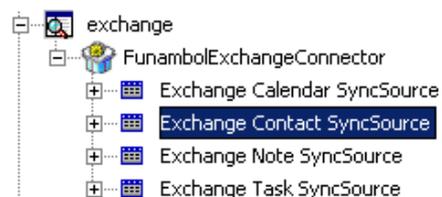


Figure 3: Exchange SyncSources

All SyncSources have the following properties:

<i>Property</i>	<i>Description</i>
Source URI	The sync source URI [i.e. “./contacts”].
Name	The SyncSource name. [i.e. “contacts”]
Exchange Folder	The name of the Exchange folder to synchronize using this source [i.e. “Exchange/Contacts”] [i.e. “Exchange/Calendar”]
Type	Should the Data content be SIF-XML format or vcard/ical format? (see next table)
Encryption	Should the Data Content be encrypted using DES algorithm?
Encoding	Should the Data Content be encoded using Base64 algorithm?

The tables below show the configuration to use the Exchange SyncSource with mobile phone or with Funambol clients that use SIF-XML format.

Exchange SyncSources configuration to use Mobile Phone

<i>SyncSource</i>	<i>Property</i>	<i>Value</i>
<i>Exchange Calendar SyncSource</i>	Type	i-card
<i>Exchange Contact SyncSource</i>	Type	vcard
<i>Exchange Note SyncSource</i>	Type	Not available
<i>Exchange Task SyncSource</i>	Type	Not available

Exchange SyncSources configuration to use Sync4j Clients that use SIF-XML format

<i>SyncSource</i>	<i>Property</i>	<i>Value</i>
<i>Exchange Calendar SyncSource</i>	Type	SIF-E
<i>Exchange Contact SyncSource</i>	Type	SIF-C
<i>Exchange Note SyncSource</i>	Type	SIF-N
<i>Exchange Task SyncSource</i>	Type	SIF-T

2.4. Officer Configuration

In order to set the Officer for Funambol Exchange Connector you have to set the parameters in the file; at the moment you have to set no parameters :

```
<installation dir>\ds-server\config\funambol\server\security\ExchangeOfficer.xml
```

This is an example of the ExchangeOfficer.xml file:

```
<?xml version="1.0" encoding="UTF-8"?>
<java version="1.4.0" class="java.beans.XMLDecoder">
  <object class="com.funambol.exchange.security.ExchangeOfficer">
```

```

<void property="exchangeRoot">
  <string>Exchange</string>
</void>
<void property="serverAuth">
  <string>none</string>
</void>
</object>
</java>

```

In the Admin tool you have to specify the correct Officer:

Officer : com/funambol/server/security/ExchangeOfficer.xml

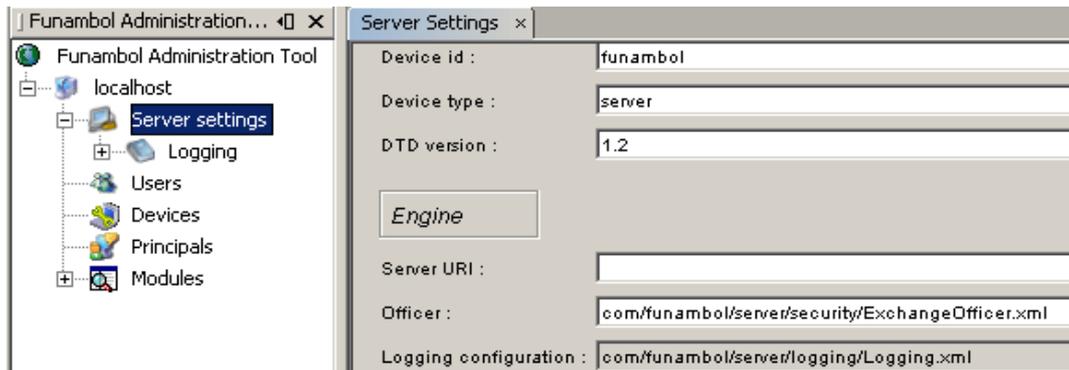


Figure 4: Officer Settings

2.5. Enabling Logging

To modify the logging level and other properties, go the Administration Tool, and check out the following tree structure (Figure 5):

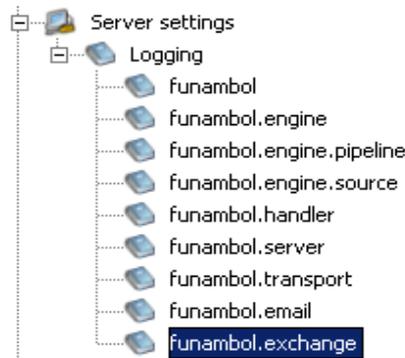


Figure 5: Logging Tree

Click on any of the categories: funambol, funambol.engine and so on, to display their logging configuration panel (Figure 6). To set Exchange Connector's logger perform double click on "funambol.exchange" node in the "Logging" tree.

Modify the options to obtain the desired logging level and output.

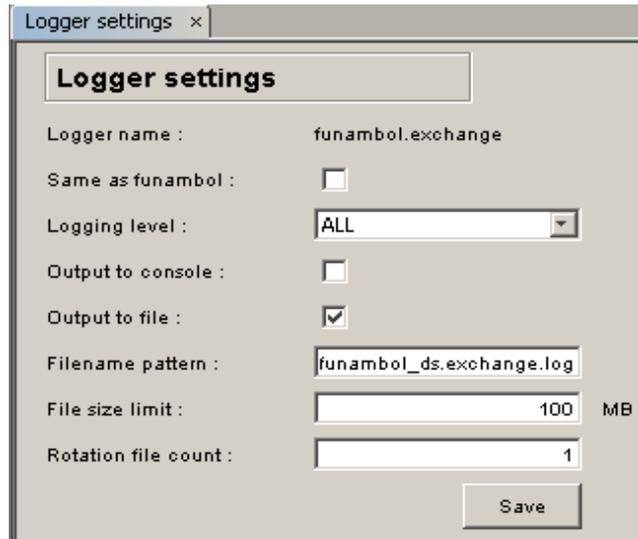


Figure 6: Exchange Logger Setting

2.6. Enabling Data Transformation

In order to enable the Encryption Communication between syncML client (i.e. The Funambol WM plug-in) and the Funambol Server/Exchange Connector you have to check the “encryption/encoding” checkbox in the SyncSource configuration Panel



Figure 7: encryption settings

if the encryption is enable the synchronization will be provided with DES and BASE64 encoding

You can also check the configuration in the Data transformation panel in the Server Settings section (Figure 9) in the Administration Tool.



Figure 8: Server Settings

Double Click the Server Setting branch, and in the appearing panel click on the button labeled “Configure” near ”Data transformer manager” (Figure 9)

Engine

Server URI :

Officer :

Logging configuration :

Pipeline manager :

Handler :

Persistence store manager :

Device inventory :

Data transformer manager :

Strategy :

User manager :

Min. value for max. msg size :

Figure 9: Engine Settings

Setup “Transformer for incoming items” and “Transformer for outgoing items” if needed (Figure 10).

Transformers for incoming items

Name	Class
b64	com.funambol.server.engine.transformer....
des	com.funambol.server.engine.transformer....

Transformers for outgoing items

Name	Class
b64	com.funambol.server.engine.transformer....
des	com.funambol.server.engine.transformer....

Figure 10: Transformers

Link the sync source URI with the needed transformation. If the SyncSource is intended for sync with Windows Mobile devices, then “b64” transformation is required. If the Windows Mobile pug-in is configured to also use encryption, the the transformation must be set to “des;b64”. Finally push “Save”. (Figure 11)

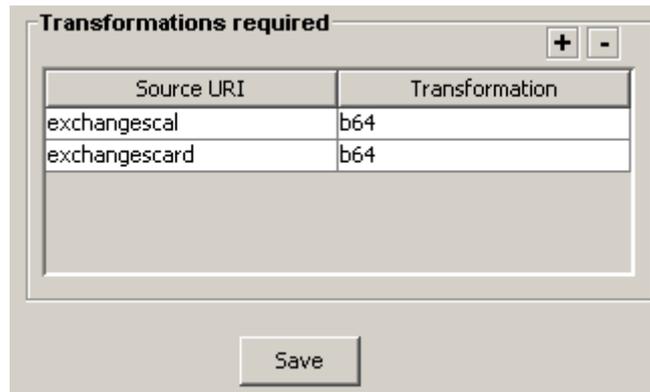


Figure 11: Transformations for SyncSources

2.7. Setting Up a Secure Connection using SLL

To set up a secure connection between Funambol Sync Server and Exchange Server using SSL, the following steps must be followed:

1. Request a Certificate for Exchange Server from IIS (Internet Information Service)
 - on the machine with the Exchange Server, go to Administrative Tools -> IIS Manager
 - check a tree structure similar to this
 - right click on the Web Site containing Exchange, and click Properties



Figure 12: IIS Manager Tree

- in the displaying window select the Directory Security tab and click the *Server Certificate...* button
 - use the displaying wizard to create a certificate request
2. Send the request to a Certificate Emitting Authority and obtain the certificate
 3. Install the certificate using IIS
 - proceed as at step 1 and use the wizard to install the certificate
 4. Insert the Certificate in a keystore file, using the command:
`keytool -import -file <certificateFile> -keystore <keystoreFile>`
 5. Having the keystore file on the machine with the Sync Server configure the Exchange Connector to use SSL with this keystore (see chapter)