
HIMSS
Integrating the Healthcare Enterprise

IHE/MESA Personnel White Pages
Consumer Tests

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1 Personnel White Pages Consumer

The MESA software is only available on Linux systems with the proper RPMs installed. Please refer to the Installation Manual. If you do not have a Linux system available for testing, contact the Project Manager to access a test system over the Internet.

1.1 Introduction

The MESA tests include a number of cases each of which rely on a sequence of messages between actors. These tests range across different integration profiles:

- Personnel White Pages

This document lists the transactions and messages for a number of cases. It may not describe the clinical scenario behind each case, but listing the transactions should clearly define what is expected of each actor. These are all of the transactions involving all of the actors. When you test with your particular actor, you may see only a subset of these messages.

1.2 Patient Identification

There are no patients defined for the PWP Consumer tests.

1.3 Configuration

The MESA scripts are run from the directory `$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer`. The ASCII configuration file `pwp_consumer.cfg` contains parameters that configure the MESA Personnel White Pages Directory.

Appendix A in this document describes the data that should be loaded by the MESA PWP Directory. The files described in the Appendix are available in the following directory:

```
$MESA_TARGET/ mesa_tests/iti/actors/pwp_directory/data
```

1.4 Starting the MESA Servers

MESA servers are started from a DOS/CMD window or a terminal emulator. Follow these steps for Unix systems

1. `cd $MESA_TARGET/ mesa_tests/rid/actors/pwp_consumer`
2. Change to the root user; those privates are required for run the slapd server used during testing.
3. `scripts/start_mesa_servers.csh`

To stop the servers, hit ^C in the server window. The script runs in the foreground until you terminate it.

In the tests below, you will want to redirect the output of the MESA server to a file that will be submitted to the Project Manager for review. The log from the OPENLDAP server will indicate if you have included the proper filter parameters in your query.

1.5 Installation Test

1.6 Loading Test Data

The LDAP server requires specific test data defined for these tests. To load the test data, follow these steps on a Unix system:

1. `cd $MESA_TARGET/mesa_tests/rid/actors/pwp_consumer`
2. `scripts/load_ldap_data.csh`

The script will prompt you for a password; this is the same password that is configured with the LDAP configuration files. As shipped with the MESA software, the password is “secret”.

This is a onetime step that need not be repeated.

2 Test Cases: PWP

This section describes test cases that are generally associated with the PWP Integration Profile. There may be some overlap with other profiles.

When you are ready to run your final tests before sending your log file (slapd.log) to the Project Manager, you must empty the log file and run each test case once, consecutively in an ascending order.

2.1 Test Case 11500: Find PWP – No DNS

In test 11500, the Personnel White Pages Consumer must locate a PWP Directory without the aid of DNS.

Manually configure your PWP Consumer with the configuration information listed below:

LDAP_HOST = IP Address to MESA LDAP server

LDIF_BASE = dc=ihe,dc=net

LDAP_PORT = 389

LDAP_SSL_PORT = 636

You will need to send the LDAP query that is described below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield two responses:

```
cn= Mooney^*
```

2.1.1 References

ITI TF-2: 3.23.4.1.2

2.1.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/ iti/ actors/ pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11500/11500.txt
4. Manually configure your PWP Consumer with the PWP Directory information.
5. Make sure the MESA server has been loaded with data as described in section 1.6.
6. Perform the LDAP query that is described in the overview above. The LDAP server will log your query.

2.1.3 Evaluation

1. The MESA LDAP server will log the query sent by your consumer application in the file 11500/11500.txt (see step 3 above).
2. Examine the MESA LDAP log file to find your query. Submit the log file to the Project Manager for evaluation.

Notes:

1. If you want to see a result of a query generated by the MESA PWP Consumer, run test 11500 in self test mode. You should verify the information in `pwp_consumer.cfg` to ensure correctness. To run:

```
perl scripts/pwpc_pwp.pl 11500 <log level>
```

2. Submit 11500.txt and `pwpc_11500.txt` to the Project Manager.

2.2 Test Case 11501: Find PWP – Not Registered in DNS

In test 11501, the Personnel White Pages Consumer tries to locate a PWP Directory using DNS, but the PWP Directory is not registered with the DNS.

2.2.1 References

ITI TF-2: 3.23.4.1

2.2.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to `$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer`.
2. The file `pwp_consumer.cfg` describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details.
4. Query the MESA DNS to locate all LDAP servers. The MESA DNS will log your query.

2.2.3 Evaluation

1. The MESA DNS server will log your DNS query.
2. Examine the MESA DNS log file and submit that file to the Project Manager for Evaluation.

Notes:

1. To run a DNS query using a MESA simulator, run the script below

```
perl scripts/pwpc_pwp.pl 11501 MESA_DNS_Server (or IP address of queried DNS)
```

2.3 Test Case 11502: Find PWP – One Registered PWP

In test 11502, the Personnel White Pages Consumer locates a PWP Directory using DNS. The DNS Server has one LDAP server registered.

2.3.1 References

ITI TF-2: 3.23.4.1

2.3.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details.
4. Query the MESA DNS to locate all LDAP servers. The MESA DNS will log your query.

2.3.3 Evaluation

1. The MESA DNS server will log your DNS query.
2. Examine the MESA DNS log file and submit that file to the Project Manager for Evaluation.

Notes:

1. To use a MESA script to send a DNS query, use the script below.

```
perl scripts/pwpc_pwp.pl 11502 MESA_DNS_Server (or IP address  
of queried DNS)
```

2.4 Test Case 11503: Find PWP – Multiple Registered PWP

In test 11503, the Personnel White Pages Consumer locates a PWP Directory using DNS. The DNS Server has multiple LDAP servers registered. The PWP Consumer needs to select the appropriate directory. (All DNS entries will point to the same server).

2.4.1 References

ITI TF-2: 3.23.4.1

2.4.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details.
4. Query the MESA DNS to locate all LDAP servers. The MESA DNS will log your query.

2.4.3 Evaluation

1. The MESA DNS server will log your DNS query.
2. Examine the MESA DNS log and submit the log to the Project Manager for evaluation.

Notes:

1. To see an example DNS query, run the script below:

```
perl scripts/pwpc_pwp.pl 11503 MESA_DNS_Server (or IP address  
of queried DNS)
```

2.5 Test Case 11505: Base DN Discovery

In test 11505, the MESA Personnel White Pages Consumer connects to the PWP Directory using Anonymous Authentication to discover the Base DN. This is a test of both Anonymous Authentication and discovery of the Base DN.

The query for base DN is described in ITI TF-2 3.24.5.2.2

The list of Base DN's that are provided by a LDAP directory can be found by doing a LDAP Query with a NULL (i.e. "") Base DN, and ObjectClass="DN". The Personnel White Pages Directory shall contain a person object with the cn="IHE-ITI-PWP". The Personnel White Pages Consumer may thus search through the list of Base DN's that the LDAP Directory contains for this cn object.

2.5.1 References

ITI TF-2: 3.24.4.1.2.1

ITI TF-2: 3.24.4.5.2.2

2.5.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11505/11505.txt
4. Query the MESA DNS to locate the LDAP server or manually configure your system.

5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.5.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log file and submit to the Project Manager for evaluation.

Notes:

1. To see a query generated by a MESA script, run the script below:

```
perl scripts/pwpc_pwp.pl 11505 4
```

2.6 Test Case 11510: PWP Anonymous Authentication

In test 11510, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Anonymous Authentication.

The PWP Consumer should make the LDAP query specified below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
cn= Mooney^*
```

2.6.1 References

ITI TF-2: 3.24.4.1.2.1

2.6.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/ iti/ actors/ pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11505/11505.txt.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.6.3 Evaluation

1. The MESA LDAP server will log your query.

2. Examine the MESA LDAP log file and submit to the Project Manager for evaluation.

Notes:

1. To see a query generated by a MESA script, run the script below:

```
perl scripts/pwpc_pwp.pl 11505 4
```

2.7 Test Case 11511: PWP Simple Authentication

In test 11511, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Simple Authentication.

The PWP Consumer should make the LDAP query specified below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
cn= Graham^Thomas*
```

2.7.1 References

ITI TF-2: 3.24.4.1.2.1.1

2.7.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use Simple Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.7.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log file and submit to the Project Manager for evaluation.

Notes:

1. To see an example query from a MESA system, run the script below:

```
perl scripts/pwpc_pwp.pl 11511 Your_DNS_Server (or IP address  
of queried DNS)
```

2.8 Test Case 11512: PWP SSL Authentication

In test 11512, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using SSL Authentication.

The PWP Consumer should make the LDAP query specified below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
cn= Farmer^Margaret *
```

2.8.1 References

ITI TF-2: 3.24.4.1.2.1.1

2.8.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use SSL Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.8.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log and submit to the Project Manager for evaluation.

Notes:

1. To see an example query, run the script below:

```
perl scripts/pwpc_pwp.pl 11512 MESA_LDAP_Server
```

2.9 Test Case 11520: PWP Query: 1 Response

In test 11520, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Anonymous Authentication.

The PWP Consumer should make the LDAP query specified below that will yield one response:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
cn=Alexander^Matthew*
```

2.9.1 References

ITI TF-2: 3.24.4.1.2.3

2.9.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11520/11520.txt.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.9.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log file and submit to the Project Manager for evaluation.

Notes:

1. To see a query and example response, run the script below:

```
perl scripts/pwpc_pwp.pl 11520 4
```

2.10 Test Case 11521: PWP Query: 4 Responses

In test 11521, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Anonymous Authentication.

The PWP Consumer should make the LDAP query specified below that will yield four responses:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield four responses:

```
sn=MO*
```

2.10.1 References

ITI TF-2: 3.24.4.1.2.3

2.10.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11521/11521.txt.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.10.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log file and submit to the Project Manager for evaluation.

Notes:

1. To see an example query and response, run the script below:

```
perl scripts/pwpc_pwp.pl 11521 4
```

2.11 Test Case 11530: PWP Query Key 1

In test 11530, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Anonymous Authentication.

The PWP Consumer should make the LDAP query specified below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
initials=cod
```

2.11.1 References

ITI TF-2: 3.24.4.1.2.3

2.11.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.

2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11530/11530.txt.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.11.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log file and submit the log file to the Project Manager for evaluation.

Notes:

1. To see an example query and response, run the script below:

```
perl scripts/pwpc_pwp.pl 11530 4
```

2.12 Test Case 11531: PWP Query Key 2

In test 11531, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Anonymous Authentication.

The PWP Consumer should make the LDAP query specified below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
o=IHE Network (and) ou=Librarians
```

2.12.1 References

ITI TF-2: 3.24.4.1.2.3

2.12.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11531/11531.txt.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.

5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.12.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log file and submit the log file to the Project Manager for evaluation.

Notes:

1. To see an example query and reponse, run the script below:

```
perl scripts/pwpc_pwp.pl 11531 4
```

2.13 Test Case 11532: PWP Query Key 3

In test 11532, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Anonymous Authentication.

The PWP Consumer should make the LDAP query specified below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
employeeNumber=2030
```

2.13.1 References

ITI TF-2: 3.24.4.1.2.3

2.13.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/ mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11532/11532.txt.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.13.3 Evaluation

1. The MESA LDAP server will log your query.

2. Examine the MESA LDAP log file and submit the log file to the Project Manager for evaluation.

Notes:

1. To see an example query and response, run the script below:

```
perl scripts/pwpc_pwp.pl 11532 4
```

2.14 Test Case 11533: PWP Query Key 4

In test 11533, the Personnel White Pages Consumer locates a PWP Directory through DNS or manual configuration. The consumer connects to the PWP Directory using Anonymous Authentication.

The PWP Consumer should make the LDAP query specified below:

Connect or bind to LDAP server using an Anonymous Authentication and the query specified below that will yield one response:

```
Mail=fwe@ihepwp.org
```

2.14.1 References

ITI TF-2: 3.24.4.1.2.3

2.14.2 Instructions

To run this test, follow these steps using a DOS window or terminal emulator:

1. Set the current directory to \$MESA_TARGET/mesa_tests/iti/actors/pwp_consumer.
2. The file *pwp_consumer.cfg* describes the MESA servers for this test. You should be aware of this file but should not modify it unless you have problems starting the MESA servers.
3. Make sure the MESA servers have been started. See section 1.4 for details. Redirect the output to the file 11533/11533.txt.
4. Query the MESA DNS to locate the LDAP server or manually configure your system.
5. Use Anonymous Authentication to connect to the MESA PWP Directory.
6. Send the LDAP query described above. The MESA PWP Directory will log your query.

2.14.3 Evaluation

1. The MESA LDAP server will log your query.
2. Examine the MESA LDAP log file and submit the log file to the Project Manager for evaluation.

Notes:

1. To see an example query and response, run the script below:

```
perl scripts/pwpc_pwp.pl 11533 4
```

2.15 Test Case 11540: PWP Exhibit Consumer User Interface

In test 11540, the PWP Consumer creates a screen shot (digital camera, screen capture) of the user interface that demonstrates the query process and how the results are displayed to the user. The query process should be integrated with the project and not performed with a command line interface to an OpenLDAP (or similar) application.

2.15.1 References

ITI TF-2: 3.24.4.1.2.3

2.15.2 Instructions

To run this test, follow these steps:

1. Use test case 11530 or some other query that your PWP Consumer supports.
2. Create a screen capture image (JPEG, GIF) of the user interface used to generate the query. This may be part of some other process in your system.
3. Perform the specified LDAP query.
4. Display the results for the end user; create a screen capture image of the results (JPEG, GIF).
5. Label both images according to organization/company name and test number. Submit results to the Technical Project Manager for evaluation.

2.15.3 Evaluation

Submit the screen capture images (JPEG, GIF) to the Technical Project Manager for evaluation. The file names should include the organization/company name and test number.

A: Appendix A

LDIF files

PWPreords.ldif is located in the data directory.

Loading LDIF file to an LDAP server

You can use your LDIF import tools to upload MESA LDIF information from the data directory. An alternative is to run our Perl script per below.

```
perl scripts\addLDIFEntries.pl Unix
```

You may have to create a root for your LDAP server if you have not done so.

```
perl scripts\addLDIFEntries.pl MakeRoot
```