

Virtual Access

How to Configure 3G Operator Locking on a Virtual Access Router

Issue 0.4

Date 27 March 2013

1	About this document	3
1.1	Scope	3
1.2	Readership	3
1.3	Firmware support.....	3
2	Introduction	4
3	Running a 3G scan on a Virtual Access router	5
4	Configure 3G Operator Lock on a Virtual Access router	6

Copyright 2013 Virtual Access (Irl) Ltd. This material is protected by copyright. No part of this material may be reproduced, distributed, or altered without the written consent of Virtual Access. All rights reserved. Third party trademarks are the property of the third parties.

1 About this document

This document describes how to configure a Virtual Access router to lock to a specific 3G provider.

1.1 Scope

This document is relevant to any Virtual Access router that contains a 3G interface.

This document describes:

- How to run a 3G scan; and
- How to configure a 3G operator lock.

1.2 Readership

This document is for engineers who have previous experience configuring and managing networks.

1.3 Firmware support

This feature is available in firmware versions from:

- 9.08.97
- 10.00.09

2 Introduction

There may be a requirement to lock a Virtual Access router's 3G connection to a certain 3G provider.

This document outlines how to configure and monitor the lock

.

3 Running a 3G scan on a Virtual Access router

Before configuring the router to lock to a specific 3G provider, you must scan the available networks to establish which provider you want to lock to. To perform this scan, login to the router via Telnet or SSH and enter the following command:

```
3G_Eval> modem interface search gsm operators modem-0
```

```

Username : super
Password :
User login successful.

      Serial Number: 00E0C800FE5F
      Hardware Model: GW2040ET--50
      Provider: Virtual Access
      Customer: Virtual Access
      Boot Image: image2 - 9.09.01 Beta 2_ph
      Boot Configuration: config1
      Current Time: 14:03:41, 18 Apr 2012 (up 0 days, 0:05)

3G_Eval> modem interface search gsm operators modem-0
GSM operator search initiated.
```

Figure 1: Output from 3G scan

Note: in this example, we have used modem-0. If the router contains a V.90 modem, then you should use modem-1.

Allow the router several minutes to complete the scan and then enter:

```
>show modem interface gsm operators search result modem-0
```

Output similar to the example below is presented.

```

3G_Eval> modem interface search gsm operators modem-0
GSM operator search initiated.

3G_Eval> show modem interface gsm operators search result modem-0
Operator name      Access      Technology      Operator Code
3                  Allowed    UMTS            27205
3                  Allowed    GSM             27201
3                  Allowed    UMTS            27201
IRL METEOR         Forbidden  UMTS            27203
O2 - IRL           Forbidden  UMTS            27202
IRL METEOR         Forbidden  GSM             27203
O2 - IRL           Forbidden  GSM             27202
```

Figure 2: 3G scan result

When you know the operator code, you can configure the router to that operator.

4 Configure 3G Operator lock on a Virtual Access router

To configure Operator lock, click **Advanced** on the Start page. The Advanced menu page appears.

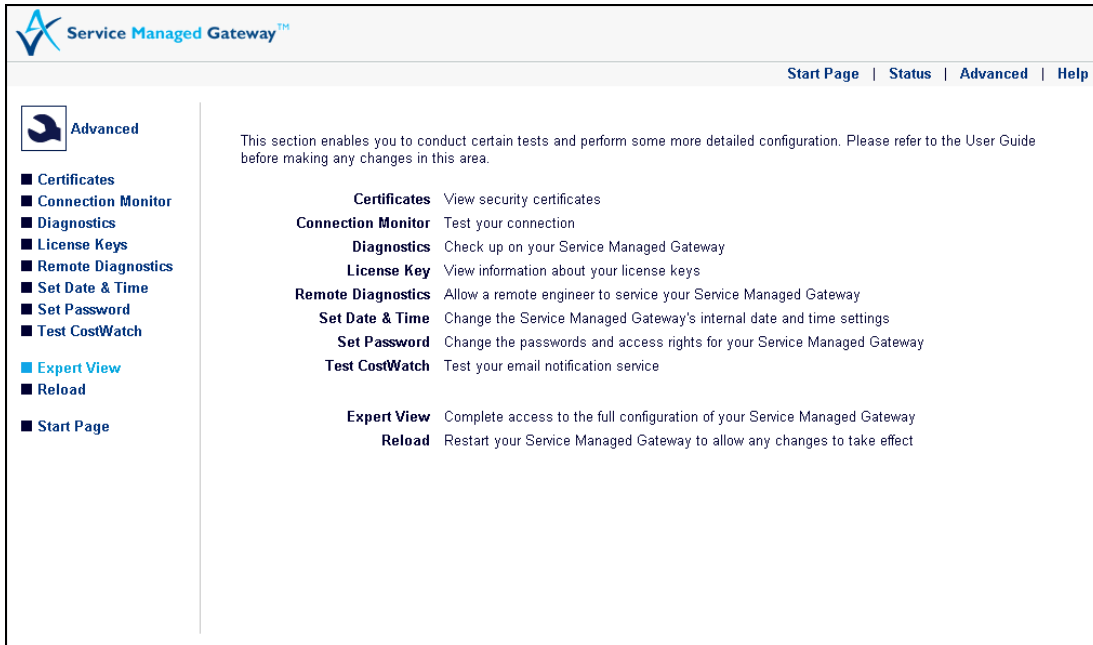


Figure 3: The Advanced menu showing Expert View

In the left-hand menu, click **Expert View**, select **Interface -> modem-0 -> gsm**. The Modem Interface GSM on modem-0 page appears.

Modem Interface GSM on modem-0

APN	<input type="text" value="threeireland.ie"/>
PIN	<input type="text"/>
PUK	<input type="text"/>
Radio Access Technology Mode	Auto ▾
SIM Switch Enabled	yes ▾
Operator Selection Mode	locked ▾
Operator Selection Code	<input type="text" value="27205"/>
Secondary Sim Operator Selection Mode	locked ▾
Secondary Sim Operator Selection Code	<input type="text" value="27202"/>

Figure 4: Modem GSM page

Select the appropriate operator selection modes and codes as described in the table below

Field	Description		Command Line
Operator Selection Mode	automatic	automatic	set Modem Interface GSM Operator selection mode modem-0, [locked preferred automatic]
	preferred	Preferred provider if available	
	Locked	To lock to provider	
Operator Selection Code	Enter relevant provider numeric code		set Modem Interface GSM Operator Selection Code = modem-0,
Secondary SIM Operator Selection Mode	automatic	automatic	set Modem Interface GSM Secondary SIM Operator Selection Mode modem-0, [locked preferred automatic]
	preferred	Preferred provider if available	
	Locked	To lock to provider	
Secondary SIM Operator Selection Code	Enter relevant provider numeric code		set Modem Interface GSM Secondary SIM Operator Selection Code modem-0,

Table 1: Modem interface on GSM fields and their descriptions

When you have made your changes, click **Update**.

Click **Save to flash**.

Click **Save Configuration**.

Follow the prompt to reload the router to update all your changes.