Creating a Custom Wi-Fi Directory for Open Mobile

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Customers and partners can include listings for their own Wi-Fi networks in the Open Mobile client. This enables users to detect and connect to these Wi-Fi networks without needing the key required to associate to each network.

Networks that have been added properly will be displayed in Open Mobile with the iPass logo, as if they were iPass-enabled hotspots.

Open Mobile does not encrypt Wi-Fi directories. As a result, network keys will be shown in plain text in unencrypted files. If you do not wish for your keys to be stored in this manner, you should not use this procedure.

> *Custom Wi-Fi directories created in this manner cannot be used for OCR (On-Campus Roaming) connections. For creation of OCR files for use with Open Mobile, see the tech note* Configuring On-Campus Roaming (OCR) with Open Mobile for Windows*, available from the iPass Knowledge Base as article #2987.*

Understanding the Directory File

An Open Mobile Wi-Fi Directory is an XML file. Each network will be contained in the node `WiFiEntryPoint`, which has a data type of WiFiEntryPoint.

The WiFiEntryPoint DataType consists of the following data elements.

Data Element	Data Type	Description
WiFiEntryPoint	N/A	Includes the attribute SSID, which is the network SSID, enclosed in double quotes (for example, "My SSID").
Security	integer	Authorization type. Select one of the following values: ▪ Open: 1 ▪ WEP-OPEN: 2 ▪ OPEN-802.1x: 4 ▪ WEP-802.1x : 8 ▪ WEP-SHARED: 8112 ▪ WPA-PSK-TKIP: 4112 (0x1000|0x40) ▪ WPA-PSK-AES: 4128 (0x1000|0x80)

		▪ WPA2-PSK-TKIP: 256
		▪ WPA2-PSK-AES: 512
		▪ WEP-TKIP: 64
		▪ WPA-AES: 128
		▪ WPA2-TKIP: 1024
		▪ WPA2-AES: 2048
Broadcast	boolean	true =Broadcast, false=Non-Broadcast.
KeyFormat	integer	Used only when Security is WEP (2). Select a value from 1 to 4, corresponding to the key field number set for WEP security. For example, if the Key2 field is set for WEP security, KeyFormat would have a value of 2.
KeyValue	string	Actual value of the access key. Not required for non-secured (Open) networks.
iSEELEnabled	integer	(Optional.) Set to 1 if iSEEL is enabled for the network.
AuthenticationMethod	string	(Optional.) Authentication method. Valid methods are: ▪ GIS access point: GI ▪ CAPTCHA authentication: GC ▪ DeviceScape: DS
Prefix	string	(Optional.) Authentication prefix.
Suffix	string	(Optional.) Domain suffix.

Directory Example

An example of a valid Wi-Fi Directory is shown here:

```
<?xml version="1.0" encoding="UTF-8" ?>
<NetworkDirectory>
        <WifiEntryPoint ssid="0033">
                <Security>2</Security>
                <Broadcast>true</Broadcast>
                <KeyFormat>0</KeyFormat>
                <KeyValue>a52de42cb6</KeyValue>
        </WifiEntryPoint>
<WifiEntryPoint ssid="17 Battery Place">
                <Security>1</Security>
                <Broadcast>true</Broadcast>
 </WifiEntryPoint>
</NetworkDirectory>
```

Two networks are listed in this example.

- The first, 0033, uses WEP security, is a broadcast network, and uses an ASCII WEP key of a52de42cb6.
- The second, 17 Battery Place, is an Open broadcast network that uses no security.

Creating Your Wi-Fi Directory

You can create your own Wi-Fi Directory in one of two ways: you can download and edit the sample Directory from the Open Mobile Portal, in an XML editor of your choice, or you can create your own from scratch.

- **Editing the Sample File:** A sample Directory file is available on the Open Mobile Portal under **Configuration | Upload Networks | Wi-Fi Network Directories | Import New Directory**. Open the file in your selected XML editor and edit it as follows:
    - In the `WiFiEntryPoint` node, change the Wi-Fi SSID, key type, and network key to the value of your new network.
    - Set the other values of other elements as needed. Unused values may be deleted. For example, if prefix is not used, the `Prefix` element may be removed from the node.
    - Copy the `WiFiEntryPoint` node once for each network you wish to add to the Directory, then change the Wi-Fi SSID, key type, and network key to the value of each new network.
- **Creating a New File:** If you choose to write your own XML file, ensure that you follow the format and structure given in the table and example above, creating a new `WiFiEntryPoint` node for each network.

When you are finished either editing the sample or creating your own file, save your Directory file as an XML file. It can now be uploaded to the Open Mobile Portal.

Uploading Your Wi-Fi Directory

You upload your Directory file to the Open Mobile Portal for use in Open Mobile profiles.

To upload your Wi-Fi Directory,

1. Log in to the Open Mobile Portal.
2. Click the **Configure** tab.
3. Select **Upload Networks**, then, under **Wi-Fi Directories**, click **Manage**.
4. Click **Import New Directory.**
5. Click **Browse**, and then browse to your XML file.
6. Click **Open**. Your Directory file will be uploaded.

You can now include the Directory in your Open Mobile profiles.

For instructions on how to add your Wi-Fi Directory to your Open Mobile profiles, see the *Open Mobile Portal Administrator Guide*, available on the Open Mobile Portal.

When such a profile is published, your networks will be available to your users within the Open Mobile client. If the profile is already in use, ensure that the profile's users perform an Open Mobile update to receive the updated profile that includes the new networks.

Troubleshooting

If the newly added networks fail to show in your Open Mobile client, you can take the following troubleshooting steps to resolve the issue.

- *XML Format:* Always use an XML editor to confirm that your XML is properly constructed and formatted. Verify that all elements are nested between the appropriate start and end tags. Bear in mind that XML is case-sensitive.

- *Valid Values:* iPass does not validate SSIDs, keys, or other values you set in the Directory. Make sure that element values for all networks are correct, including SSID, key value, and broadcast settings. Incorrect key values, for example, can cause Open Mobile to prompt users for a correct key when attempting to connect.

- *Open Mobile Profile Update:* In order for a given machine to connect to the custom Wi-Fi networks from your Directory file, it must have received the updated Open Mobile profile. Have the user perform an Open Mobile update. (Note that there may be a delay of up to an hour between the time when you update a profile, to when the profile is passed to the Open Mobile update servers and will become available for users.)

- *Network Connectivity:* Confirm that network connectivity is available for the network in question (for example, that there are no DHCP failures or similar network issues.)

- *Basic Wi-Fi Connectivity:* Confirm that Wi-Fi connectivity is available for the machine attempting to connect to the network. The *iPass Open Mobile User Guide* contains a set of Wi-Fi troubleshooting tips that can help pinpoint and resolve Wi-Fi connectivity issues.