

Creating a Mobile Broadband Directory

VERSION 2.0, OCTOBER 2012

Customers and Partners may wish to include their own Mobile Broadband Directory in their Open Mobile client. This allows users to detect and connect to these Mobile Broadband networks without needing enter their credentials.

Networks that have been added properly will be displayed in the Open Mobile client with the iPass logo.

Creating the Directory File

The directory file is in XML format and consists of two main sections: the network. section and the Display Rules section. It is recommended that you use an XML editor to when creating the file to ensure proper XML format.

Sample File

You can use the following sample file as a reference and guideline for creating your directory file, or you can download a sample file from the Open Mobile Portal (**Configuration > Upload Networks > Manage Mobile Broadband Directory > Import New Directory > Download Sample Mobile Broadband Directory file**). The network. section starts at <APNNetworks> and the Display Rules section starts with <DisplayRules>.

```
<?xml version="1.0"?>
<APNDB>
<APNNetworks>!-- AdminAPN.ini equivalent --!
<APNNetwork ID='31017' AllowRoaming='yes' IsPrivate='no' UseIPassCredentials='yes'
PDPType='IP' AuthType='PAP'>
<APNOVERRIDE>
<Country>US</Country>
<NetworkName>Cingular</NetworkName>
<APN>isp.cingular</APN>
<Username>ISPDA@CINGULARGPRS.COM</Username>
<Password>CINGULAR1</Password>
<IPAddress> </IPAddress>
<DNS>
<DNS1>66.209.10.201 </DNS1>
<DNS2>66.209.10.202</DNS2>
</DNS>
<QoS> </QoS>
<Domain></Domain>
<DialString></DialString>
</APNOVERRIDE>
<PRNS>
<PRN NetworkNumber='310380'>
<HEN>yes</HEN>
</PRN>
```

```

</PRNS>
</APNNetwork>
</APNNetworks>
<DisplayRules!-- 3GDisplayRules.ini equivalent --!
<GSM-Networks>
<DisplayRule ID='1' Order='1'>
<NetworkName>
<Operator>Contains</Operator>
<Value>Wireless</Value>
</NetworkName>
<BearerType>
<Operator>EQ</Operator>
<Value>UMTS</Value>
</BearerType>
<NetNumber>
<Operator>EQ</Operator>
<Value>310410</Value>
</NetNumber>
<DisplayFormat> $$var:NetworkNumber$$ : $$var:BearerType$$ : $$var:APN$$
</DisplayFormat>
</DisplayRule>
</GSM-Networks>
<CDMA-Networks>
<DisplayRule ID='1' Order='1'>
<NetworkName>
<Operator>Contains</Operator><Value>EVDO</Value>
</NetworkName>
<BearerType>
<Operator>EQ</Operator>
<Value>EVDO</Value>
</BearerType>
<DisplayFormat>$$var:NetworkName$$ $$var:BearerType$$</DisplayFormat>
</DisplayRule>
</CDMA-Networks>
</DisplayRules>
</APNDB>

```

Network Section

The networks section of the file defines the overrides to the default APN configuration (specified in the APN.ini file), and the preferred roaming networks for a given home network, including whether each of the preferred networks is a HEN (Home Equivalent Network).

Data Element	Data Type	Description
APNNetwork	String	The following attributes define the APN Network: <ul style="list-style-type: none"> • ID=: defines the home network number in single quotes. Required. • AllowRoaming=: either 'yes' (roaming is allowed) or 'no' (roaming is not allowed). Required and the default value is yes. • IsPrivate=: either 'yes' (network is private) or 'no' (network is not private). Required and the default is no. • UseIPassCredentials=: either 'yes' or 'no'. Not required and the default is no. • PDPTType=: either 'IP' or 'PPP'. Not required and the default is IP. • AuthType=: either 'PAP' or 'CHAP'. Not required and the default is PAP.
APN-Override	APN-Override	Please see the APN-Override Table.

Data Element	Data Type	Description
PRNS	PRNS	Please see PRNS Table

APN-Override Table

Data Element	Data Type	Description
Country	String	Country Code (for example, US, FR).
Network Name	String	Name of the network.
APN	String	Access Point Name for the network.
Username	String	Log in username for the network.
Password	String	Log in password for the network.
IPAddress	String	Static IP Address
DNS1	String	Primary DNS name used when connecting to the network.
DNS2	String	Secondary DNS name used when connecting to the network.
QoS	String	Quality of Service level values used when connecting to the network.
Domain	String	Domain name used when connecting to the network.
DialString	String	Dial string used when connecting to the network.

PRNS Table

Data Element	Data Type	Description
PRN	Complex	A preferred Roaming Network that contains one attribute: Network Number: defines the network number as an integer in single quotes (required).
HEN	String	Sub-element of PRN. Either <i>yes</i> (this is the home equivalent network) or <i>no</i> (this is not the home equivalent network).

Display Rules Section

This section will define the display rules (or flexible labeling feature) for translating network names to another display text.

Data Element	Data Type	Description
GSM-Networks	GSM-Networks	Please see GSM-Networks table.
CDMA-Networks	CDMA-Networks	Please see CDMA-Networks table

GSM-Networks Table

Data Element	Data Type	Description
Display Rule	String	Defines the display rule and has the following attributes: <ul style="list-style-type: none"> • ID: contains the unique ID for the rule (required) • Order: specifies the evaluation order of this rule (required)
Network Name	Complex	Specifies the network name that needs to be matched and contains the following sub-elements: <ul style="list-style-type: none"> • Operator: either EQ (equals to) or Contains (used for a substring match) • Value: specifies the network name
Bearer Type	Complex	Specifies the bearer type that needs to be matched and contains the following sub-elements: <ul style="list-style-type: none"> • Operator: either EQ (equals to) or Contains (used for a substring match) • Value: specifies the bearer type
NetNumber	Complex	Specifies the network number that needs to be matched and contains the following sub-elements (GSM only): <ul style="list-style-type: none"> • Operator: either EQ (equals to) or Contains (used for a substring match) • Value: specifies the network number
Display Format	string	Specifies the format of the network name that needs to be displayed; it can be static text or the following macros: <ul style="list-style-type: none"> • \$\$var:NetworkNumber\$\$: represents the network number. GSM only. • \$\$var:APN\$\$: represents the APN string. GSM only. • \$\$var:NetworkName\$\$: represents the current network name. • \$\$var:BearerType\$\$: represents the bearer type of the network.

CDMA-Networks Table

Data Element	Data Type	Description
Display Rule	String	Defines the display rule and has the following attributes: <ul style="list-style-type: none"> • ID: contains the unique ID for the rule (required) • Order: specifies the evaluation order of this rule (required)
Network Name	Complex	Specifies the network name that needs to be matched and contains the following sub-elements: <ul style="list-style-type: none"> • Operator: either EQ (equals to) or Contains (used for a substring match) • Value: specifies the network name
Bearer Type	Complex	Specifies the bearer type that needs to be matched and contains the following

Data Element	Data Type	Description
Display Format	string	sub-elements: <ul style="list-style-type: none"> Operator: either EQ (equals to) or Contains (used for a substring match) Value: specifies the bearer type Specifies the format of the network name that needs to be displayed; it can be static text or the following macros: <ul style="list-style-type: none"> \$\$var:NetworkName\$\$: represents the current network name. \$\$var:BearerType\$\$: represents the bearer type of the network.

Uploading the Network Directory File

After finishing and saving your Directory File, you upload it to the Open Mobile Portal.

To upload the network directory file to the Open Mobile Portal:

1. Log in to the Open Mobile Portal, and then select the **Configuration** tab.
2. Select **Upload Networks**, and then select **Manage** under **Mobile Broadband Directory**.
3. Select **Import New Directory**.
4. Enter the name you would like your directory to have after **Display Name**.
5. Browse to the XML file you created and select the **Upload File** button.

The XML file is checked for valid formatting. An invalidly formatted XML file will fail to upload.

6. Your directory should now appear under **Mobile Broadband Network Directories**

For instructions on how to add the Directory to your Open Mobile profiles, see

http://help.ipass.com/doku.php?id=managing_mobile_broadband_directories.

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.

- **Validate the 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.
- **Update the Open Mobile Profile:** In order for a given device to connect to the custom Mobile Broadband networks from your Directory file, it must have received the updated Open Mobile profile. Have the user perform an Open Mobile update. (Up to an hour may pass 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.)

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