Funambol DM Server

SCTS Testing Guide

Version 3.0
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Important Information

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Contents

Introduction

The SyncML Conformance Test Suite (SCTS) tests whether a client and server conform to the SyncML protocol. The tool works as a SyncML client to test servers and vice versa, and provides valuable debugging information.

This document describes how to use the SCTS DM v. 1.1.2 tool to test the DM Server. The following types of authentication are tested:

- Basic authentication
- MD5 authentication
- HMAC authentication

Testing Procedure

1. Perform the initial setup. This setup is the same regardless of the type of authentication to be tested.
2. Configure the DM Server and the SCTS. The configuration differs depending on the type of authentication you want to test; for example, the configuration of the DM Server and SCTS for testing MD5 authentication differs from that used for testing HMAC authentication.
3. Perform the tests. The testing procedure is the same regardless of the type of authentication to be tested.

Initial Setup

Perform the initial setup as follows:

1. Open a database console and run the following scripts:

   - `delete from fnbl_principal;`
   - `delete from fnbl_dm_state;`
   - `delete from fnbl_user;`
   - `delete from fnbl_device;`
   - `insert into fnbl_user (username, password, email, first_name, last_name) values ('funambol', 'funambol', 'funambol@nowhere.org', 'funambol', 'funambol');`
   - `insert into fnbl_user (username, password, email, first_name, last_name) values ('G3TBy1/QA4/5KmjjAizy6A==', '', 'funambol@nowhere.org', 'funambol', 'funambol');`
   - `insert into fnbl_device (id, description, type, digest, client_nonce, server_nonce, server_password) values ('dmtest', 'TestDM', 'SCTS', 'G3TBy1/QA4/5KmjjAizy6A==', 'MTIzNA==', 'NTY3OA==', 'srvpwd');`
   - `insert into fnbl_principal (id, username, device) values('100', 'funambol', 'dmtest');`
   - `insert into fnbl_principal (id, username, device) values('101', 'G3TBy1/QA4/5KmjjAizy6A==', 'dmtest');`

2. In the `Funambol/dm-server/config/com/funambol/server/engine/dm/NotificationSender.xml` file, replace `'http://localhost:80'` with the hostname or address of the machine that runs the SCTS.

   Note that this is the default path to the `NotificationSender.xml` file. To specify a different path, set the 'funambol.dm.home' property in the script used to start the server.

Configuring the DM Server and SCTS

This section describes how to configure the DM Server and SCTS tool based on the type of authentication to be tested.

Basic Authentication

Configure the DM Server first, and then configure the SCTS.

DM Server Configuration

1. Go to the `Funambol/dm-server/config/com/funambol/server/security/` directory (the default configuration path; your server installation may differ).

2. Replace the contents of the `DBOfficer.xml` file with the contents of the `BasicDBOfficer.xml` file.

SCTS Configuration

1. Run the SCTS DM v. 1.1.2.

2. Create a new client device with the following properties:

Device ID:	`dmtest`
MaxMsg Size:	`5000`
MaxObj Size:	`25000`
Support Lrg Obj:	`checked`
Encoding:	`WBXML (or XML)`

3. Open the newly-created device and create a new account with the following properties:

Name:	`funambol`
Server ID:	`funambol`
Address:	`http://<SERVERNAMEORIP>/funambol/dm`
Port number:	`<SERVERPORT>`
Server Authentication:	`None`
Client Authentication:	`Basic, User name: funambol, Password: funambol`

MD5 Authentication

Configure the DM Server first, and then configure the SCTS.

DM Server Configuration

1. Go to the `Funambol/dm-server/config/com/funambol/server/security/` directory (the default configuration path; your server installation may differ).

2. Replace the contents of the `DBOfficer.xml` file with the contents of the `MD5DBOfficer.xml` file.

SCTS Configuration

1. Run the SCTS DM v. 1.1.2.

2. Create a new client device with the following properties:

Device ID:	`dmtest`
MaxMsg Size:	`5000`
MaxObj Size:	`25000`
Support Lrg Obj:	`checked`
Encoding:	`WBXML (or XML)`

3. Open the newly-created device and create a new account with the following properties:

Name:	`funambol`
Server ID:	`funambol`
Address:	`http://<SERVERNAMEORIP>/funambol/dm`
Port number:	`<SERVERPORT>`
Server Authentication:	`None (or Digest)`
Client Authentication:	`Digest, User name: funambol, Password: funambol`

4. In the device management tree, expand the `./SyncML/DMAcc/funambol` node and specify the following values (you will need to press the **Apply Changes** button of the main window for each change to store the new values):

ServerNonce:	`5678 (set it as Characters)`
ClientNonce:	`1234 (set it as Characters)`
ServerPW:	`srvpwd`

HMAC Authentication

Configure the DM Server first, and then configure the SCTS.

DM Server Configuration

1. Go to the `Funambol/dm-server/config/com/funambol/server/security/` directory (the default configuration path; your server installation may differ).

2. Replace the contents of the `DBOfficer.xml` file with the contents of the `HMACDBOfficer.xml` file.

SCTS Configuration

1. Run the SCTS DM v. 1.1.2.

2. Create a new client device with the following properties:

Device ID:	`dmtest`
MaxMsg Size:	`5000`
MaxObj Size:	`25000`
Support Lrg Obj:	`checked`
Encoding:	`WBXML (or XML)`

3. Open the newly-created device and create a new account with the following properties:

Name:	`funambol`
Server ID:	`funambol`
Address:	`http://<SERVERNAMEORIP>/funambol/dm`
Port number:	`<SERVERPORT>`
Server Authentication:	`None (or HMAC)`
Client Authentication:	`MD5*, User name: funambol, Password: funambol`

   * You must select MD5 authentication due to a bug in the SCTS Tool. If you select HMAC authentication, the tool does not send the credential and the tests fail.

4. In the device management tree, expand the `./SyncML/DMAcc/funambol` node and specify the following values (you will need to press the **Apply Changes** button of the main window for each change to store the new values):

ServerNonce:	`5678 (set it as Characters)`
ClientNonce:	`1234 (set it as Characters)`
ServerPW:	`srvpwd`

Testing the DM Server

After you have configured the DM Server and SCTS for an authentication type, you run all the tests described in this section with no further configuration changes.

To test the DM Server using the SCTS, perform the following:

1. Run the SCTS DM v. 1.1.2.
2. Select the dmtest device.
3. Select DM Accounts.
4. Select the funambol account.
5. Select Tests and run them using the following instructions:

Group	Instructions
Group 1	Press Execute test.
Group 2	Press Execute test.

Group 3	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/3');`
	2. Press Execute test.

Group 4	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/4');`
	2. Press Execute test.

Group 5	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/5');`
	2. Press Execute test.

Group 6	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/6');`
	2. Press Execute test.

Group	Instructions

Group 7	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/7');`
	2. Press Execute test.

Group 8	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/8');`
	2. Press Execute test.

Group 9	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/9');`
	2. Select the device's management tree and create the node "./SCTSValue" (if it does not exist)
	3. Select Tests and group 9.
	4. Press Execute test.

Group 10	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/10');`
	2. Press Execute test.

Group 11	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/11');`
	2. Press Execute test.

Group 12	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/12');`
	2. Press Execute test.

Group 13	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/13');`
	2. Press Execute test.

Group	Instructions

Group 14	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/14');`
	2. Press Execute test.

Group 15	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/15');`
	2. Press Execute test.

Group 16	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/16');`
	2. Press Execute test.

Group 17	1. Open a database console and run the following scripts:
	`delete from fnbl_dm_state;`
	`insert into fnbl_dm_state (id, device, state, operation) values ('1', 'dmtest', 'P', 'scts/17');`
	2. Press Execute test.

Group 18	1. Right-click the dmtest device and select "Make Notifiable" 2. Press Execute Test. 3. Run notification.cmd TestDM scts/3.

Resources

This section lists resources you may find useful.

Related Documentation

This section lists documentation resources you may find useful.

Funambol DM Server Documentation

The Funambol DM Server documentation set includes the following documents:

- *Funambol DM Server Administration Guide*: Read this guide for server installation instructions.
- *Funambol DM Server Developer's Guide*: Read this guide to understand how to develop extensions to the DM Server.
- *Funambol DM Server DM Demo User's Guide*: Read this guide for a demonstration of the basic management operations of the DM Server.
- *Funambol DM Server SCTS Testing Guide*: This document.

Other Resources

SCTS

Additional information on the SCTS tool can be found on SourceForge under the "OMA-SCTS" project at `http://sourceforge.net/projects/oma-scts`.