HOWTO - Make an SI file accessible to RadioDNS Hybrid Radio Devices

Last Updated: 2021-01-13 (Removed EPG references / corrected error in troubleshooting)

Summary

The SI file is an XML file that contains meta-data describing a Service Provider and Services. This HOWTO describes how to make it publicly accessible so that RadioDNS Hybrid Radio devices can locate it and extract the meta-data from it.

If you have not yet created an SI file, or you would like to validate an existing SI file, look first at our HOWTO on our SI Management Tool.

If you have not registered your radio station for RadioDNS, look first at our HOWTO on Registering Your Station for RadioDNS Hybrid Radio.

Overview

Your SI file is the file (along with PI files) that make up the meta-data supported by Hybrid Radio Service and Programme Information.

Devices download this file over the internet, using HTTP. That means that any kind of webserver can be used to host and serve an SI file. The file must be served from a URL constructed according to the Hybrid Radio Service and Programme Information and RadioDNS Hybrid Radio Lookup standards.

> **Note:**
>
> Historically, Service and Programme Information was referred to as EPG (Electronic Programme Guide), and this was the term used when the technical standards were created. References to EPG and radioepg are the historic names of what is now Service and Programme Information.

Location of the SI File

You should identify a webserver from which you can serve the SI.xml files. This server should be able to do the following:

- Support the HTTP 1.1 protocol
- Serve the SI file as /radiodns/spi/3.1/SI.xml
- Identify .xml files as MIME type text/xml or application/xml

Popular servers like Microsoft IIS, Apache HTTP Server, nginx can support these requirements.

We refer to this server as your 'SPI Server'.

Save your SI file on the server, and make sure you can successfully load it from a browser by entering the url:

```
http://(SPI server host name)/radiodns/spi/3.1/SI.xml
```

The server should return the SI file, with the HTTP Status Code '200 OK' and content-type: application/xml. You can use a browser like Google Chrome in Developer Mode to check that the response code and mime type are set correctly.

Creating an DNS SRV Record for your SPI Server

So that RadioDNS Hybrid Radio compatible devices can locate your SI file, you need to create a DNS SRV record on your FQDN (Fully Qualified Domain). Your FQDN is the domain you registered for your radio station in RadioDNS.

You need to add the DNS SRV record in this form:

		example:
srv record:	_radioepg._tcp.(FQDN)	_radioepg._tcp.radiostation.com
srv hostname:	(SPI server host name)	spi.radiostation.com
port:	80	80

> **Note:**
>
> You create the DNS SRV record on your FQDN, not with RadioDNS. You will need to log onto your domain management company's control panel, and either add the DNS SRV record using the tool they provide, or raise a support ticket with them to do it manually.

Verifying that the SI can be located by devices

You can manually verify that the SI can be successfully located by carrying out the following steps.

This example uses the 'nslookup' tool, which is provided as a command line tool in Microsoft Windows, Apple Mac OS, and Linux.

Step 1 - Do a RadioDNS lookup using your radio station's information

```
nslookup (frequency).(pi-code).(ecc).fm.radiodns.org
-> CNAME rdns.musicradio.com
```

Step 2 - Do a DNS SRV lookup for your SPI server

```
nslookup -type=SRV _radioepg._tcp.rdns.musicradio.com
-> host = spi.musicradio.com    80
```

Step 3 - Retrieve the SI file

Open a browser and use the addresses:

```
http://spi.musicradio.com/radiodns/spi/3.1/SI.xml
```

Your SI file should be retrieved successfully, confirming that it now accessible to RadioDNS Hybrid Radio compatible devices.

Troubleshooting

I am getting 404, 503 or other errors when trying to retrieve my SI.xml file.

Check that you are using exactly the right URL. Note that the file is 'SI.xml', not 'si.xml', as some webservers are case sensitive.

Check that your SI file is saved in the same folder that your webserver is looking for documents in, and that the webserver has read access to both the folders and the SI.xml file.

I am getting SRV RECORD NOT FOUND when trying to resolve the DNS SRV record names.

Check that you have the leading _ characters in the DNS SRV record (_radioepg._tcp.radiostation.com) and that it's properly attached to your FQDN. Raise a support ticket with your domain host to check.

I'm not seeing anything on the device

Your SI file may be corrupted or not correctly constructed. Check that your SI file's validity by loading it into the SI Management Tool (http://si.radiodns.org)

I'm seeing station names and descriptions on the device, but no logos

Make sure the URLs specified in the SI file for the logos are valid, and returning the logos as PNG or JPG images. Don't make the image filesizes too large (under 50kBytes is recommended).