FUNAMBOL

Funambol Installation and Configuration Guide version 7.1

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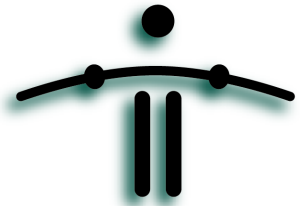http://www.funambol.com/support

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CHAPTER 1

Getting Started

Before you start the process, you may want to start with a review of your installation options.

Funambol is distributed as an all-components-included package, that includes all the required software resources and a set of accessories that let you try out the Funambol Server before committing to a full-scale installation/configuration.

The Funambol Server package installation provides you with a fully functional Funambol Server - which includes Data Synchronization Service, Inbox Listener Service, PIM Listener Service and Push Connection Service - and if your host computer is open to out-of-network connections, you will quickly have a Funambol system ready for real-world use.

The Funambol Server package includes the companion user guide *Funambol Test Drive Guide*, that takes you through a small-scale server installation and then leads you through evaluation— including two synchronization scenarios:

- Using a "mobile device" emulator or your current copy of Outlook
- Using a real SyncML device, through a live Internet connection, along with your current copy of Outlook

This guide will take you through the complete installation and configuration, along with all the options.

To help you get started, the contents of this installation/configuration guide detail all of the setup procedures for each package, for use with both Microsoft Windows and Linux systems.

Preparing a Host Computer

The Funambol Server package is available for both Windows and Linux. This section details the software and hardware requirements for a successful installation of each package (which have overlapping system requirements.)

Minimum system requirements

Windows-based host	Pentium 4 CPU, running at 1.8GHz
	Windows 2000 Professional, Windows XP Professional or Windows Vista
	200 MB of free disk space
	768 MB memory
Linux-based host	Pentium 4 CPU, running at 1.8GHz
	No Linux version or publisher restrictions, at present

200 MB of free disk space

512 MB memory

| **Per-user capacity** | Allocate 1.5 Mb of drive space per potential user (allowing for an average of 1,000 contacts and 1,000 events) |

Preparing the Funambol Server package installation

If your plan is to evaluate the Data Synchronization Service before engaging in a real-world deployment, you should install this ready-to-run Funambol server package on a little-used local host computer. Or, if you have a network with a few users, and would like to offer data synchronization that encompasses contacts and calendar information with a minimum of additional setup, this package will serve your needs. You also have the option of establishing links from the Data Synchronization Service to any external data sources such as email servers.

This package includes these key components:

- Funambol Data Synchronization Service, v7.x
- Apache Tomcat 5.5 or later
- Java Runtime Environment, 1.5.x
- Hypersonic (JDBC-compliant) database
- Funambol Administration Tool
- Software accessories for use in the Data Synchronization Service data-synchronization "test drives"

Alert: If you prefer to use a JDBC-compliant database other than Hypersonic, you need to install both the database and the required driver.

Alert: PostgreSQL error syncing configuration.
When using the server with PostgreSQL version 8.3 (as opposed to previous versions), there is an error while performing a fast sync of client configuration (for the clients that support this feature as for example the Windows Mobile Sync Client). The problem arises from a change in the database from version 8.2. The database no longer automatically casts all data types into text strings for functions that take a string input. An explicit cast is now needed. This can be accomplished by defining and using a casting function at the end of the `Funambol/ds-server/default/sql/postgresql/create_engine.ddl` script as follows:

```
CREATE FUNCTION pg_catalog.text(bigint) RETURNS text STRICT IMMUTABLE
LANGUAGE;
```

```
SQL AS 'SELECT textin(int8out($1));';
```

```
CREATE CAST (bigint AS text) WITH FUNCTION pg_catalog.text(bigint) AS
IMPLICIT;
```
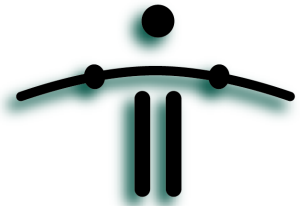
Obtaining the Funambol Server package

To download a free copy of the full Funambol Server package from the Funambol website, follow these steps:

1 Start your web browser and connect to the Funambol website: `www.funambol.com`.

2 On the Funambol homepage, click the **Open Source** tab.

3 In the main **Open Source** page, click **Download Funambol**.

4 Among the download options, look for the **Funambol Server** area.

5 Review the available packages (Windows and Linux) in this area and click an OS-specific Funambol Server package link to start the download.

6 When the **Download a File** page appears, fill in the registration form, and click **Submit**.

   • Or, take advantage of a click-through link ("No thanks...") to open the next page.

7 Click the filename link to start the download.

8 Once the download is complete, you can start the installation process, as detailed in "Installation on a Windows Host Server" on page 4 or "Installation on a Linux Host Server" on page 5.

CHAPTER 2

Installing the Funambol Server package

After downloading a copy of the Funambol Server package (as detailed in the previous chapter), you can run the installer on either a Windows or Linux host. Each installation is described in step-by-step detail in the following sections:

- "Installation on a Windows Host Server" on this page
- "Installation on a Linux Host Server" on page 5

Installation on a Windows Host Server

1   After downloading the package, double-click the installer icon.

2   When the Funambol Setup wizard window appears, review the introductory text.

3   Click **Next** to proceed.

4   When the *License Agreement* window appears, review the GNU Affero General Public License (AGPL) text.

5   If you agree to the terms in the license, click the checkbox by **I accept...**.

6   Click **Next** to proceed.

7   When the *Choose Install Location* window appears, don't change the default destination folder (unless you have strong preferences):

    `C:\Program Files\Funambol`

8   Click **Next** to proceed.

    When the *Choose Start Menu Folder* window appears, don't change the default selection (unless you have strong preferences):

    `Funambol`

9   Click **Install** to proceed.

    The Installing Status window records each phase of installation.

    When the final *Completing Funambol Setup* window appears, make sure the **Start Funambol Server** checkbox is checked, then click **Finish**.

    A terminal window briefly appears, recording the status of the server startup.

10 If a Windows Security Alert dialog box appears, to inform you that a particular Java program will (by default) be blocked, click **Unblock**, which enables the server startup to continue.

Server startup should normally be complete in under a minute's time.

Verifying the server startup

To verify that the Funambol Data Synchronization Service is started, open the system tray and look for the server status icon as shown here.

The server status icon should be green if the server was successfully started. If the icon is red, or if no status icon appears, follow the steps detailed in the next section ("If the server does not automatically start" on page 5) to manually start the Data Synchronization Service.

Once the server is started, you can proceed to the initial server configuration, as detailed in "Getting Started with Configuration" on page 14.

If the server does not automatically start

If no server status icon appears in the system tray after a couple of minutes, you must manually start the Funambol server. To do so, follow these steps:

1   Click **Start**, and choose **Programs | Funambol | Data Synchronization Server | Start Server**.

After a brief pause, the system tray icon should appear at this point. The color of the icon represents one of these states:

- **Green** – the server is running.
- **Yellow** – the server is loading.
- **Red** – the server is stopped.

2   If the Funambol icon is green, you can start a web browser and connect to this URL:

- http://localhost:8080/funambol

A summary web page with Funambol DS Server information appears.

You can now proceed to the initial server configuration, as detailed in "Getting Started with Configuration" on page 14.

Installation on a Linux Host Server

This installation requires the use of a terminal window and a shell command line. Have the package version number handy (as noted in the downloaded package filename), for use in this procedure. You do not have to log in as root to complete this installation; any admin account has permission for this task.

1 Open a terminal window, if it's not already open.

2 Type the following command:

```
sh funambol-<version number>.bin
```

3 Press **Enter** to proceed.

4 When the license agreement appears, read the text.

5 To accept the terms of the agreement, type **y** (Yes) at the prompt and press Enter.

6 Specify a top-level directory in which to install the packaged software. Otherwise, the installation defaults to this directory:

```
/opt/Funambol
```

At the conclusion of installation, you are prompted to start the server.

7 Type **y** (Yes) and press Enter.

- If you prefer to delay startup of the server, you can always change to the proper directory (`/opt/Funambol/bin`), then run this command at a later time:

```
sh funambol start
```

This concludes the installation. You can now proceed to the initial server configuration, as detailed in "Getting Started with Configuration" on page 14.

Verifying the server startup

After you've installed and started the Data Synchronization Service, you can verify its operation by following these steps:

1 Run a `ps` command.

2 When the results appear, `grep` for "`funambol`".

3 If a listing is found, the server is in operation.

Or you can do the following:

- Start a web browser and connect to this URL: http://localhost:8080/funambol

- A web page with Funambol Data Synchronization Service information appears, if the server is running.

Setting up Automatic Data Synchronization Service Startup

As of this edition of the user guide, the Funambol Data Synchronization Service won't automatically start when you start or restart the host server. Follow these steps to automate server startup.

1 Using a terminal window, copy the startup script into the /etc/init.d directory using the following command:

```
cp /opt/Funambol/bin/funambol /etc/init.d/funambol
```

2   Use a text editor to open the newly copied script.

3   Open the script in a text editor, and change line 4 as noted here:

EXISTING: FUNAMBOL_HOME=`(cd .. ; pwd)`

POST-EDITS: FUNAMBOL_HOME=`(cd /opt/Funambol ; pwd)`

This points the script to the absolute location of your installation.

4   Enter this command:

```
ln -s /etc/init.d/funambol /etc/rc3.d/S30funambol
```

This creates a symbolic link to your rc3.d directory.

5   To verify that the Funambol Data Synchronization Service is running, start a web browser and link to this URL:

http://<servername>:8080/funambol.

A Data Synchronization Service test page should appear.

Starting the Funambol Administration Tool

To open the Administration Tool window, follow these steps:

1   To start the Funambol Administration Tool, do one of the following:

- WINDOWS: Click **Start**, and choose **Programs|Funambol|Administration Tool**.

- LINUX: At the prompt, change to `/opt/Funambol` and run this command:

  `admin/bin/funamboladmin`

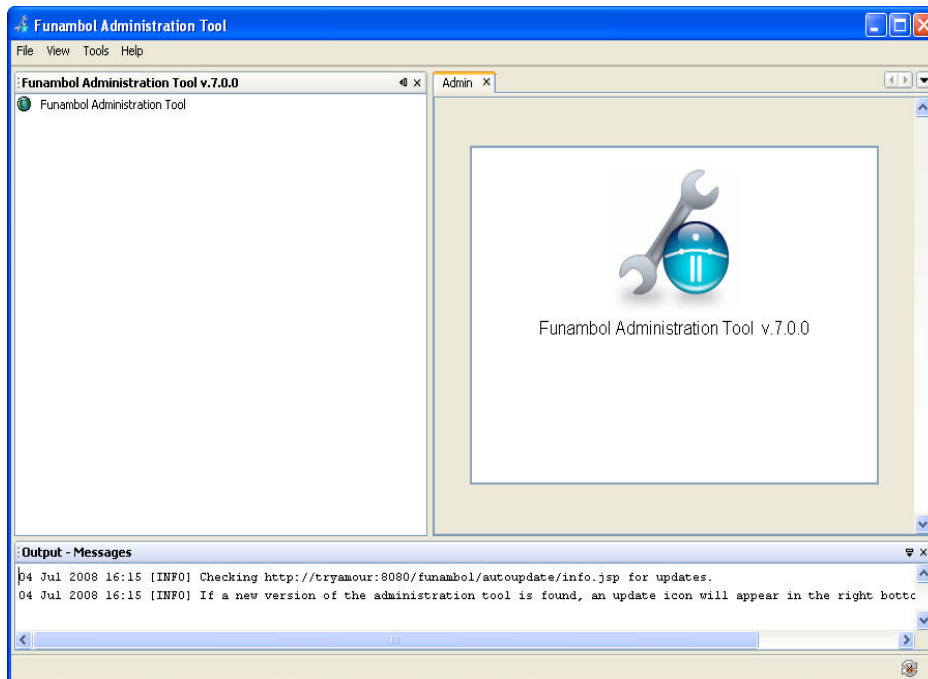The Funambol Administration Tool window appears on-screen.

FIGURE 3-1

No information will be displayed until you log in with an administrative user ID and password—as detailed in the next section.

Logging into the Data Synchronization Service

1   In the Admin Tool window, choose **File**/**Login**.

  • Or, double-click **Funambol Admin Tool** in the Navigation pane.

  • Or, right-click the Funambol Admin Tool item and choose **Login**.

2   When the Login dialog box appears, (as shown in the following illustration), make no changes to the default settings.
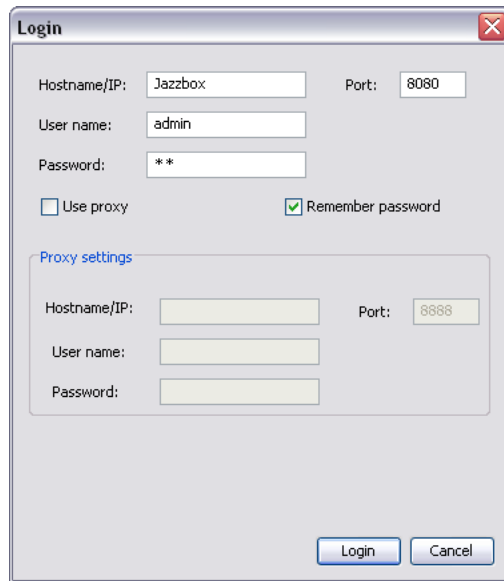
  • The Hostname/IP field displays by default the name of the local computer.

3   With the default entries intact, click **Login**.

Tip: the Login dialog box will remember the most recent login entries.

Note: the default user name is "admin" and the default password is "sa".

4   After login, the Admin Tool window *Navigation* pane lists your server as the root node of an explorer-like tree that sorts your management options into server settings, users, devices, principals, modules and more.
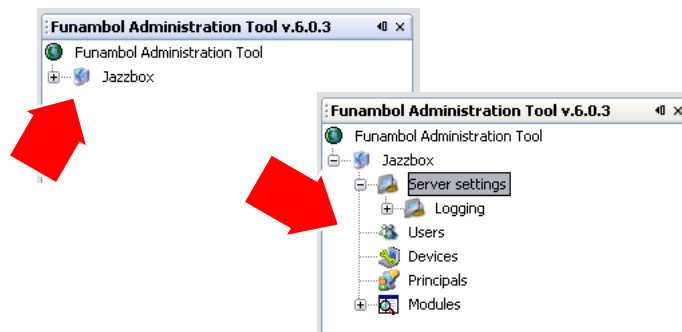
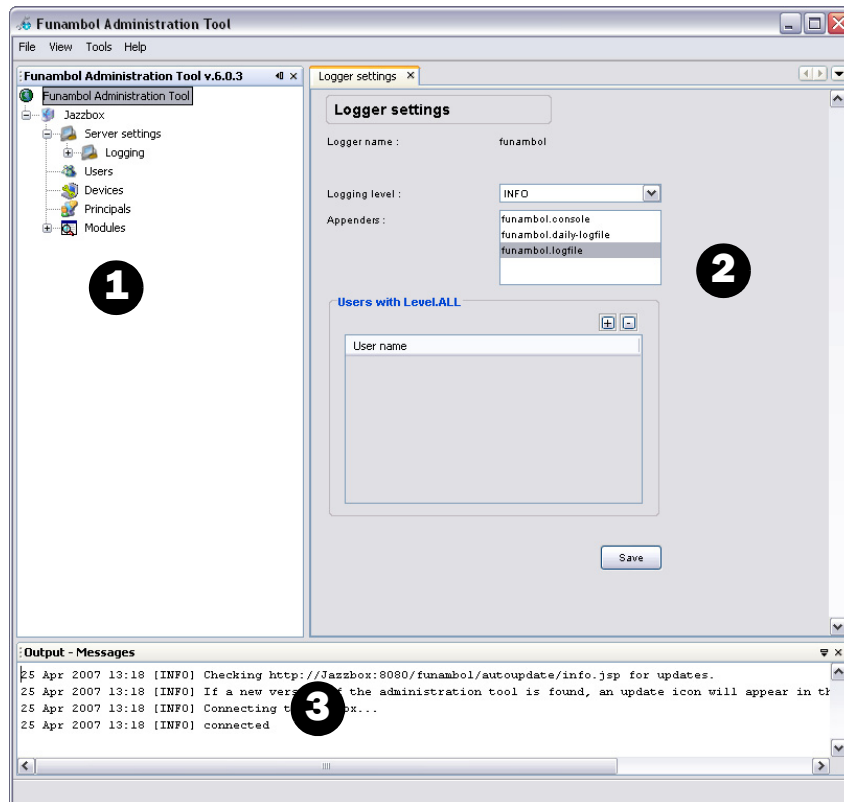The main window (in typical working mode) is partitioned into the following panes:

[-**1**-] — **Navigation**   Lists all the primary components, that you can add to or edit, to monitor and maintain the server, users, devices, principals, modules, etc.

Double-click an item in the expanded Navigation tree, to see the current entries and editable options in the Data Entry pane.

[-**2**-] — **Data entry**   Use the features in this pane to add, edit, delete or search for information related to the item selected in the Navigation pane.

[-**3**-] — **Output Messages**   This pane displays in-progress status messages (results, success or failure) relevant to your current task.

In addition, you can temporarily hide one or two of the three principal panes, as needed. For example, some Data Entry displays are very full of options, it's helpful to be able to hide both Navigation and Output panes in order to see all the options.

5   Your first task is to replace the default admin login information—as detailed in the next section.

Changing the Admin Account Password

After you first log in with the Administration Tool, you should immediately change the default password assigned to the "admin" account, for increased security.

1   In the Admin Tool window, expand the server tree in the Navigation pane, and double-click **Users**.

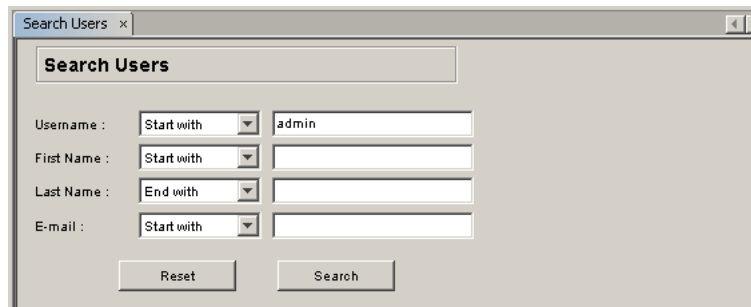**2**   When the Search Users features appears, click in the **Username** field and type "admin"
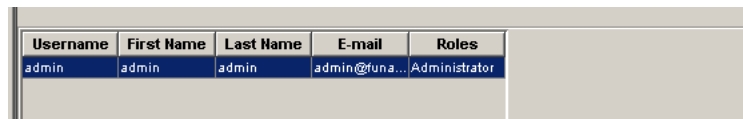
3   Click **Search**.

The admin account should appear in the results table.

4   Select the admin account and click **Edit**.

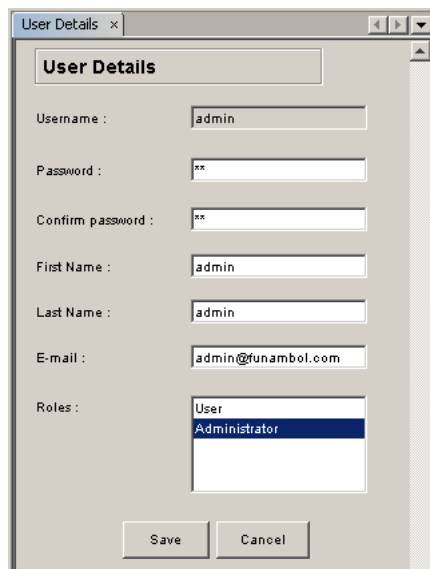The User Details options appear, with key information displayed in editable fields.

5   Type a new, secure password in both **Password** and **Confirm Password** fields.

6   Click **Save** to save and apply the new password.

Important!

If you change the password, be sure to do the following to verify the new password:

1   Exit the Administration Tool.

This logs you out of the Data Synchronization Service.

2   Restart the Tool and log in again as "admin"—using your new password.

This verifies the new password text.

For information on creating additional admin user accounts, review the next section.

Creating Additional Administrator User Accounts

If your Funambol server workload justifies the use of more than one system administrator, you can add the needed accounts by following these steps:

1   After expanding the server tree in the Navigation pane, right-click **Users** in the navigation pane and choose **Add User.**
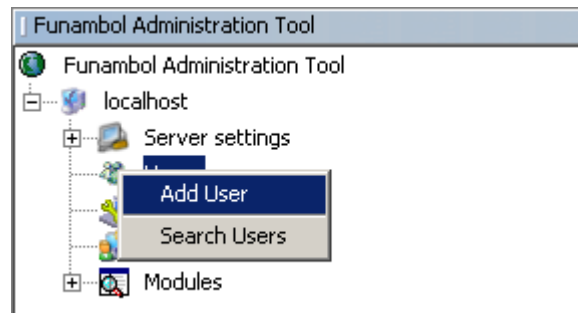

FIGURE 3-8

The Add User options appear in the Data Entry pane.

FIGURE 3-9

2 Enter the relevant (and required) information in the following fields.

Username	Enter a name up to 255 characters in length, using any combination of characters.
	Alert: User names are case-sensitive.
Password	Enter a unique, secure password.
Confirm password	Re-type the same password.
First Name	Enter the user's first name (not including any middle initials).
Last Name	Enter the user's last name.
Email	The email address the user wants to link to the Funambol server.
Roles	Select a role for the user from the following:
	Choose **User**, if this user is allowed to perform synchronizations with the server. Note that a "user" does not have "Admin" access to the server.
	Choose **Administrator**, if this user is to perform administrative tasks. Note however that an Administrator cannot synchronize data using devices or applications.

3 Click **Add** to save the settings.

A confirmation message appears in the Output-Messages pane.

4 Repeat this procedure to create other needed admin accounts.

5 You can now communicate this admin-user account information to relevant would-be users.

CHAPTER 4

Getting Started with Configuration

After installation is complete, you'll need to replace the default network settings with relevant information. This makes your server ready for the rest of the setup process, as is detailed in the separate guide, *"Funambol Administration Guide"*.

Specifying the Public IP Address

The default installation allows extremely limited access to the Funambol DS Server via a local-host address. This permits only direct administrative connections. This section details the changing of the IP address, to allow system users (internal and external) to connect to the Data Synchronization Service for both data synchronization and administration purposes.

1 Having logged into the Data Synchronization Service with the Administration Tool, review the Navigation pane.

2 Expand the server tree and double-click **Server settings**.

3 In the Server Settings panel, locate the **Server URI** property.

4 Enter the IP address or hostname assigned to this service, in the following format:

```
http://<server name or IP address>:<server port>/funambol/ds
```

5 Click **Save**.

The Output-Message pane displays a confirmation message.

What's Next

You've set up the Funambol Data Synchronization Service for basic operational readiness. Now you can customize it to fit into your network and serve your anticipated user base. This includes the following tasks:

COMPONENT	SETUP TASK?	ON-GOING?	AS NEEDED?
Change the "Admin" account password	Optional	Yes	
Additional "admin" user accounts	Optional		Optional
Custom server configurations	Yes		

COMPONENT	SETUP TASK?	ON-GOING?	AS NEEDED?
Server settings: Capabilities	If needed		
Server settings: Engine	If needed		
User accounts	(Automatic)	If needed	
Device records	(Automatic)	If needed	
Principals	(Automatic)	If needed	
Set up Email Connector	Optional		
Configure Email Push	Optional		
Configure Email module	Optional		Yes
Configure PIM Push	Optional		Yes
Configure Log files, Loggers	Optional		Yes

Each of these task topics is covered in detail in a clearly labeled section or chapter in the separate publication, *"Funambol Administration Guide"*. See the *Contents* of that guide for page numbers.