

# **Broadband Technical Support Guide**

This guide will take you through the diagnostic checks you can make prior to contacting the service desk.

## **Tools**

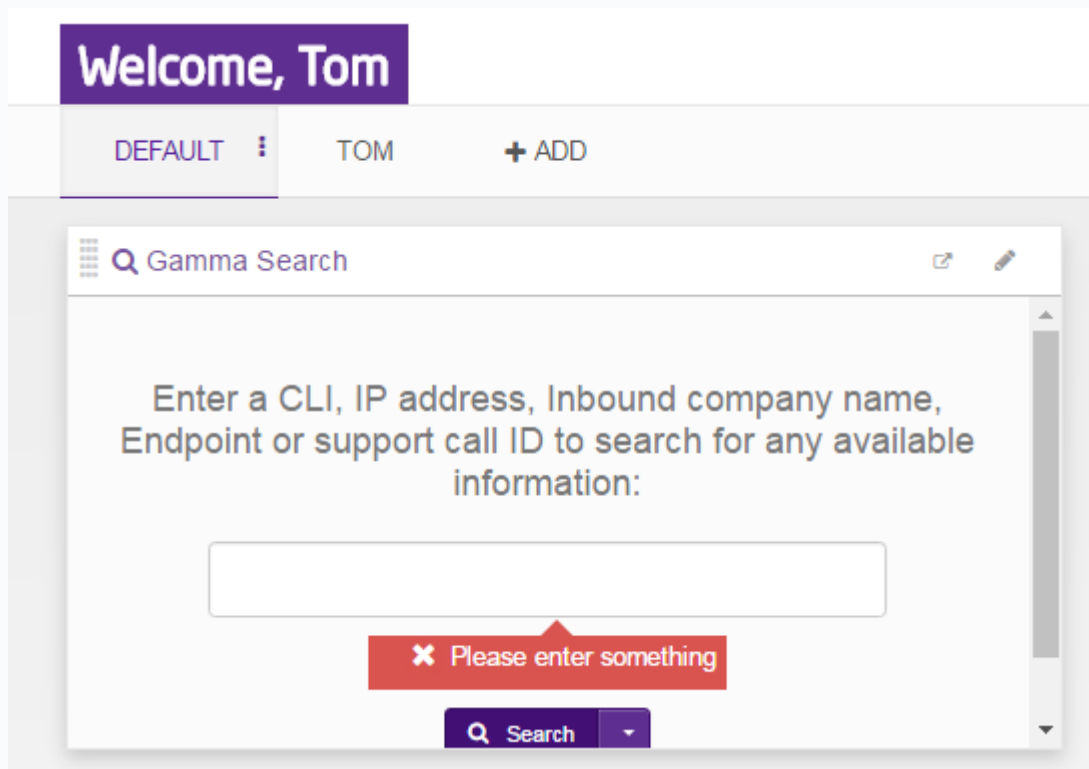
### **Searching Methods**

Within the Gamma portal there are multiple ways of searching to find the circuit you need, you can do this by either using the Gamma search or the Service Management page.

## **Gamma Search**

### **Step 1**

Go to the landing page on the Gamma Portal and look for the widget named "Gamma Search"



## Step 2

Now you can enter your search criteria as stated in in the Gamma Search “Enter a CLI, IP address, inbound company name, Endpoint or support call ID to search for any available information”

## Step 3

After you have searched you will be taken to another page that will show you the results, note there is also an advanced search that will give you some more options if you want to narrow down your search.

## Gamma Search

Welcome to Gamma search! This allows you to search for services and numbers within Gamma. To search simply enter a valid search term into the simple search box and press search. If you want to look at specific numbers or sets of numbers the advanced button will give you a set of options to find specific products, end points and numbers within ranges.

Simple search terms supported:

- CLI: Search for a specific CLI
- IP: Search for an IP related to a Broadband or SIP product
- Inbound company name: Search for an Inbound company by name



Your WLR Numbers can be managed separately via the WLR Portal

[Go to the WLR Portal](#)

Search term: \*



[Search](#)

[Advanced](#)



You searched for the term:92.207.154.232  
We found 1 numbers matching your criteria.

### Broadband- 01616848310 - [Click here for details](#)

#### Number Details

Number:	<input type="text"/>	Product:	<span>Broadband</span>
Partner Account:	XXXX - Gamma Test 1 - 44000169	Broadband Service ID:	<input type="text"/>
IP Address:	<input type="text"/>	Status:	<span>Active</span>
Broadband Product:	FTTC 80:20		

[1 Next](#)

# Broadband Service Management

## Step 1

Go to Provisioning & Management> Data Services> Broadband> Service Management

Within this search table you won't need to enter a partner account but please note that this may result in the search taking slightly longer, you can use any of the fields to search for a circuit based on what information you have, on the below screen shot I we have searched just using the IP Address and the result has shown.

From here you will be able to use the Actions tab to perform a number of related tasks for this circuit.

## Broadband Order & Service Management

Partner Account:

Order ID:

Service ID:

CLI / ONT Ref / ALID:

Broadband Category:

Customer Name:

Site Postcode:

IP Address:

CPE Username:

IP Address Option:

Service Status:

Order Status:

Max Results Returned:

Records Per Page:

Showing 1 to 10 of 104

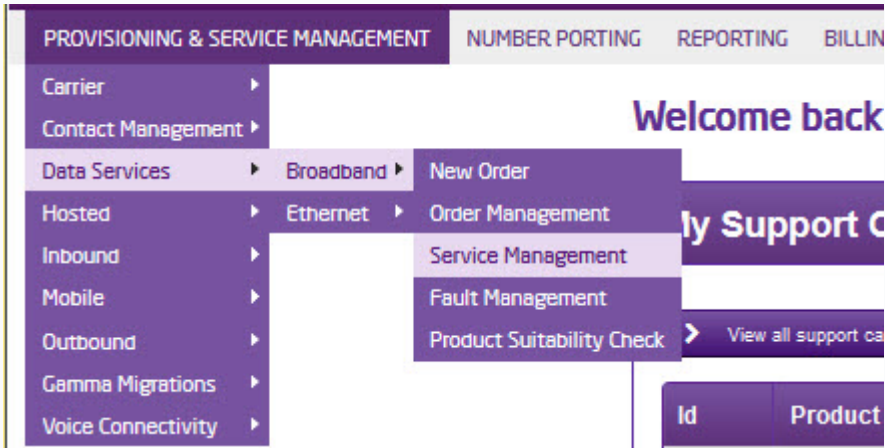
Order ID	Service ID	Channel Partner	Broadband Product	Circuit Status	CLI/ONT Ref/ALID	Customer Name	Postcode	Actions
				Active				

## Session Status

The most basic tool that is available, and one that is used as a part of 1st line triage, is the Session Status tool. You can view the current session status of a customer, whether online or offline.

### Step 1

In the Gamma Portal go to Provisioning > Broadband > Service Management. Find the customer in question using the filters provided and then click on the Service ID link:



## Broadband Service Management

Partner Account:

CLI:  Service ID:

Service Status: (Any) Broadband Category: (Any)

Customer Name:  Site Postcode:

IP Address:  CPE Username:

Records Per Page: User default (10) Max results returned: User default (100)


Showing 1 to 10 of 100

Service ID	Channel Partner	Broadband Product	Service Status	CLI	Customer Name	Postcode	Actions
144610		Gamma Unlimited Business 2+	Active	016		M1	Actions

## Step 2

The below screen is seen. In this case the user is clearly offline, there is no PPP session established with our servers.

## Broadband Service Details

Basic Service Details	
Service ID:	144610
CLI:	01618728937
Broadband Product:	Gamma Unlimited Business 2+
Service Status:	<span>Active</span> 
Session Status:	<span>Offline</span>

Product Details	
Care Level:	Standard Care
Router Model:	Supplied By Customer
DSL Username:	01618728937@b2bdsi
DSL Password:	4NtwzFvcT4
WAN IP Address:	188.66.72.227


  

Service History	
Live Date:	14/04/2016
Changed Date:	25/05/2016 11:20:24
Changed Summary:	New Fault Journey Started
Ceased Date:	
Ceased Type:	

Routed IP Address Details	
Routed IPs:	None
Subnet:	
Subnet Mask:	
Network Address:	
Broadcast Address:	
Address Start:	
Address End:	

Related Order Detail	
Order ID:	79741 <a href="#">View Order</a> 

MAC	
Requested Date:	
MAC:	
Expiry date:	
Supplier Request Status:	

### Step 3

This may be because the order has not completed. Click on the 'View Order' button where you will be able to see the order status of this circuit. You can click the View Service button to return to the previous page.

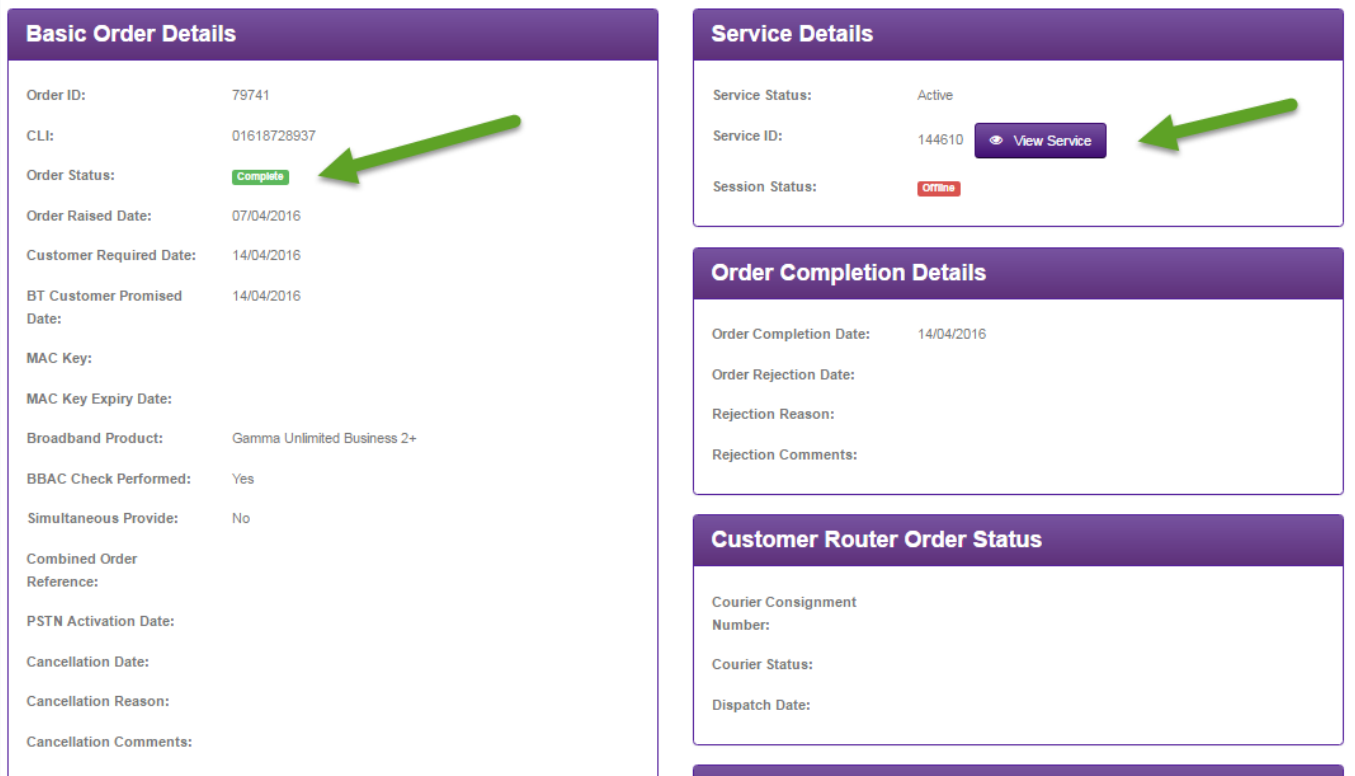
## Broadband Order Details

Basic Order Details	
Order ID:	79741
CLI:	01618728937
Order Status:	<span>Complete</span>
Order Raised Date:	07/04/2016
Customer Required Date:	14/04/2016
BT Customer Promised Date:	14/04/2016
MAC Key:	
MAC Key Expiry Date:	
Broadband Product:	Gamma Unlimited Business 2+
BBAC Check Performed:	Yes
Simultaneous Provide:	No
Combined Order Reference:	
PSTN Activation Date:	
Cancellation Date:	
Cancellation Reason:	
Cancellation Comments:	

Service Details	
Service Status:	Active
Service ID:	144610 <a href="#">View Service</a>
Session Status:	<span>Offline</span>

Order Completion Details	
Order Completion Date:	14/04/2016
Order Rejection Date:	
Rejection Reason:	
Rejection Comments:	

Customer Router Order Status	
Courier Consignment Number:	
Courier Status:	
Dispatch Date:	



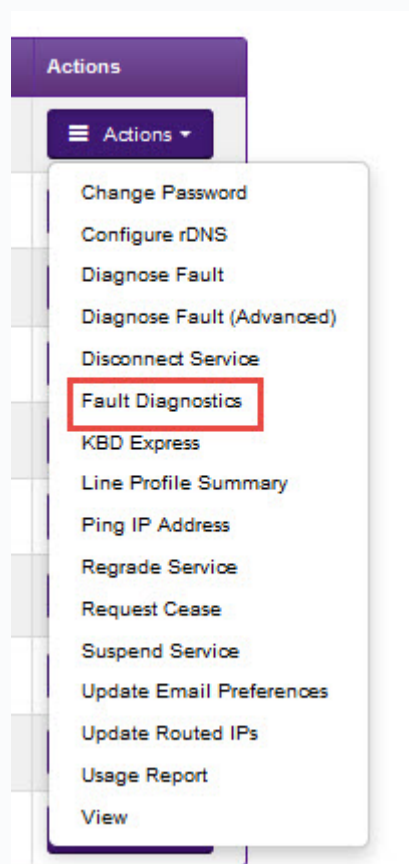
## Fault Diagnostic Tool and RADIUS Reports

This tool allows you to run key diagnostic tests for each of your users. It also provides information on support calls and service requests against a user's broadband and PSTN line (if it is with Gamma). Integrated into this tool are a set of RADIUS reports which you can run for diagnostic purposes.

By automatically running several operations and queries (simultaneously and at speed), providing a set of high-level results returned and displayed in a simple and clear format, this tool helps you quickly identify where a customer reported problem may lie. The tool not only gives you the visibility of all the key RADIUS information you need, but more importantly, with a single click of the mouse it does the same amount of work that a support operative could need up to 3-4 minutes to complete. Where you need to drill down for more information, the tool allows you do this as well. It also shows if there are any support cases open, or cases that have been open in the last 30 days, against not only the DSL service, but also the underlying (Gamma) PSTN line.

To operate the tool, go to the main portal menu tab 'Broadband' >> 'Broadband Service Management'. Now find the subscriber you wish to diagnose. Click on the 'Fault Diagnostics' link at

the bottom right of the screen and this will trigger a series of processes / tests the results of which are then displayed on the screen.



You need to understand the meaning of the following icons to work with the tool.



- Test passed.



- Test failed.



- Service status warning.



- provides helpful information about the test that has been run.

Once you have used this tool a few times you will be able to quickly scan the page, and using the icons, know how to pin-point a potential issue quickly.

## Ping Test

Ping is a network administration utility used to test the 'reachability' of an endpoint and to measure the round-trip time for messages sent from an originating host to an end point. Ping operates by sending Internet Control Message Protocol (ICMP) echo request packets to the target end point and waiting for an ICMP response. In the process it measures the time from transmission to reception (round-trip time) and records any packet loss. The results of the test are provided in a statistical summary of the response packets received, including the minimum, maximum, and the mean round-trip times.

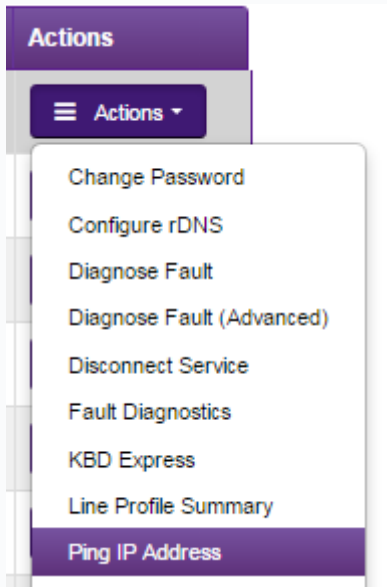
A Ping Test is an excellent tool to determine if there are certain issues with a subscriber's service. It can be used to show if the subscriber's line is reachable and can also be used to indicate potential quality issues such as latency and packet loss. It is not a definitive test, but it should be used in conjunction with the other tools provided.

Please note- For Ping Tests to work the end-point router must be enabled for ICMP\*

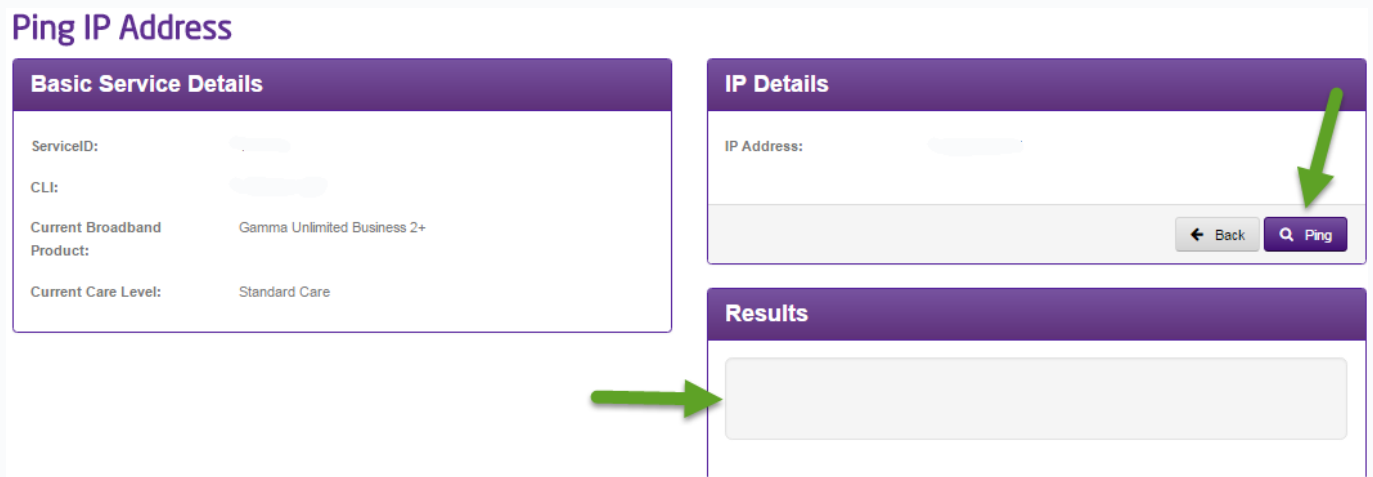
\*If a router is configured in natted then IMCP will be enabled, if it is configured in routed then IMCP will be disabled by default.

The first ping is typically much longer than the subsequent 3, as the first packet in a ping requires an ARP request/response as well.

To operate, please go to the main menu tab 'Data Services' >> 'Broadband' >> 'Broadband Service Management'. You are then required to find the subscriber you wish to test against. Then click on the 'Ping Test' link at the bottom right of the screen. You will be taken to the screen below:



When you get to this page if you click the ping button then the results will show in the results box below.



## First line Checks

Before you contact the support desk please ensure that you have completed the below checks for the relevant fault.

\*\*Please note that these tests only apply to ADSL & VDSL and do not apply to SOGEA and FTTP as there is no voice component of the line to carry these tests out on. Skip these tests SOGEA & FTTP circuits.

## Preliminary WLR Tests

Check the physical phone line. To do this:

- Plug a telephone into the test socket, lift the receiver and listen for any audible noise
- Dial 17070 and press option 2, this will carry out a quiet line test
- Make a phone call and ensure the quality of the call is good
- If you own the line, carry out a WLR line test

## No Dial Tone

- Is the router powered up?
- Are the router and associated cables connected correctly?
- Does rebooting the router resolve the problem?

- Is the underlying telephone line working ok? (see Preliminary WLR tests above)
- Plug in a phone and check that dial tone is present, and that there is no audible noise. (see Preliminary WLR tests above)
- Is the sync light on the router (CD Light)?
- Is the PPP light on the router?



- Confirm if the customer has ever had a working service, if yes when was the fault first experienced? And has anything recently changed on site? i.e. new cabling, other electrical equipment?
- Is the router connected in the master socket? Has the internal wiring been eliminated?
- Does removing all other equipment from the line like analogue phones and fax machines solve the issue? \*

Please note: Gamma strongly recommends that equipment like fax, PDQs & alarms are kept on a separate WLR line from broadband. These products and any others that use high frequency tones will interfere with the connection and cause speed and connectivity issues.

## Drop Calls

- Is the problem experience constantly or only at certain times of the day?
- Does the router lose sync when the calls are dropped? If so, how long for and how does the user get sync back?
- Is the underlying telephone line is working OK? Plug in a phone - is dial tone present and no audible noise? (see Preliminary WLR tests above)
- Is the router filtered properly? Does changing the filter help?
- Is the router connected directly to the master socket? Has local wiring been eliminated?
- Has all other equipment been removed from the PSTN line (phone and fax machines)?
- Are there any sources of electrical or mechanical interference near the router?

## Poor Call Quality

- Describe the symptoms exactly and at which end experienced: crackling or popping; distorted voice; intermittent silence; inaudible voice; echo on the line
- Is the problem experience constantly or only at certain times of the day?
- Is the underlying telephone line is working OK? Plug in a phone - is dial tone present and no audible noise? (see Preliminary WLR tests above)
- Is the router filtered properly? Does changing the filter help?
- Is the router connected directly to the master socket? Has local wiring been eliminated?
- Has all other equipment been removed from the PSTN line (phone and fax machines)?
- Are there any sources of electrical or mechanical interference near the router?
- The following guides are to be used after the first line checks have been completed, by using the contents table at the top of the page you will be able to select - [Back to the top](#)

## Broadband Traffic Priority Policy

# What is Traffic Priority

Gamma provides a high-quality broadband product for the business market. We aim to secure the highest quality of service for business-critical applications during core business hours. Our network identifies and will offer a priority service for business-critical traffic:

<b>Activity/Application</b>	<b>Peak Priority Status: Mon-Fri 08:00-18:00</b>	<b>Off-Peak Priority Status</b>
Assured Services	Level 3	Level 3
Business Services: VPN Email Off-site Backup Database Surveillance Software Markets Presentation Trading Remote Access (inc Terminal Services, SSH etc.)	Level 3	Level 3
Internet Browsing	Level 2	Level 3
Software updates	Level 2	Level 3
Audio Streaming (Excludes VoIP)	Level 1	Level 3
Video Streaming	Level 1	Level 3
Music & Video downloads, P2P etc	Level 1	Level 3

## Priority Level settings:

**Level 3:** Business Critical Products & Services. These services are essential for business operations and continuity, and as such are time sensitive, therefore will always take preference over non time-sensitive or non-business critical services.

**Level 2:** Managed Products & Services. These are services which are not as time sensitive as those in level 3 but will take priority over services which are not critical for the operation or continuity of core business.

**Level 1:** Non-business critical traffic. These services are not classed as business critical or time sensitive.

## Why and how do we do it?

By identifying the different types of traffic in our network we can ensure that both business critical and time sensitive products and services take priority over other traffic. This is done so that we can provide our customers with a premium class of business connectivity during core business hours.

## When is our Traffic Priority Service deployed?

Our traffic priority service will be in use during core business hours - Monday to Friday 08:00 to 18:00. Outside of these times there will be no restrictions.

# Shareband

Gamma provide a wires only broadband product and we manage our traffic accordingly to prioritise business and time critical applications. Shareband deploys 3rd party bespoke CPE and proprietary technology to enhance performance, typically by aggregating two or more ISPs. We cannot be held responsible or support changes and issues with 3rd Party solutions.

## Intermittent Connection

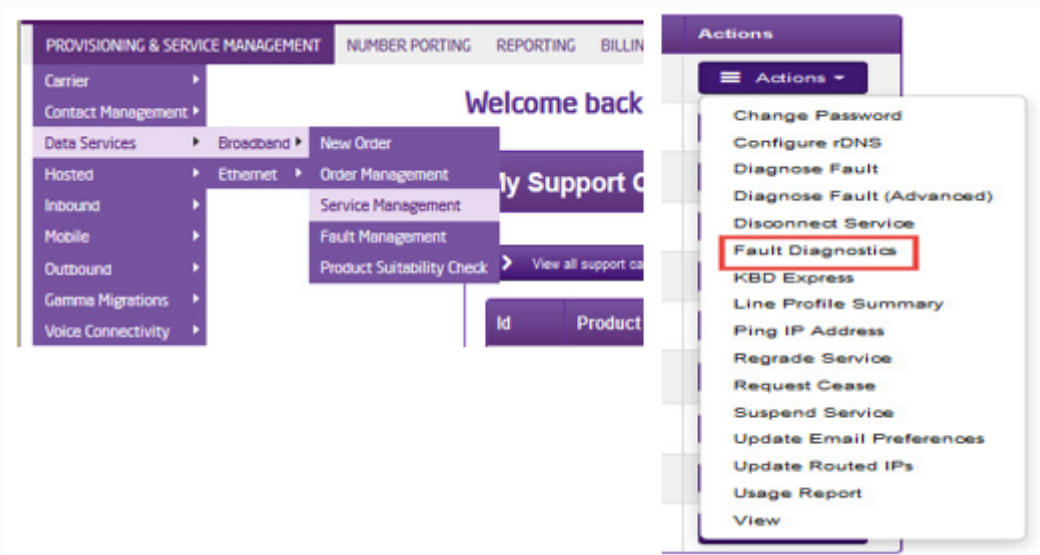
Intermittent connections can be caused by several factors - most commonly these are caused by local equipment, however the fault can lie within BTs network.

Please note:

Before you start diagnostics, it is worth checking if there are any known outages in your area which may affect the service.

### Step 1

From the Gamma Portal, go to "Provisioning and Service Management", "Data Services", "Broadband" and then select "Service Management". Select the relevant account, and search for the affected line using the one of the available search options available. Once you've found the line, using the Actions menu select "Fault Diagnostics".



## Step 2

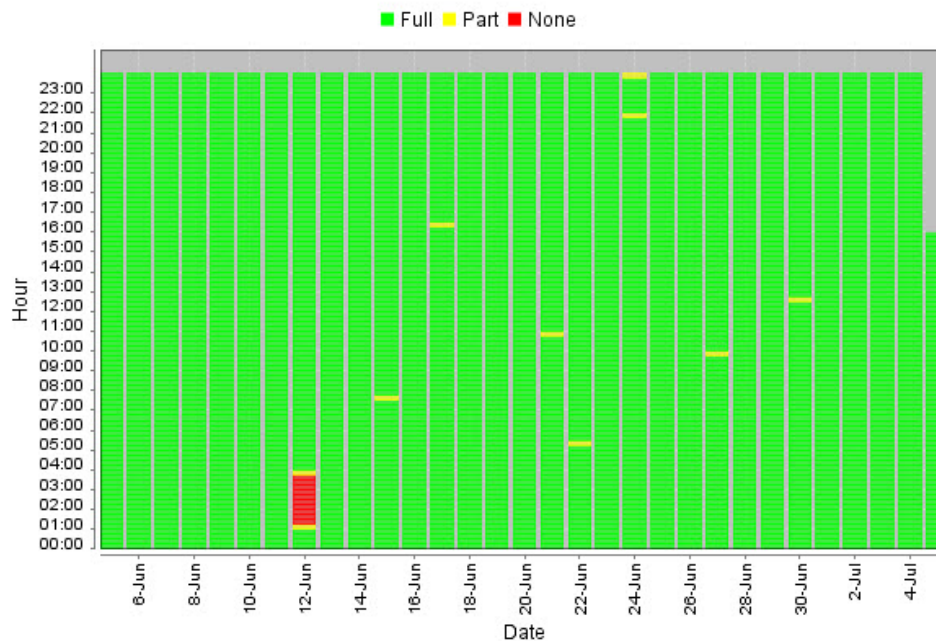
The "Radius Session Map" will be the first screen displayed. If the relevant 15 minute segments are green, this indicates that the line is not dropping connection and therefore the fault lies locally within the customer's network. Please check local equipment such as servers and switches etc.

If the relevant 15 minute segment is yellow or red, this shows that there could be an intermittent fault and you should progress to the below diagnostics.

If the relevant 15 minute segment is red, this show that there could be a fault with the line and you should progress to Step 4.

### Radius Session Status Map (Last 30 days)

The disconnections listed are indicative of the type of disconnection and do not indicate the cause of the disconnection



### Step 3

Look for patterns with the yellow and red segments. You're looking for regular drops at the same time of day, or if the connection is dropping every 'x' number of hours. Do these drops tally up with:

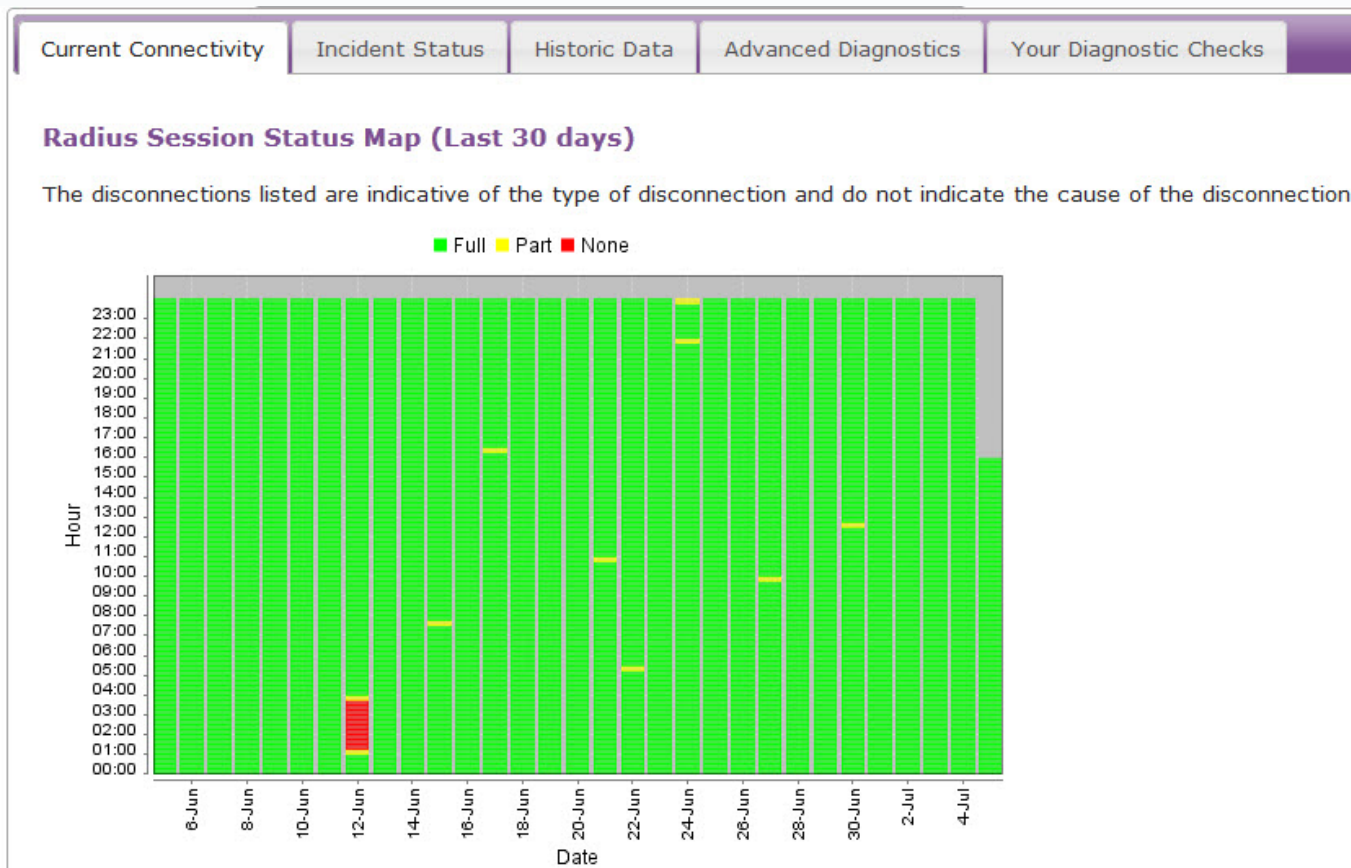
Any local changes (roadworks etc)

Does something get switched on/turned off when the drops occur?

Does the customer have anything electrical local to the router which may be affecting the connectivity such as buzzing power sockets or is the router sat on top of a server etc?

If any of the above are relevant try moving the router as far away from the source as possible to rule out radio frequency interference. Please refer to the REIN and SHINE article which outlines devices

that could be the cause of the intermittent connectivity please click here if not, please progress to Step 4.



#### Step 4 (Only Applicable for ADSL)

Now check the xDSL stats, found under the "Current Connectivity Tab". Scroll all the way to the bottom of the page to see these stats.

We need to ensure that there are no HEC Errors or Errored Seconds. Upstream errors usually indicate a fault with the customer's equipment (run through Step 6-10). Downstream errors could still be problems with the customer's equipment or with the BT line. It is worth doing some equipment checks before raising a fault.

## xDSL Status Check

	Downstream DSL Link Information	Upstream DSL Link Information
Loop Loss	41	23
SNR Margin	9	23
Errored Seconds	0	0
HEC Errors	0	0
Cell Count	352	152
Speed	6464	448
Maximum Stable Rate (KBPS)		5696
Fault Threshold Rate (KBPS)		4556
Mean Time Between Errors Upstream (Seconds)		43200
Mean Time Between Errors Downstream (Seconds)		28800

### Step 5

Check the physical phone line.

**\*\*\*\*Please note that this tests only apply to ADSL & VDSL and do not apply to SOGEA and FTTP as there is no voice component of the line to carry these tests out on. Skip these tests SOGEA & FTTP circuits\*\***

To check the physical phone:

Plug a telephone into the test socket, lift the receiver and listen for any audible noise

Dial 17070 and press option 2, this will carry out a quiet line test

Make a phone call and ensure the quality of the call is good

If all of these checks are OK, proceed to Step 6.

If you hear noise or the line test fails, you should raise a fault with the line provider before further diagnosing any broadband issues.

## Step 6

Power off the router for 30 seconds, then power back on. This can be done by removing the power supply.

You should then monitor your connection for any improvements. To refresh the data, click the "Refresh Supplier Data" at the bottom of the screen. If the service has stabilised the issue has been resolved.

If you are still experiencing an intermittent connection, please proceed to Step 7.





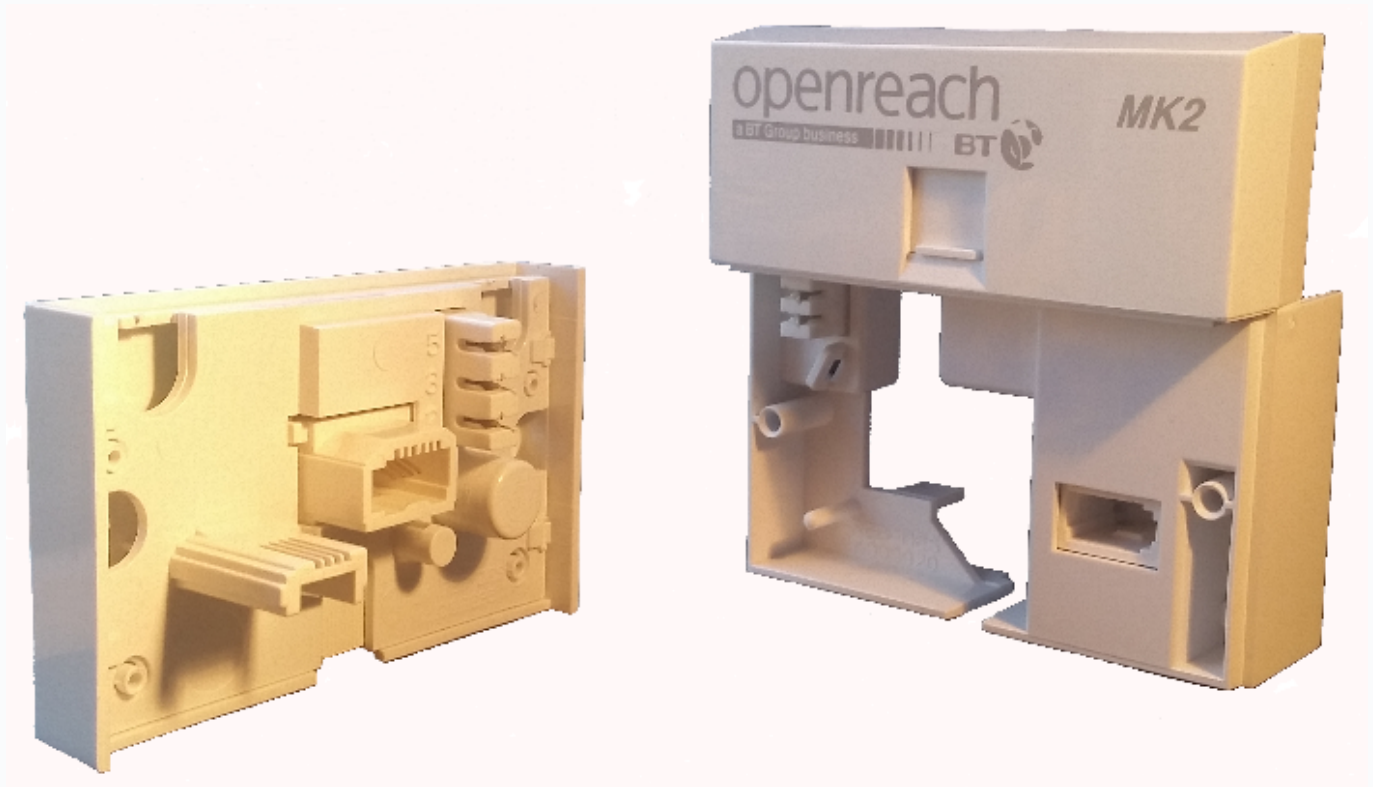
## Step 7

Connect your broadband to the NTE5 test socket and monitor. You should remove the faceplate of your socket and connect your broadband to the socket as shown. This will bypass any internal wiring issues. You should then monitor your connection for any improvements.

If the service has stabilised the issue has been resolved and the problem lies with internal wiring, not the broadband.

If you are still experiencing an intermittent connection please proceed to Step 8.

If you are removing the faceplate of an SSFP for FTTC, you will need to add an external filter as the filter is normally inside the faceplate.



## Step 8

Change the filter.

Gamma routers come with 2 x micro filters, you should switch to the second or use a different one. If the service has stabilised the issue has been resolved and the problem lies with a faulty micro filter.

If you are still experiencing an intermittent connection please proceed to Step 9.



## **Step 9**

Try an alternate router on the connection.

If you have an alternate router, test this on the connection. If this is not possible, proceed to Step 10.

You should then monitor your connection for any improvements. If the service has stabilised and the issue has been resolved, then the fault looks likely to be a router fault.

If you are still experiencing an intermittent connection, please proceed to Step 10.

## **Step 10**

If none of these checks have worked, you'll need to raise a fault on the Advance Diagnostics page.

Select the "Your Diagnostic Checks" tab and follow the drop-down menus.

Current Connectivity Incident Status Historic Data Advanced Diagnostics **Your Diagnostic Checks**

Please note that it is important that these 1st line checks are completed. Please note that by not completing these tests it may elongate the time taken to resolve your issue as we will need to do these with you once the fault is logged.  
Please note that providing incorrect information may result in the fault been incorrectly diagnosed or unnecessarily progressed to a SFI visit. Should your fault progress to an SFI visit then should no fault be found then the visit will be chargeable.

1. Has the customer ever had a working service, and if yes, when was the first fault experienced ?  
Please select... [ ]

2. Select fault type from the drop down list :  
**Intermittent DSL Connection** [ ]

- When the connection drops, does the router need to be rebooted to restore the connection or does the connection come back up on its own?  
[ ]
- Are there any devices other than the broadband router and filter attached to the broadband line? (fax machines, alarm systems, cordless phones etc)  
[ ]
- What kind of environment is the broadband line installed in? (business office, home, portacabin, industrial unit, etc)  
[ ]

3. If you intend to raise a fault, please confirm you have completed the following checks (follow links to test/data)

Line Test completed	Please select... [ ]
Microfilter changed	Please select... [ ]
Router tested from test socket	Please select... [ ]
Checked sync profile for any patterns in the drops	Please select... [ ]

Reset Raise Fault

Please note:

If you already have a fault raised for this service, you'll be unable to raise a new fault.

## Slow Speed Faults

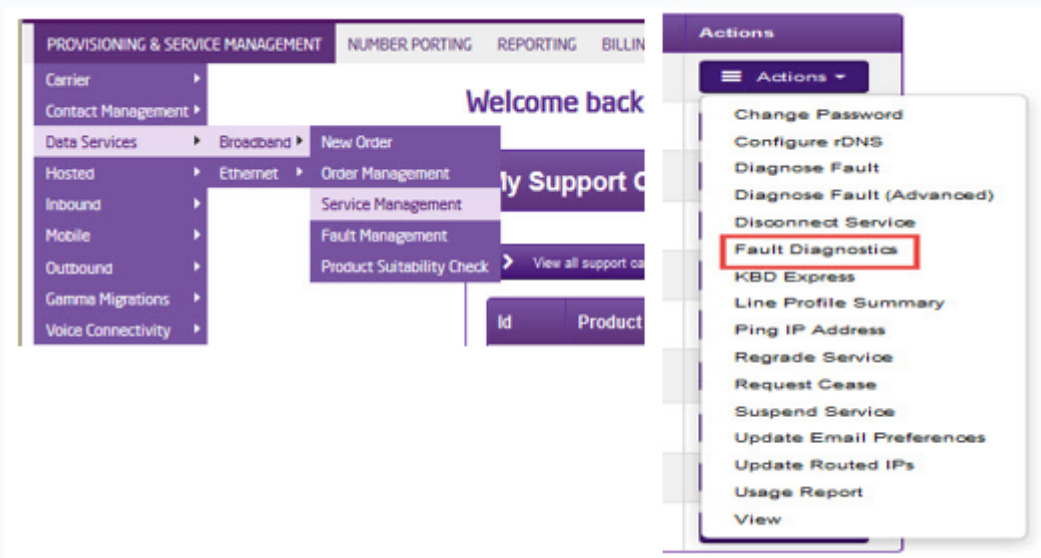
Sometimes what appears to be a slow connection issue may be an intermittent connection; where the router is constantly dropping. In these instances please follow the [Intermittent Connection](#) diagnostics.

Please note:

Before you start diagnostics, it is worth checking if there are any known outages in your area which may affect the service.

## Step 1

From the Gamma Portal, go to “Provisioning and Service Management”, “Data Services”, “Broadband” and then select “Service Management”. Select the relevant account, and search for the affected line using the one of the available search options available. Once you’ve found the line, using the Actions menu select “Fault Diagnostics”.



## Step 2

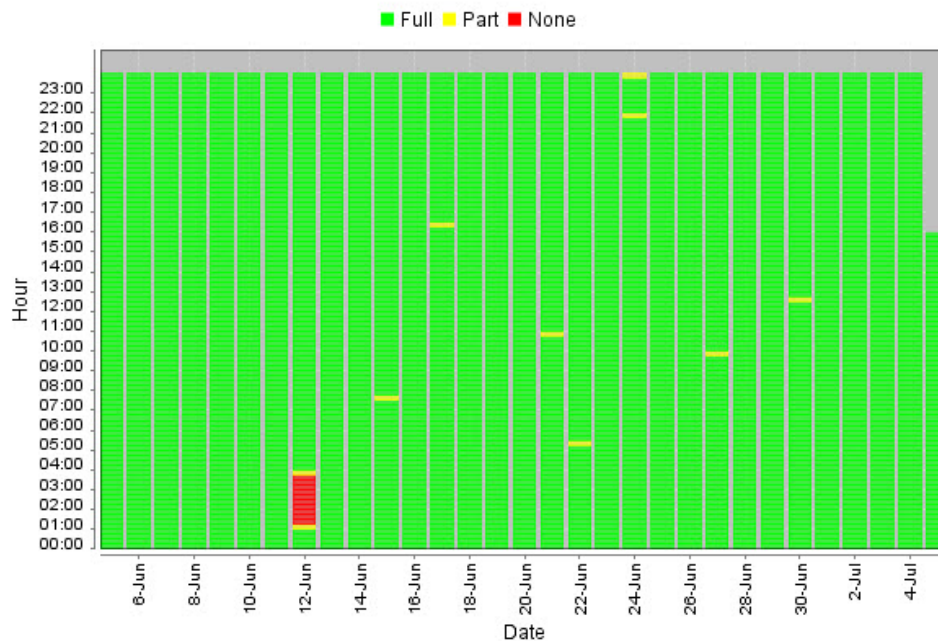
The “Radius Session Map” will be the first screen displayed.

If the connection is stable (green segments) then continue to Step 3.

If you are seeing drops (red segments) throughout this period, then please follow the Intermittent Connection diagnostics.

### Radius Session Status Map (Last 30 days)

The disconnections listed are indicative of the type of disconnection and do not indicate the cause of the disconnection



### Step 3 (Only Applicable for ADSL)

Now check the xDSL stats, found under the "Current Connectivity Tab". Scroll all the way to the bottom of the page to see these stats.

We need to ensure that there are no HEC Errors or Errored Seconds. Upstream errors usually indicate a fault with the customer's equipment (run through steps 7-13). Downstream errors could still be problems with the customer's equipment or with the BT line. It is worth doing some equipment checks before raising a fault.

## xDSL Status Check

	Downstream DSL Link Information	Upstream DSL Link Information
Loop Loss	41	23
SNR Margin	9	23
Errored Seconds	0	0
HEC Errors	0	0
Cell Count	352	152
Speed	6464	448
<b>Maximum Stable Rate (KBPS)</b>		5696
<b>Fault Threshold Rate (KBPS)</b>		4556
<b>Mean Time Between Errors Upstream (Seconds)</b>		43200
<b>Mean Time Between Errors Downstream (Seconds)</b>		28800

## Step 4

Check the Historic Data tab and check the sync speed max/min/average results and compare with the xDSL status. These will indicate if the sync speed is fluctuating. If the sync speed is fluctuating, go to Step 5.

Current Connectivity	Incident Status	Historic Data	Advanced Diagnostics	Your Diagnostic Checks	
<b>Local Access Network Detail</b>					
<b>Prognosis</b>					
Prognosis for a period of 14 days from 27-Jun-2012 to 10-Jul-2012. The circuit was in sync throughout the specified analysis period. Please refer to the other sub-tests within the KSD including the Status Check to confirm whether the circuit is currently in sync and logged on. If the circuit is currently out of sync please carry out internal wiring, filters, modem/router checks with the End User at the master socket where possible. The circuit has no dropping syncs. Please carry out internal wiring, filters and modem/router checks with the End User at the master socket where possible.					
<b>Parameter</b>	<b>Downstream Trends</b>		<b>Upstream Trends</b>		
Line Rate	MIN: 5400 KBPS The line rate has varied by a small amount and frequently on most of the days during the analysis period. The line rate is very high (good). Please see the average value.	MAX: 6464 KBPS AVG: 5987 KBPS	MIN: 448 KBPS The line rate is stable over the period. The line rate is very high (good). Please see the average value.	MAX: 448 KBPS AVG: 448 KBPS	
Noise Margins	MIN: 9 DB The noise margin has varied by a small amount but occasionally on just a few days during the analysis period. This is normal behaviour for a DSL product and is not affecting the service in any way. The Noise margin is within acceptable limits. Please see the average value.	MAX: 14 DB AVG: 11 DB	MIN: 20 DB The noise margin has varied by a small amount but occasionally on just a few days during the analysis period. This is normal behaviour for a DSL product and is not affecting the service in any way. The Noise margin is high. Please see the average value.	MAX: 23 DB AVG: 23 DB	
Transmission Errors	MIN: 113 High during Thu Jul 05 00:00:01 BST 2012 to There have been insignificant errors on the line during almost all parts of the day. This behaviour happens on almost all days during the analysis period. This is normal behaviour for a DSL product and is not affecting the service in any way.	MAX: 3600 AVG: 3391	MIN: 592 High during Thu Jul 05 00:00:01 BST 2012 to Multiple There have been insignificant errors on the line during almost all parts of the day. This behaviour happens on almost all days during the analysis period. This is normal behaviour for a DSL product and is not affecting the service in any way.	MAX: 3600 AVG: 3547	
Line Attenuation	MIN: 41 DB The loop length is quite long, so errors on this line are expected.	MAX: 41 DB AVG: 41 DB	MIN: 23 DB The loop length is quite long, so errors on this line are expected.	MAX: 23 DB AVG: 23 DB	
<b>Parameter</b>	<b>Trend</b>				
Uptime	MIN: 900 s This circuit is up for an average 86.0% of the time.	MAX: 86400 s AVG: 74110 s			
<b>Parameter</b>	<b>Trend</b>				
Initialisation	MIN: 0 The circuit is very stable and no initialisations occur.	MAX: 1 AVG: 0			
<b>Line Profile</b>					
BRAS Profile Name	adu5000	BIP Update Time	2012-07-10T08:39:15+01:00	Sync Rate	5696
Max Downstream Line Requested		Max Upstream Line Requested		Sync Timestamp	2012-07-10T08:46:22+01:00
Headline Rate (Downstream Line Rate)	5000	Upstream Line Rate	448	Traffic Weighting	
Downstream Maximum Stable Rate	5696	Upstream Maximum Stable Rate	0	Stability Option (Service Option)	1
Downstream Fault Threshold Rate	4556	Upstream Fault Threshold Rate		Interleaved	Auto
Downstream Target Margin	0	Upstream Target Margin	0		

[Return To Service Details](#)

[Fault Diagnostics Guidelines-Help](#)

[Refresh Supplier Data](#)

## Step 5

Run speed tests to identify if the connection is facing throughput issues. Please run the test on the following [speedtest.btwholesale.com](http://speedtest.btwholesale.com) and [speedtest.gammatelecom.com](http://speedtest.gammatelecom.com)\*

\* [speedtest.gammatelecom.com/ethernettest](http://speedtest.gammatelecom.com/ethernettest) (to be used for FTTC)

The full test needs to be run via the further diagnostics option entering the CLI. If this is not fully completed then we are unable to raise a speed fault on the line with our supplier.

## Step 6

Please note:

All checks should be run with everything removed from the router with only a single PC connected via ethernet. You should also disconnect all devices connected via wireless. This is to eliminate the possibility of malware or viruses or software using the internet connection which would affect the lines true throughput (for example torrents).

Check the physical phone line.

**\*\*Please note that this test only applies to ADSL & VDSL and do not apply to SOGEA and FTTP as there is no voice component of the line to carry these tests out on. Skip these tests SOGEA & FTTP circuits.**

To check the phoneline:

- Plug a telephone into the test socket, lift the receiver and listen for any audible noise
- Dial 17070 and press option 2, this will carry out a quiet line test
- Make a phone call and ensure the quality of the call is good
- If you own the line, carry out a WLR line test

If all of these checks are OK, proceed to Step 7.

- If you hear noise or the line test fails, you should raise a fault with the line provider before further diagnosing any broadband issues

## **Step 7**

Power off the router for 30 seconds, then power back on. This can be done by removing the power supply.

You should then monitor your connection for any improvements. To refresh the data, click the "Refresh Supplier Data" at the bottom of the screen. If the service has stabilised the issue has been resolved.

If you are still experiencing slow speed please proceed to Step 8.

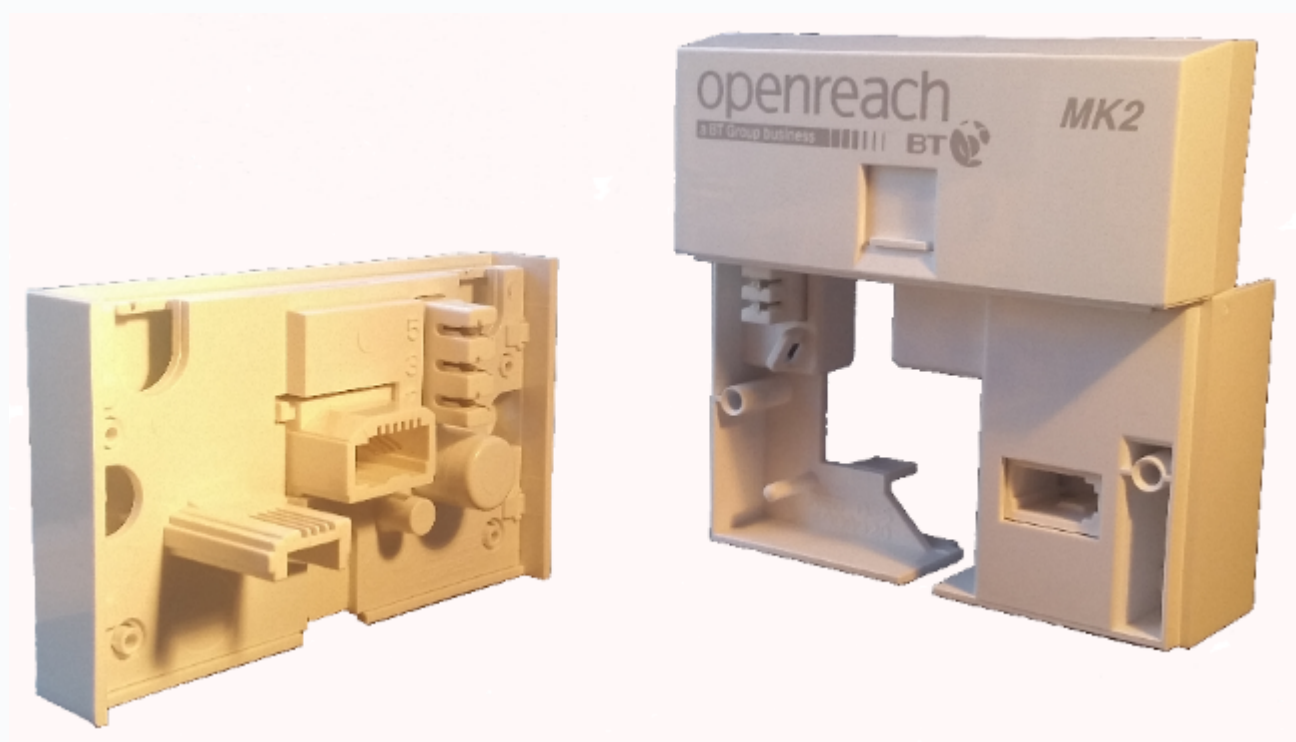


## Step 8

Connect your broadband to the NTE5 test socket and monitor. You should remove the faceplate of your socket and connect your broadband to the socket as shown. This will bypass any internal wiring issues. You should then monitor your connection for any improvements.

If the service has stabilised the issue has been resolved and the problem lies with internal wiring, not the broadband.

If you are still experiencing slow speed please proceed to Step 9.



## Step 9

Change the filter, Gamma routers come with 2 x micro filters, you should switch to the second or use a different one.

If the service has stabilised the issue has been resolved and the problem lies with a faulty micro filter.

If you are still experiencing slow speed please proceed to Step 10.



## **Step 10**

Try an alternate router on the connection. If you have an alternate router, test this on the connection. If this is not possible, proceed to Step 12.

You should then monitor your connection for any improvements. If the service has stabilised the issue has been resolved and the problem lies with a faulty router.

If you are still experiencing an intermittent connection please proceed to Step 11.

## **Step 11**

If none of these checks have worked, you'll need to raise a fault on the Advance Diagnostics page.

Please note:

If you already have a fault raised for this service, you'll be unable to raise a new fault.

Select the "Your Diagnostic Checks" tab and follow the drop down menus.

Current Connectivity Incident Status Historic Data Advanced Diagnostics **Your Diagnostic Checks**

Please note that it is important that these 1st line checks are completed. Please note that by not completing these tests it may elongate the time taken to resolve your issue as we will need to do these with you once the fault is logged.  
Please note that providing incorrect information may result in the fault being incorrectly diagnosed or unnecessarily progressed to a SFI visit. Should your fault progress to an SFI visit then should no fault be found then the visit will be chargeable.

1. Has the customer ever had a working service, and if yes, when was the first fault experienced ?  
Please select...

2. Select fault type from the drop down list :  
**Intermittent DSL Connection**

- When the connection drops, does the router need to be rebooted to restore the connection or does the connection come back up on its own?
- Are there any devices other than the broadband router and filter attached to the broadband line? (fax machines, alarm systems, cordless phones etc)
- What kind of environment is the broadband line installed in? (business office, home, portacabin, industrial unit, etc)

3. If you intend to raise a fault, please confirm you have completed the following checks (follow links to test/data)

Line Test completed	Please select... <input type="text"/>
Microfilter changed	Please select... <input type="text"/>
Router tested from test socket	Please select... <input type="text"/>
Checked sync profile for any patterns in the drops	Please select... <input type="text"/>

## No Web Pages

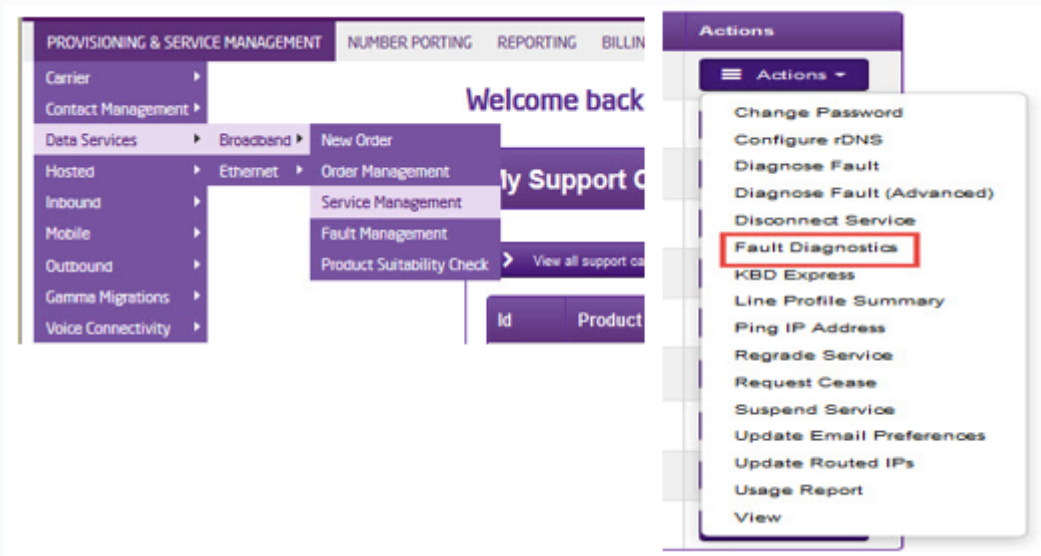
If you are unable to load up any web pages, you may still have a connection to your Broadband. Follow the below steps to help with identifying the fault.

Please note:

Before you start diagnostics, it is worth checking if there are any known outages in your area which may affect the service.

## Step 1

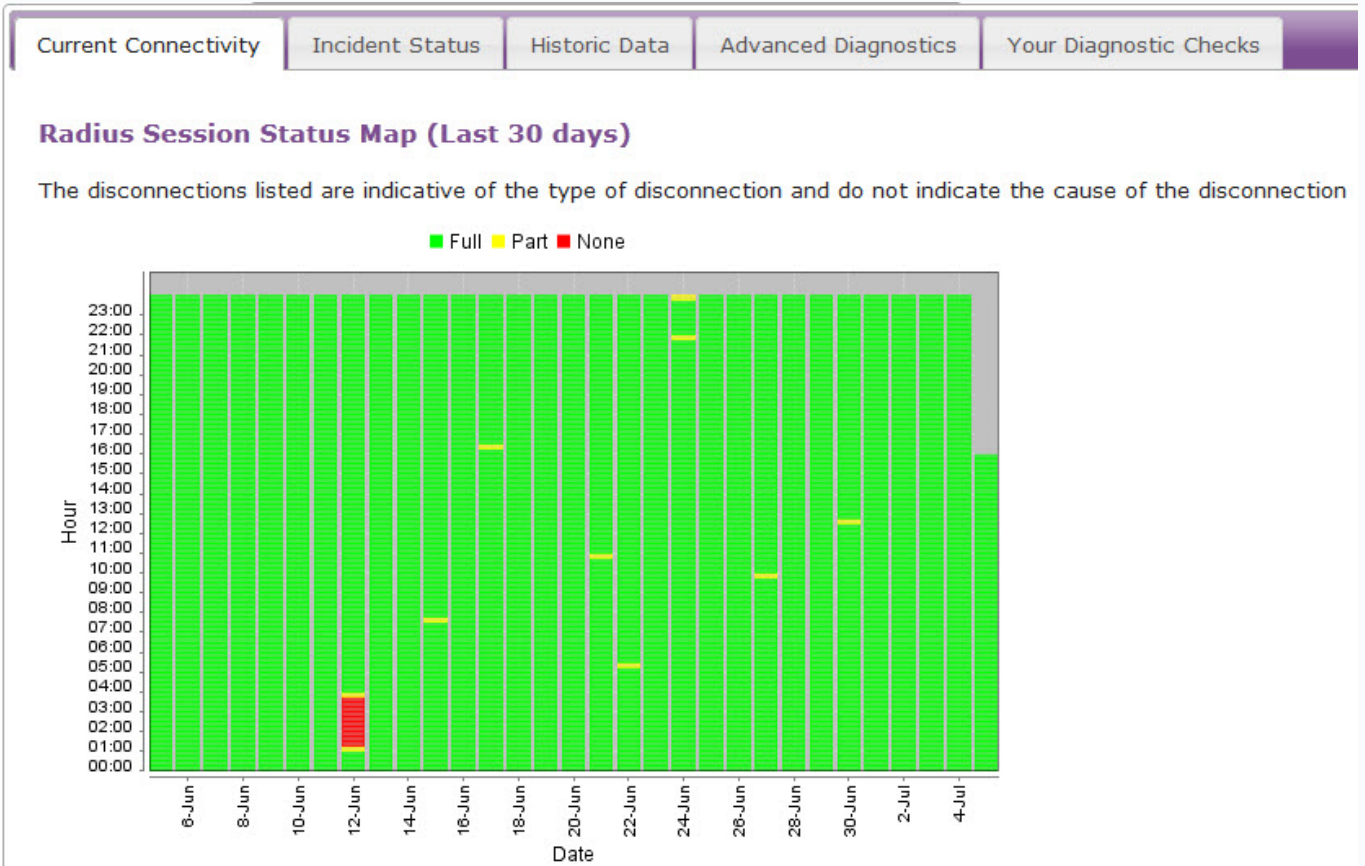
From the Gamma Portal, go to “Provisioning and Service Management”, “Data Services”, “Broadband” and then select “Service Management”. Select the relevant account, and search for the affected line using the CLI. Once you’ve pressed search, using the Actions menu select “Fault Diagnostics”.



## Step 2

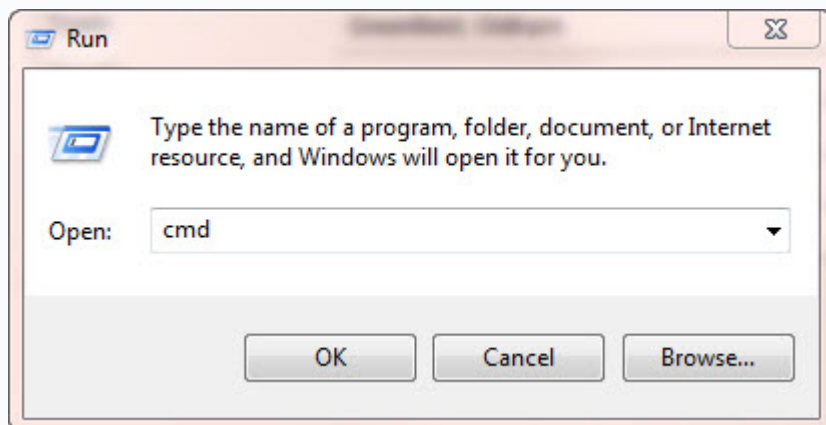
If the Radius Session Map is showing red in the affected 15 minute segment, please go refer to the No Authentication trouble-shooter.

If the Radius Session Map is showing green in the affected 15 minute segments, this is likely to be a local issue.



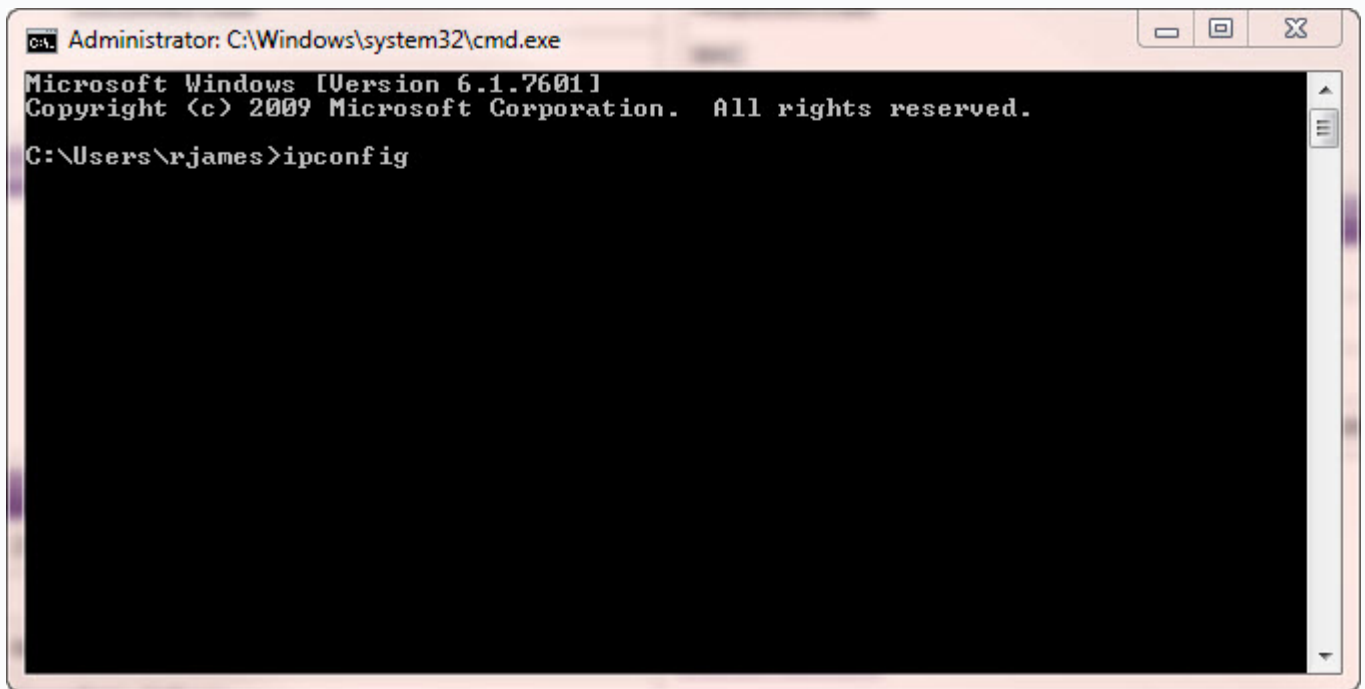
### Step 3

We need to do some tests on the local equipment now. Go to “Start” on your PC and then “Run”. Within the text box of the “Run” facility, type in “cmd” and press “OK”. This can also be achieved by going to **Start > All Programs > Accessories > Command Prompt**



#### Step 4

Type in "ipconfig" and press enter.



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\rjames>ipconfig
```

#### Step 5

Look for the Default Gateway address and make a note of this.

```
Administrator: C:\Windows\system32\cmd.exe
Connection-specific DNS Suffix . . . :
Link-local IPv6 Address . . . . . :
IPv4 Address. . . . . :
Subnet Mask . . . . . :
Default Gateway . . . . . : 10.0.71.254
Tunnel adapter isatap. :
Media State . . . . . :
Connection-specific DNS Suffix . . :
Tunnel adapter isatap.gammatelecom.com:
Media State . . . . . :
Connection-specific DNS Suffix . . :
Tunnel adapter Teredo Tunneling Pseudo-Interface:
Media State . . . . . :
Connection-specific DNS Suffix . . :
C:\Users\rjames>
```

## Step 6

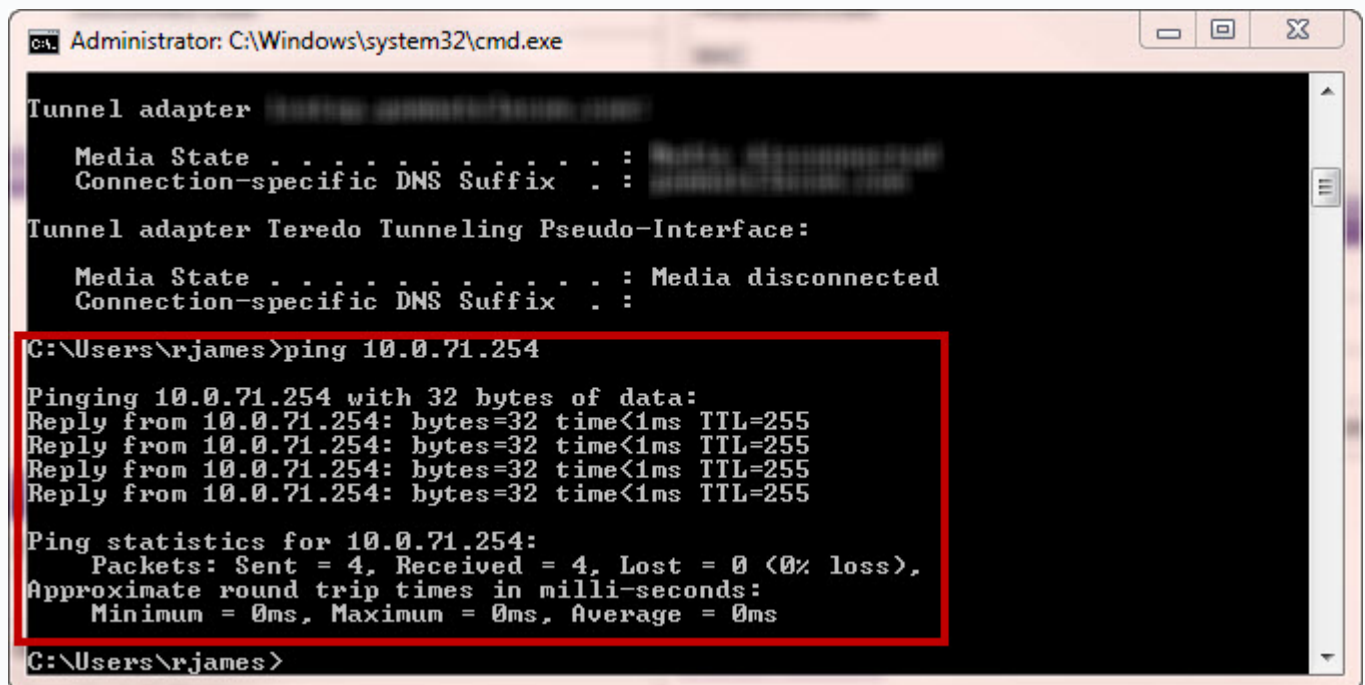
Type in “ping” followed by a space, then the Default Gateway address and press enter.

```
Administrator: C:\Windows\system32\cmd.exe
Connection-specific DNS Suffix . . . :
Link-local IPv6 Address . . . . . :
IPv4 Address. . . . . :
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 10.0.71.254
Tunnel adapter isatap. :
Media State . . . . . :
Connection-specific DNS Suffix . . :
Tunnel adapter isatap.gammatelecom.com:
Media State . . . . . :
Connection-specific DNS Suffix . . :
Tunnel adapter Teredo Tunneling Pseudo-Interface:
Media State . . . . . :
Connection-specific DNS Suffix . . :
C:\Users\rjames>ping 10.0.71.254
```

## Step 7

If you get replies from the ping (like in the screen shot across), this means that you can connect to the router and you should proceed to Step 9.

If you get no results from the router (which look like the screen shot in Step 10), this means that you have no connection to the router and would need to contact your IT Administrator.



```
Administrator: C:\Windows\system32\cmd.exe

Tunnel adapter {...}
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : {...}

Tunnel adapter Teredo Tunneling Pseudo-Interface:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :

C:\Users\rjames>ping 10.0.71.254

Pinging 10.0.71.254 with 32 bytes of data:
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255

Ping statistics for 10.0.71.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\rjames>
```

## Step 8

If you get a reply from the router ping, you would need to ping a live web address. We recommend sending a ping to Google's address.

To do this, type in "ping 8.8.8.8" and press enter.

```
Administrator: C:\Windows\system32\cmd.exe

Tunnel adapter {...}
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . : {...}

Tunnel adapter Teredo Tunneling Pseudo-Interface:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . :

C:\Users\rjames>ping 10.0.71.254

Pinging 10.0.71.254 with 32 bytes of data:
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255

Ping statistics for 10.0.71.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\rjames>ping 8.8.8.8
```

### Step 9

If you are unable to get a reply from the Google DNS ping (example in the screen shot across), this would suggest that it is a local issue (router/firewall) and you would need to speak to your IT Administrator regarding this.

If you have got a ping result back from Google (which looks like the screen shot in Step 9), you have access to the Internet and need to do some more tests. Please see Step 10.

```
Administrator: C:\Windows\system32\cmd.exe
C:\Users\rjames>ping 10.0.71.254

Pinging 10.0.71.254 with 32 bytes of data:
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255

Ping statistics for 10.0.71.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\rjames>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\rjames>
```

## Step 10

We now need to ping a web address, again we recommend google. In the command prompt, type in "ping google.co.uk".

If you get no results back, this would suggest a DNS error. You would need to try adding DNS manually on the router or the customers PC, or speak to your IT Administrator about this.

If you have got results back, then you should be OK to view web pages. If you are still unable to view web pages, then this could be a Browser error or a proxy may be enabled, and again you'd need to speak to your IT Administrator.

```
Administrator: C:\Windows\system32\cmd.exe
C:\Users\rjames>ping 10.0.71.254

Pinging 10.0.71.254 with 32 bytes of data:
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255
Reply from 10.0.71.254: bytes=32 time<1ms TTL=255

Ping statistics for 10.0.71.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\rjames>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\rjames>
```

## No Sync Fault

No Sync faults can be identified by checking the lights on the customer's router. Generally the Broadband/DSL light should be solid, if this is not the case then the line doesn't have sync. Please see below for a screenshot of the router lights.

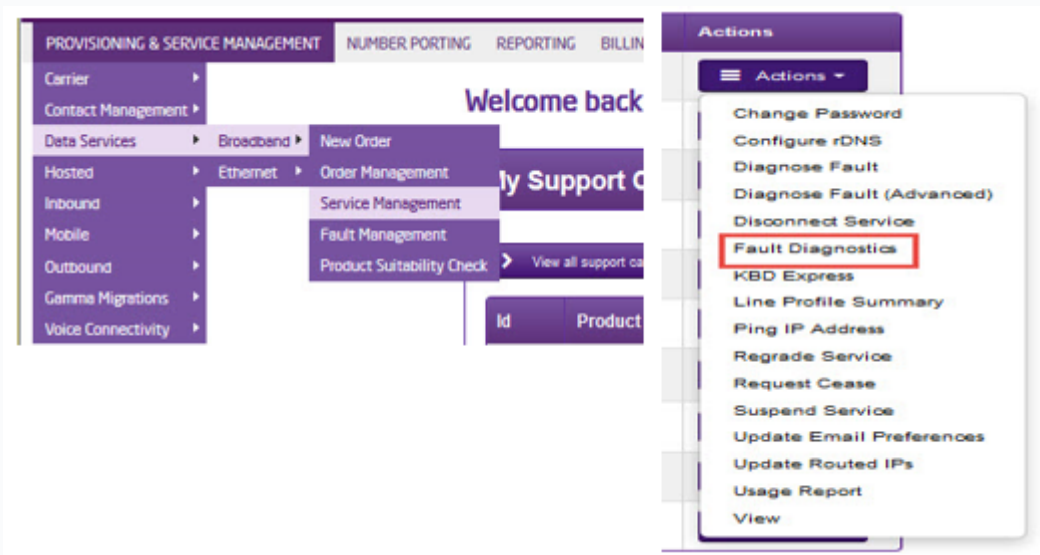
Please note:

Before you start diagnostics, it is worth checking if there are any known outages in your area which may affect the service.



## Step 1

From the Gamma Portal, go to "Provisioning and Service Management", "Data Services", "Broadband" and then select "Service Management". Select the relevant account, and search for the affected line using the one of the available search options available. Once you've found the line, using the Actions menu select "Fault Diagnostics".



## Step 2

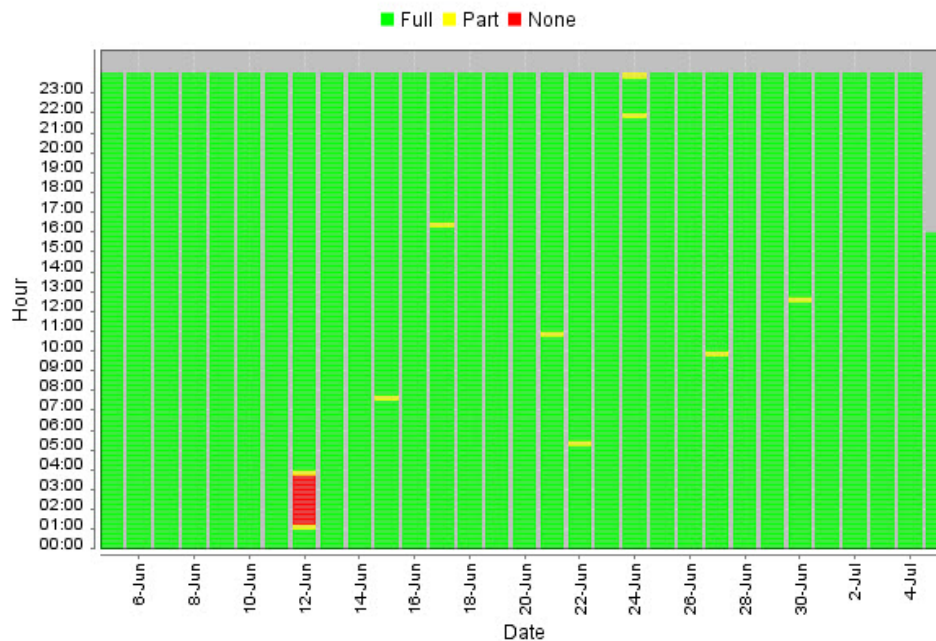
Check the Radius Session Map to see if there has been any connection in the 15 minute segment that is affected. A red segment means that there is no service.

If the segment is green, the router and the service is showing online the connection is active therefore please follow no web pages diagnostics by clicking [here](#).

If the segment is red, continue to Step 3.

### Radius Session Status Map (Last 30 days)

The disconnections listed are indicative of the type of disconnection and do not indicate the cause of the disconnection



### Step 3

Check xDSL Status Check. If the customer is facing a no sync fault there will be no results shown here. Go to Step 4, If they do have sync (so xDSL status check shows zeros in the results). Ensure that the sync light on the router is not lit. If this is not lit please follow the below diagnostics to Step 4

If they do have sync and the router shows this also, they are facing a no authentication fault please use the no authentication diagnostics by clicking [here](#).

### Step 4

Check the physical phone line.

**\*\*Please note that these tests only apply to ADSL & VDSL and do not apply to SOGEA and FTTP as there is no voice component of the line to carry these tests out on. Skip these tests SOGEA & FTTP circuits.**

To check the physical phoneline:

- Plug a telephone into the test socket, lift the receiver and listen for any audible noise
- Dial 17070 and press option 2, this will carry out a quiet line test
- Make a phone call and ensure the quality of the call is good
- If you own the line, carry out a WLR line test

If all of these checks are OK, proceed to Step 5.

If you hear noise or the line test fails, you should raise a fault with the line provider before further diagnosing any broadband issues.

## **Step 5**

Power off the router for 30 seconds, then power back on. This can be done removing the power supply.

You should then monitor your connection to see if the router obtains a connection. If the service has

obtained a connection the issue has been resolved.

If you are still experiencing no sync connection, please proceed to Step 6.

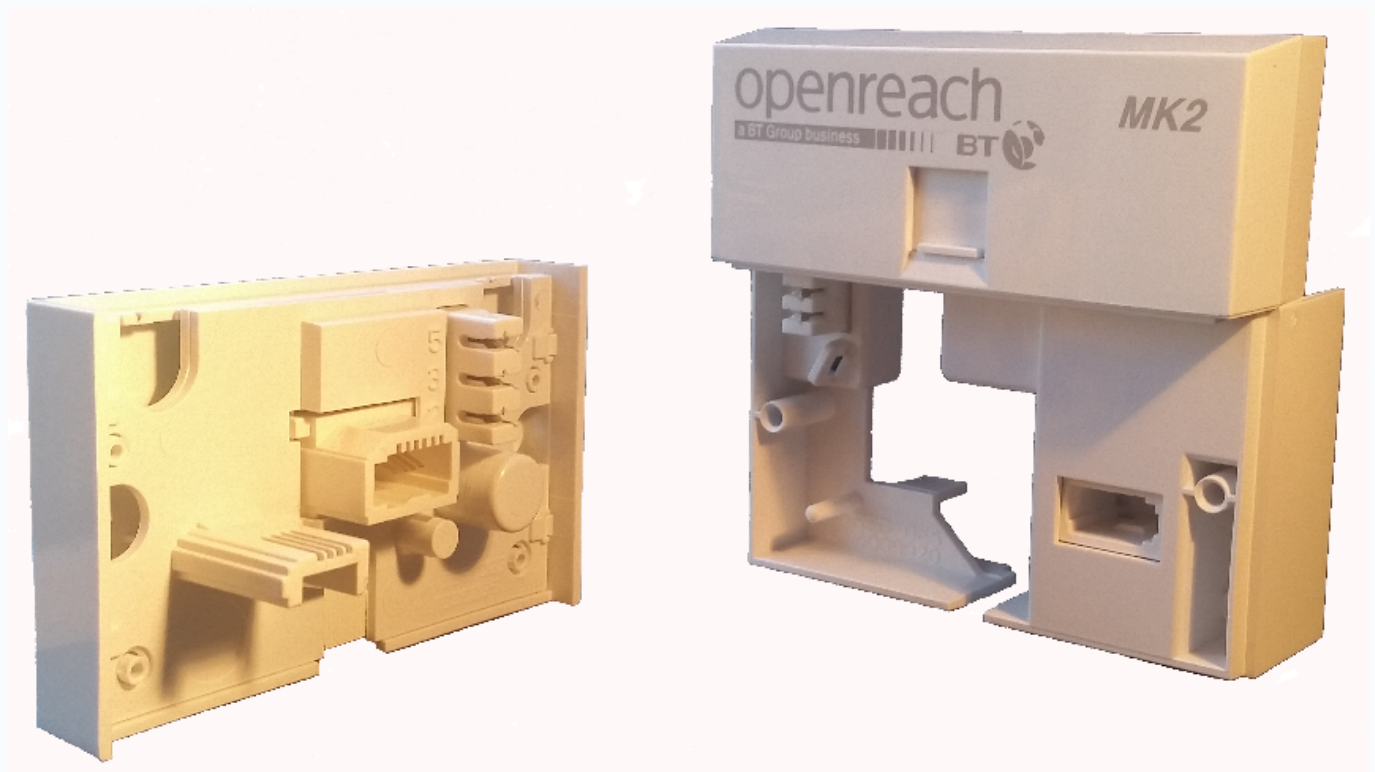


**Step 6**

Connect your router to the NTE5 test socket and monitor. You should remove the faceplate of your socket and connect your router to the socket as shown. This will bypass any internal wiring issues. You should then monitor your connection for any improvements.

If the service has obtained a connection the issue has been resolved, then the problem lies with the internal wiring, not the broadband.

If you are still experiencing no sync connection please proceed to Step 7.



## Step 7

Change the filter, Gamma routers come with 2 x filters, you should switch to the second or use a different one.

If the service has obtained a connection the issue has been resolved and the problem lies with a faulty filter.

If you are still experiencing no sync connection please proceed to Step 8



### **Step 8**

Try an alternate router on the connection, If you have an alternate router, test this on the connection. If this is not possible, proceed to Step 10.

You should then monitor your connection for any improvements. If the service has obtained a connection the issue has been resolved, then the problem lies with a faulty router.

If you are still experiencing no sync connection, please proceed to Step 9.

### **Step 9**

If none of these checks have worked, you'll need to raise a fault on the Advance Diagnostics page.

Select the "Your Diagnostic Checks" tab and follow the drop down menus.

Please note:

If you already have a fault raised for this service, you'll be unable to raise a new fault.

Current Connectivity Incident Status Historic Data Advanced Diagnostics **Your Diagnostic Checks**

Please note that it is important that these 1st line checks are completed. Please note that by not completing these tests it may elongate the time taken to resolve your issue as we will need to do these with you once the fault is logged.  
Please note that providing incorrect information may result in the fault being incorrectly diagnosed or unnecessarily progressed to a SFI visit. Should your fault progress to an SFI visit then should no fault be found then the visit will be chargeable.

1. Has the customer ever had a working service, and if yes, when was the first fault experienced ?  
Please select...

2. Select fault type from the drop down list :  
**No connection / Sync Fault**

- Is the 'sync' light on the router constantly lit (not off or flashing)? (this light may also be labeled 'dsl', 'broadband', 'line' or 'I')
- If the 'sync' light on the router is constantly lit, is the 'auth' light on the router also constantly lit (not off or flashing)? (this light may also be labelled 'internet', 'acct', 'authentication' or with a picture of a globe)

3. If you intend to raise a fault, please confirm you have completed the following checks (follow links to test/data)

Line Test completed

Microfilter changed

Router tested from test socket

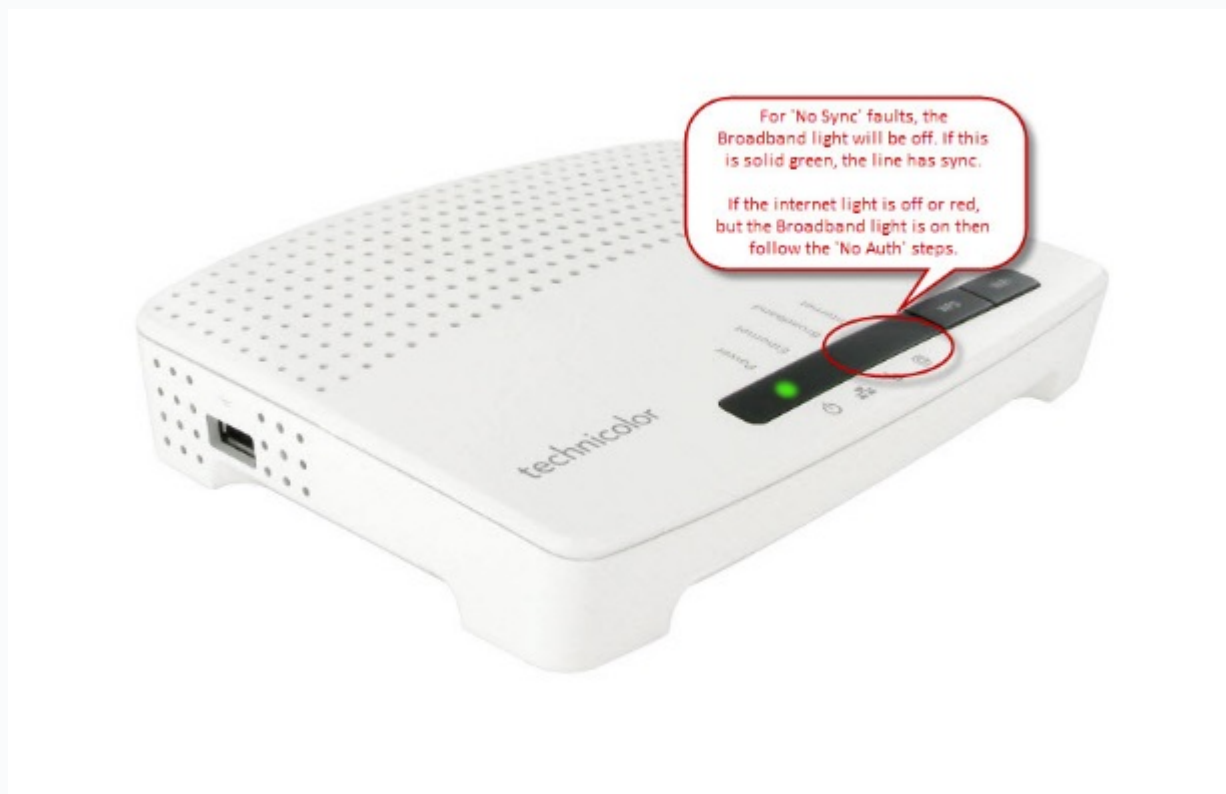
Checked sync profile for any patterns in the drops

## No Authentication Fault

No Auth faults can generally be identified by checking the lights on the customer's router. Please see below for a screenshot of Gamma supplied router for assured and notes as to which lights you should see present.

Please note:

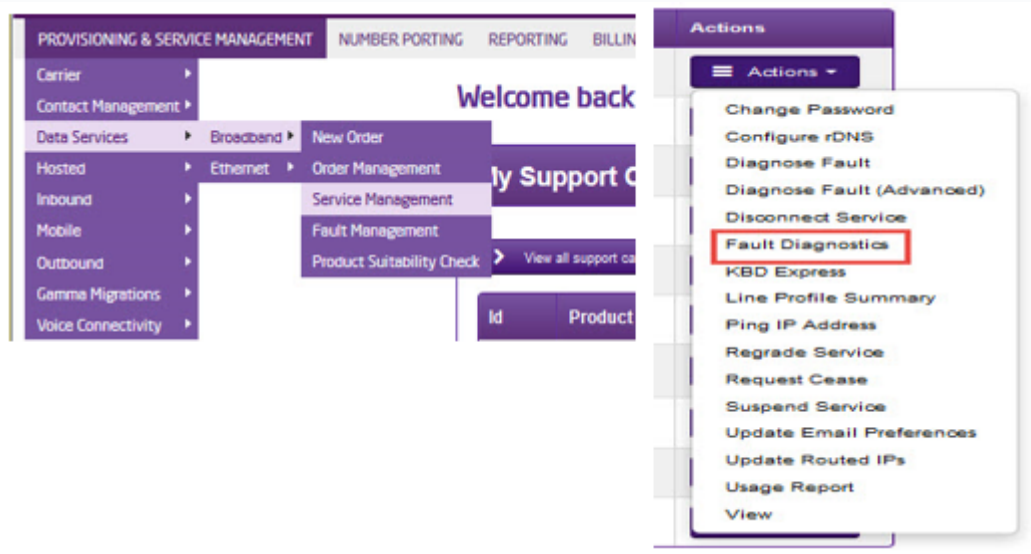
If you already have a fault raised for this service, you'll be unable to raise a new fault.



## Step 1

From the Gamma Portal, go to "Provisioning and Service Management", "Data Services", "Broadband" and then select "Service Management". Select the relevant account, and search for the affected line using the one of the available search options available. Once you've found the line,

using the Actions menu select "Fault Diagnostics".



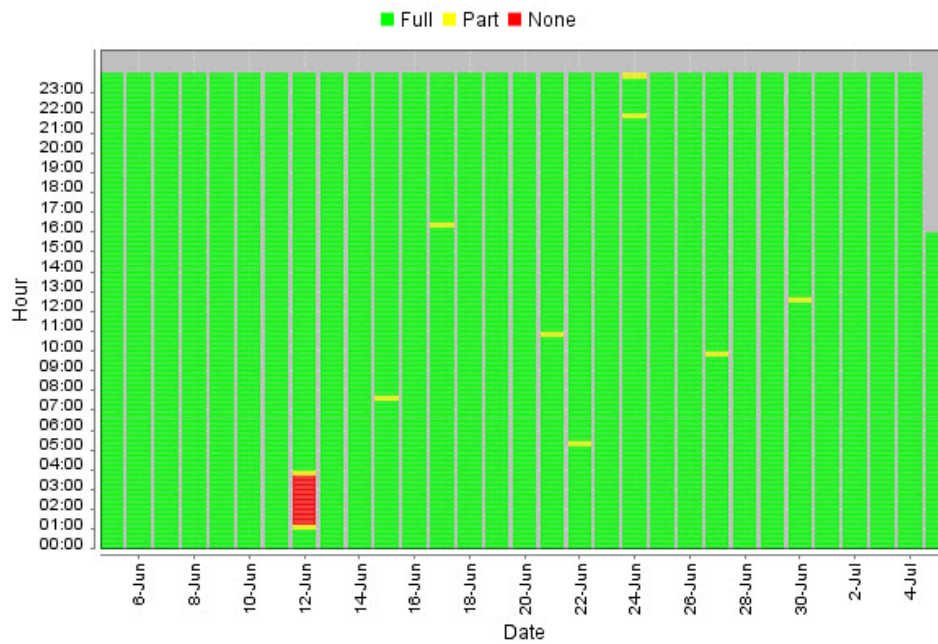
## Step 2

Check the Radius Session Map to see if there has been any connection in the 15 minute segment that is affected. A red segment means that there is no service and you should continue to Step 3.

If the segment is green, go to the [No Web Pages](#) section of the technical support guide by clicking [here](#), and start from Step 3.

### Radius Session Status Map (Last 30 days)

The disconnections listed are indicative of the type of disconnection and do not indicate the cause of the disconnection



### Step 3 (Only Applicable for ADSL)

Scroll to the bottom of the page and look at the xDSL Status Check and ensure that the follow fields are above zero (it doesn't matter what the value is):

- Loop Loss
- SNR Margin
- Cell Count
- Speed

Please note:

If all these values are zero, this would suggest a [No Sync Fault](#), and you should follow these trouble shooting steps

### xDSL Status Check

	Downstream DSL Link Information	Upstream DSL Link Information
Loop Loss	41	23
SNR Margin	9	23
Errored Seconds	0	0
HEC Errors	0	0
Cell Count	352	152
Speed	6464	448
Maximum Stable Rate (KBPS)		5696
Fault Threshold Rate (KBPS)		4556
Mean Time Between Errors Upstream (Seconds)		43200
Mean Time Between Errors Downstream (Seconds)		28800

\*\*Please note this step only applies to ADSL.

### Step 4

Click the "Recent Radius Login Attempts" hyperlink under the "Additional Session Data" to see if there are any error messages in this (such as password reject etc).

Session Drops By Hour (Last 24 hours)

**Additional Session Data**

Latest Session Details

Recent Session History

Unexpected Session Terminations (Last 7 days)

**Recent Radius Login Attempts**

Login Rejections (Last 7 days) : 0

Expected Username : 01457870524-gam@standard

Actual Username : 01457870524-GAM@STANDARD.

Service Selection Names : BUSINESS-ACCESS.CO.U

**xDSL Status Check**

	Downstream DSL Link Information	Upst
Loop Loss	41	23
SNR Margin	9	23

**Recent Radius Login Attempts**

Results Returned : 13

Page 1 of 2

Username	Password	Reply	Auth Date
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-07-05T20:31:48+01:00
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-06-30T12:35:17+01:00
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-06-27T09:52:43+01:00
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-06-24T23:48:11+01:00
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-06-24T21:57:33+01:00
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-06-22T05:17:23+01:00
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-06-21T10:55:54+01:00
-gam@standard.business-access.co.uk:ppp	SdSkeRVMvc		2012-06-18T10:08:33+01:00
-gam@standard.business-access.co.uk:ppp	SdSkeRVMvc		2012-06-18T10:08:33+01:00
-gam@standard.business-access.co.uk:ppp	Chap-Password		2012-06-17T16:17:59+01:00

Export options:

## Step 5

Check to see that the Expected Username and Actual Username in the “Additional Session Data” section match.

Please note:

Currently the case might not match, and whilst this is important what we are looking for here is the green tick next to Actual Username until a fix is put in place.

## Additional Session Data

### Latest Session Details


### Recent Session History

Unexpected Session Terminations (Last 7 days) : 0

### Recent Radius Login Attempts

Login Rejections (Last 7 days) : 0

Expected Username : [REDACTED] -gam@standard.business-access.co.uk

Actual Username : [REDACTED] -GAM@STANDARD.BUSINESS-ACCESS.CO.UK 

- Service Selection Names : BUSINESS-ACCESS.CO.UK

## Step 6

Check the physical phone line.

\*\*Please note that these tests only apply to ADSL & VDSL and do not apply to SOGEA and FTTP as there is no voice component of the line to carry these tests out on. Skip these tests SOGEA & FTTP circuits.

To check the physical phoneline:

- Plug a telephone into the test socket, lift the receiver and listen for any audible noise
- Dial 17070 and press option 2, this will carry out a quiet line test
- Make a phone call and ensure the quality of the call is good
- If you own the line, carry out a WLR line test

If all of these checks are OK, proceed to Step 7.

If you hear noise or the line test fails, you should raise a fault with the line provider before further diagnosing any broadband issues.

## Step 7

Power off the router for 30 seconds, then power back on. This can be done by removing the power supply. You should then monitor your connection to see if the router obtains a connection. If the service has obtained a connection the issue has been resolved.

If you are still experiencing no sync connection, please proceed to Step 8.

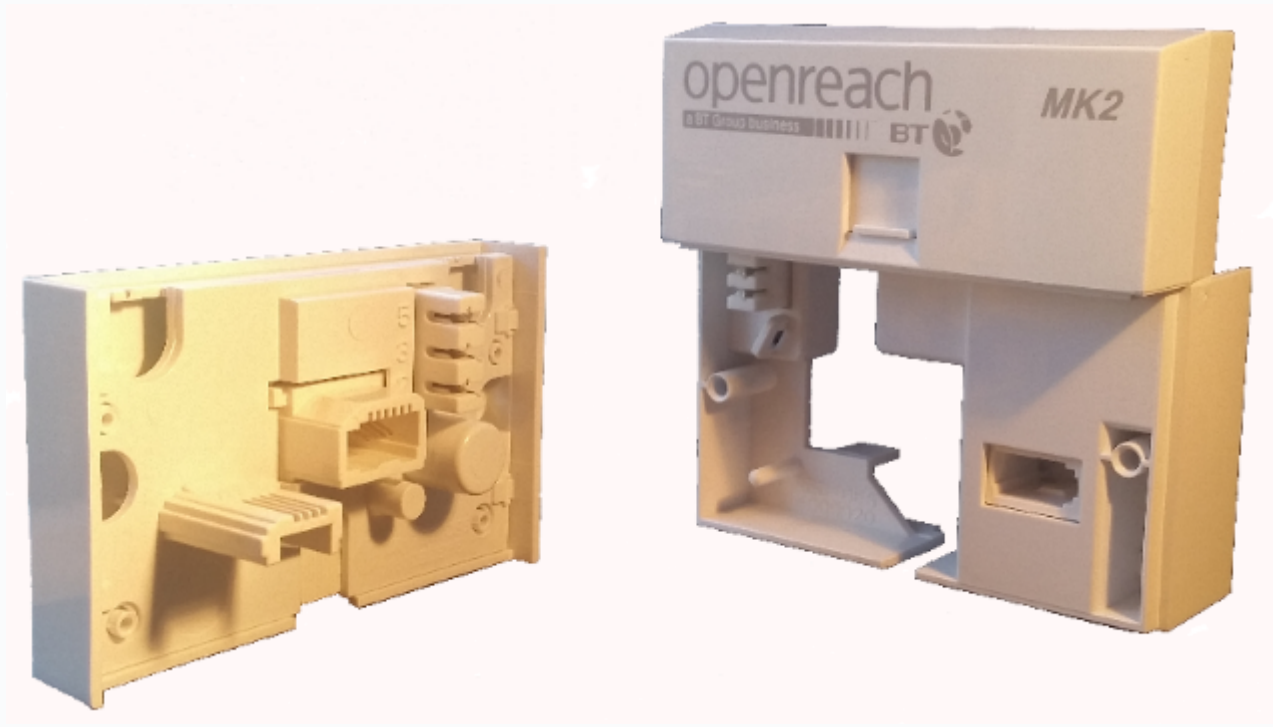




### **Step 8**

Connect your broadband to the NTE5 test socket, you should remove the faceplate of your socket and connect your filter directly into the socket as shown. If the service has come back online, the issue has been resolved and the problem lies with internal wiring, not the broadband.

If you are still experiencing no authentication, please proceed to Step 9.



## Step 9

Change the micro filter, Gamma routers come with 2 x micro filters, you should switch to the second or if this is already used, purchase a new micro filter. If the service has come back online the issue has been resolved and the problem lies with a faulty micro filter.

If you are still experiencing no authentication, please proceed to Step 10.



## **Step 10**

Try an alternate router on the connection, if you have an alternate router, test this on the connection. If this is not possible, proceed to Step 11.

If the service has obtained a connectivity the issue has been resolved and the problem lies with a faulty router. If the service still fails, please proceed to Step 12.

## **Step 11**

Carry out a factory reset on the router.

Please note:

This will remove any specific port forwarding rules and any configuration settings programmed. You should be conscious of this when carrying out a factory reset.

This can be done by holding the reset button (as pictured) until the lights on the front change.

You will need to reconfigure the router after this, the settings can be found in the description box where you opened this guide from.

If the service has come back online the issue has been resolved and the problem lay with the router.



## Step 12

If none of these checks have worked, you'll need to raise a fault on the Advance Diagnostics page.

Select the "Your Diagnostic Checks" tab and follow the drop down menus.

Current Connectivity Incident Status Historic Data Advanced Diagnostics **Your Diagnostic Checks**

Please note that it is important that these 1st line checks are completed. Please note that by not completing these tests it may elongate the time taken to resolve your issue as we will need to do these with you once the fault is logged.  
Please note that providing incorrect information may result in the fault being incorrectly diagnosed or unnecessarily progressed to a SFI visit. Should your fault progress to a SFI visit then should no fault be found then the visit will be chargeable.

1. Has the customer ever had a working service, and if yes, when was the first fault experienced ?  
Please select...

2. Select fault type from the drop down list :  
**No connection / Sync Fault**

- Is the 'sync' light on the router constantly lit (not off or flashing)? (this light may also be labeled 'dsl', 'broadband', 'line' or 'l')
- If the 'sync' light on the router is constantly lit, is the 'auth' light on the router also constantly lit (not off or flashing)? (this light may also be labelled 'internet', 'acct', 'authentication' or with a picture of a globe)

3. If you intend to raise a fault, please confirm you have completed the following checks (follow links to test/data)

Line Test completed

Microfilter changed

Router tested from test socket

Checked sync profile for any patterns in the drops

Please note:

If you already have a fault raised for this service, you'll be unable to raise a new fault.

## Enabling port mirroring on Technicolor TG588/DGA122

Please note the DGA122 is being phased out and replaced by the DGA122 - please speak to the Service Desk for details on this process. See the Gamma Portal - digital Customer Service Plan for contact details.

Sometimes it's useful to be able to monitor traffic on an Ethernet port of the TG582n (e.g. the attached device is a VoIP phone and one can't run Wireshark on it).

Many of the Technicolor routers (including the TG582N) have the useful facility to take the traffic flowing on one Ethernet port and monitor it on another Ethernet port. The CLI commands needed are:

## Step 1

Declare the port to send the monitor traffic to. In this example, it will be sent to port 2:

```
:eth switch mirror capture port=2
```

## Step 2

Now declare which traffic on which port to monitor. In this example, we'll monitor inbound and outbound traffic on port 4:

```
:eth switch mirror ingress port=4 state=enabled
```

```
:eth switch mirror egress port=4 state=enabled
```

## Step 3

It is still possible to use the capture port (port 2 in the above example) as a normal Ethernet port, just that Wireshark (or similar) will see both normal traffic and the monitor traffic - so get your capture/display filters sorted out.

It doesn't seem possible to discover the current settings of the monitor, so when finished it might be best to issue:

```
:eth switch mirror ingress port=4 state=disabled
```

```
:eth switch mirror egress port=4 state=disabled
```

For information on how to switch off SIP ALG on a Technicolor Router using telnet please see the corresponding section in this document

## Switch off SIP ALG on a Technicolor Router using Telnet

This guide is going to tell you how to use Telnet (a text based protocol that allows you to connect to a remote device over the Internet) through command prompt, though there are programs such as Secure CRT that you can use for this.

Please note:

The Gamma Service Desk will not be able to assist you in turning off SIP ALG, and you should speak to your Internet Service Provider or consult with your router user guide for further information.

### Step 1

On your PC go to "Start" and select "Run" and type in "cmd" and click "OK".

### Step 2

When command prompt loads up type in "Telnet IP address of your router " and hit enter. This will then load up the Telnet console.

Please note:

In Windows 7 you'll need to enable the Telnet Client first. See this guide on the Microsoft Help Pages on how to enable Telnet in Windows 7, click [here](#)



**Check under "System Maintenance - Management that the telnet port is enabled and what the port number is on your router.**

**If you are doing it on the internal network this will be your Default Gateway in IP Config, if it is externally, you'll need to ask your customer to go to Google and type in "Whats my IP". More information can be found at [About.com](#).**

### **Step 3**

Enter your administrators log in when asked for "Account" and then the password is the password of the router.

### **Step 4**

Type in the following commands:

connection unbind application=SIP port=5060

saveall

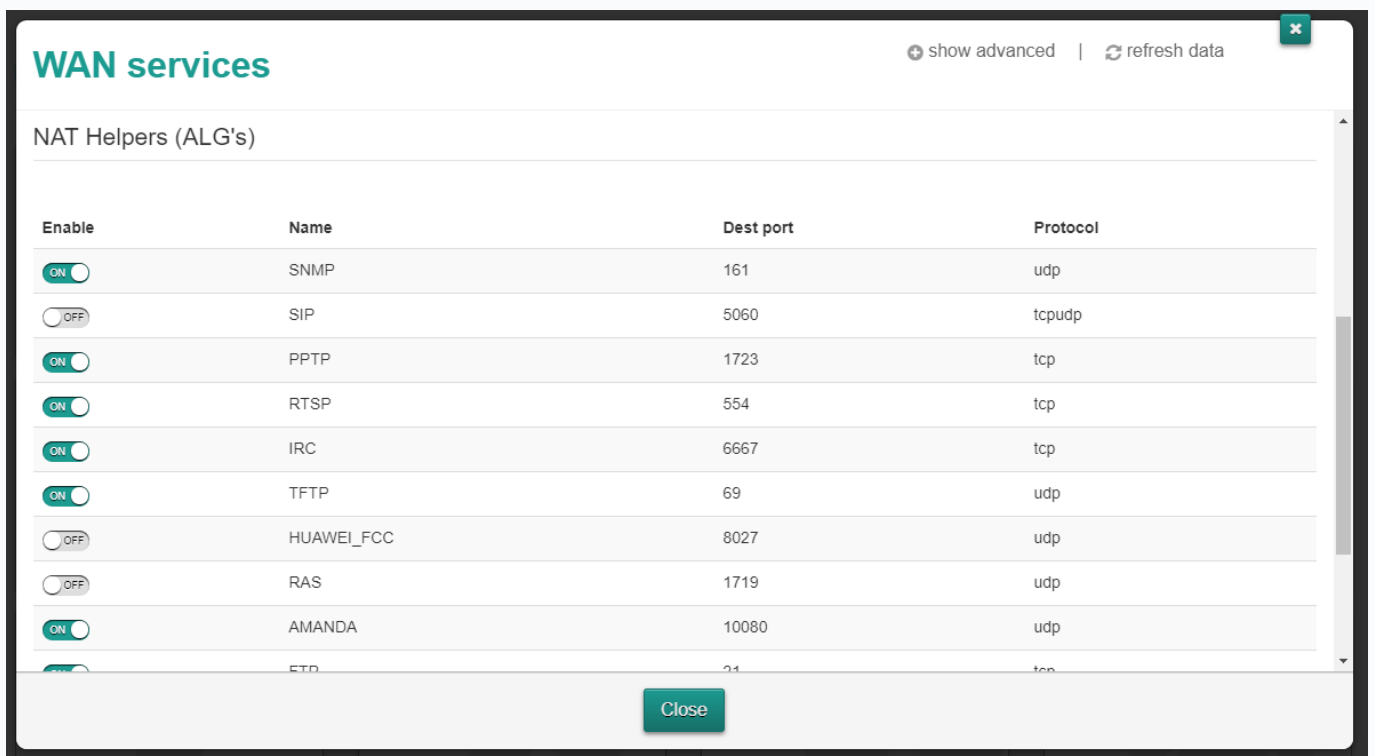
## Switch off SIP ALG in the GUI

From the router's homepage, click on "WAN Services"

The screenshot displays the Technicolor router's GUI homepage. At the top left is the Technicolor logo, and at the top right is a user dropdown menu showing "Administrator". The main area is a grid of 16 tiles, each representing a different system function:

- System Info:** Version Damson (19.4) with a router icon.
- Broadband:** Connected, 20 Mbps download, 72.85 Mbps upload.
- Internet Access:** PPP Connected, WAN IP: 51.52.204.195.
- Wireless:** TNCAP5E8868, Shared - Auto 5GHz, 0 ToD Rules.
- Local Network:** DHCP Enabled, Gateway: 192.168.1.1, Netmask: 255.255.255.0.
- Devices:** 0 Ethernet Devices Connected, 1 WiFi Device Connected, 0 ToD Rules.
- WAN Services:** DMZ Disabled, DynDNS Disabled, 0 Port Rules, 0 UPnP Rules.
- Firewall:** Firewall Level: Medium.
- Telephony:** Disabled (toggle switch).
- Diagnostics:** Includes icons for system health, network status, and connectivity.
- Assistance:** Disabled (toggle switch).
- Management:** User Management, Log Viewer.
- Content Sharing:** Samba Filesharing Enabled, DLNA Enabled.
- Site Filtering:** Site Blocking Disabled, 0 Site Blocking Rules.

From here, click on “Settings” and scroll down to “NAT Helpers (ALG’s)”



The screenshot shows a web interface for "WAN services". At the top right, there are links for "show advanced" and "refresh data". Below the title, the section "NAT Helpers (ALG's)" is displayed. It contains a table with the following data:

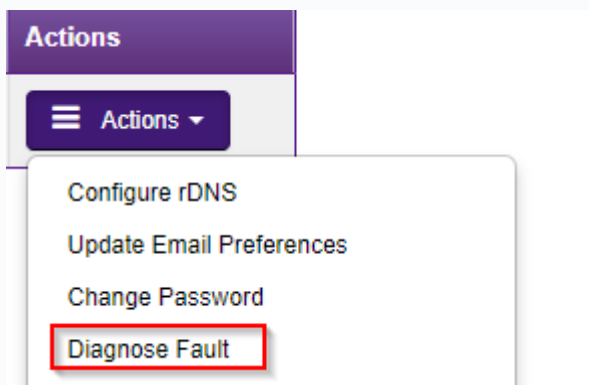
Enable	Name	Dest port	Protocol
<input checked="" type="checkbox"/>	SNMP	161	udp
<input type="checkbox"/>	SIP	5060	tcpudp
<input checked="" type="checkbox"/>	PPTP	1723	tcp
<input checked="" type="checkbox"/>	RTSP	554	tcp
<input checked="" type="checkbox"/>	IRC	6667	tcp
<input checked="" type="checkbox"/>	TFTP	69	udp
<input type="checkbox"/>	HUAWEI_FCC	8027	udp
<input type="checkbox"/>	RAS	1719	udp
<input checked="" type="checkbox"/>	AMANDA	10080	udp
<input checked="" type="checkbox"/>	FTP	21	tcp

A "Close" button is located at the bottom center of the panel.

SIP ALG can be easily enabled or disabled here depending on your set up.

# Broadband Fault Diagnostic Tool

In order to access the diagnostic tool on the Gamma portal, navigate to your Broadband service by following this menu structure; Provisioning & service management >> Data Services >> Broadband >> Order and Service Management, From here you will need to select the actions tab and the “Diagnose Fault” option.






## Broadband Health Check






The Broadband health check is what you will see as your first page in the Gamma portal diagnostic journey, as you can see in the screenshot below, you will be presented with some basic service details, a testing details panel which contains a colour co-ordinated image (this image changes throughout the journey, this is addressed later on in this document) and the health check itself which consists of 5 sections; Synchronisation, Authentication, Stability, Performance and Speed.

# Broadband Fault Process

## Health Check

Service Details	
Service ID:	185823
CLI:	01817802178
Customer Name:	Michael Lever
Post Code:	M28 1NA
Broadband Product:	FTTC 80:20

Testing Details		
End User 	BTW 	 Gamma

Health Check		Help
 Synchronisation	>	
 Authentication	>	
 Stability	>	
 Speed	>	
 Performance	>	

[← Return to Broadband Order & Service Management](#) [🔍 Start Diagnostics](#)

## Synchronisation

Synchronisation refers to the signal sent between the router and the equipment within the local telephone exchange. This is commonly denoted on routers by a light labelled either DSL, CD or Broadband. The synchronisation, or sync speed will vary depending on the length of the line from the local telephone exchange to the router, and the quality of the copper that the signal travels over. The sync speed will determine the maximum throughput speed available.

Should the sync show as amber or red, this suggests that there is a fault with the service. This fault could be with the equipment in the exchange, on the line between the exchange and the router, with the router itself, or with the internal wiring or additional equipment at your customer's premises, for example, a microfilter or the cables.

**✓ Synchronisation** ▼

Status: Customer is online.

[Start Diagnostics](#)

## Authentication

Authentication refers to whether the credentials (username and password) entered are authorised to access the services on the line. The credentials entered are checked against those held on the Radius server. Provided there is a match, access to the services is granted.

This panel will show whether your customer's router is correctly authenticating to Gamma. The actual username and password that should be programmed into the router is shown, along with the last requests that were made to access the services, and whether they were successful or not.

**✓ Authentication** ▼

Your customer is currently: Online

CPE Username: 01617902179@b2bdsi

CPE Password: cHhesaDSN5

There were authentication problems at the most recent attempt

---

There is no connection data for 01617902179@b2bdsi

[Start Diagnostics](#)

## Stability

Stability refers to how stable the connection is perceived to be. The more times that a connection drops out, the more unstable the connection appears.

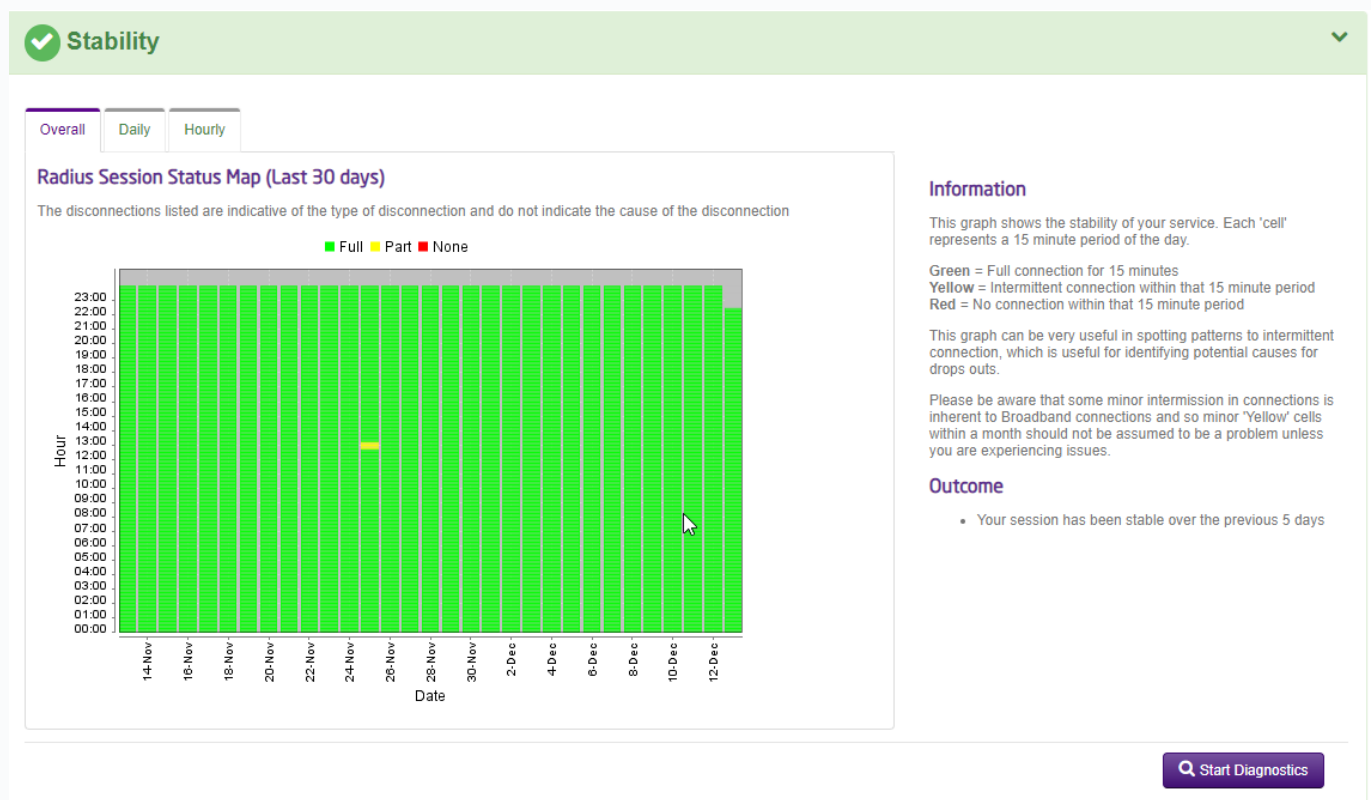
The graph shows hourly/daily/monthly drops in your customer's connection based on the last 30 days' worth of data. This can be very useful in spotting patterns, particularly when an intermittent issue is reported. Commonly, alarms or PDQ machines operating over a broadband line can cause intermittent issues, however, you may also be able to spot a customer switching their router off on an evening or over the weekend, which to the Dynamic Line Management (DLM) on the line will look like a stability problem. Other faults may manifest themselves as intermittent connections, such as drops in wireless or slow speed. This graph can help you narrow these types of issue down as only disconnections from the Broadband network will show on here.

The graph shows data in 15 minute segments based on a RAG (Red, Amber, Green status), the colours will indicate the following:

Red - This means the connection has had no session during that 15 minute segment

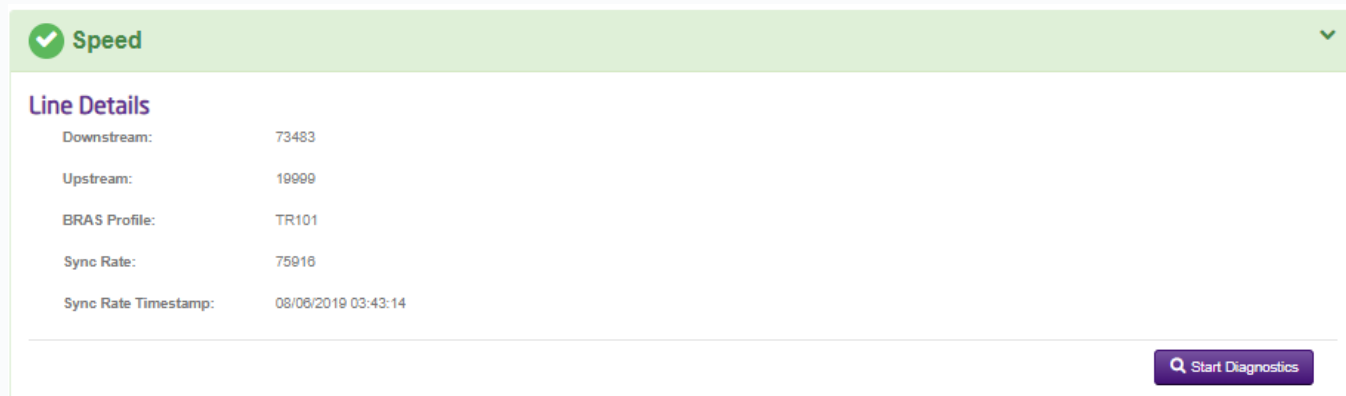
Amber - The connection has had one or more drops during the 15 minute segment

Green - This means the connection has been fully live for the 15 minute segment



# Speed

This tab can simply be used to run a speed test on your customers line. When you initially open the tool, this tab will be grey indicating that the test has not actually be run yet - in order to run the speed test simply click on the tab and the test will begin automatically (please be aware this can take up to 30 seconds to produce results for you).



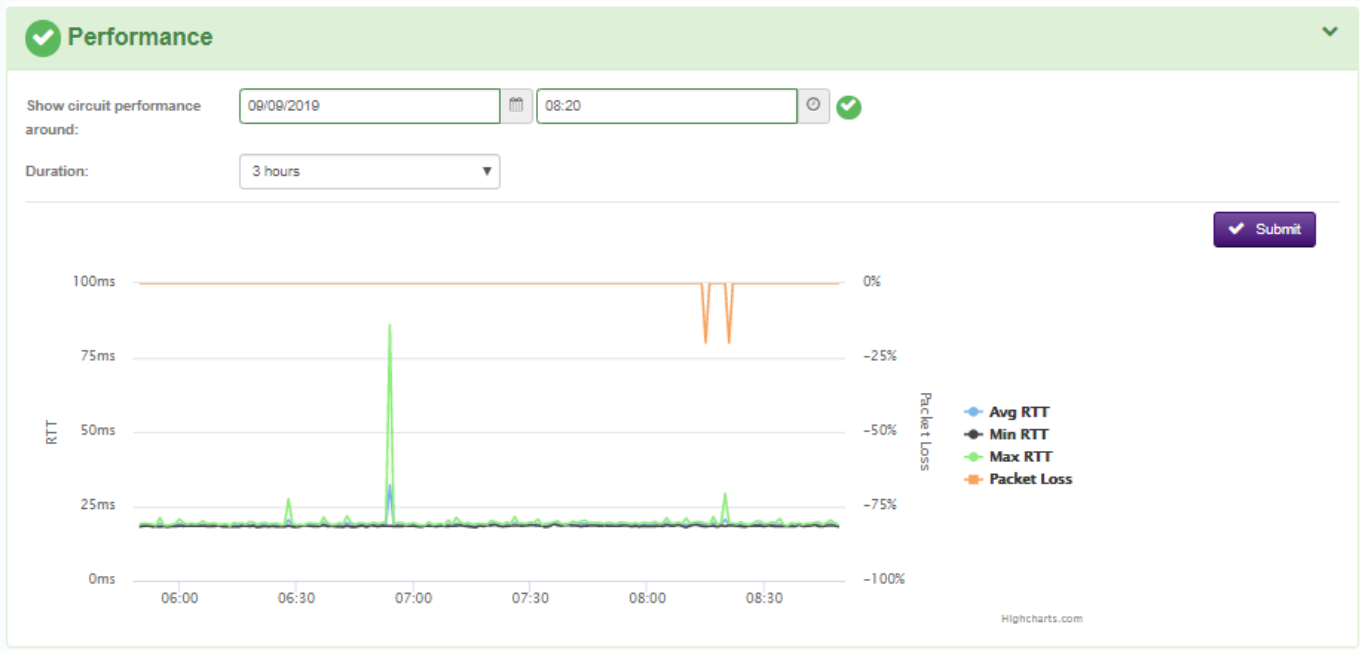
The screenshot shows a user interface for the 'Speed' tab. At the top, there is a green header bar with a checkmark icon and the word 'Speed'. Below this, the 'Line Details' section is displayed as a table with the following information:

Downstream:	73483
Upstream:	19999
BRAS Profile:	TR101
Sync Rate:	75916
Sync Rate Timestamp:	08/06/2019 03:43:14

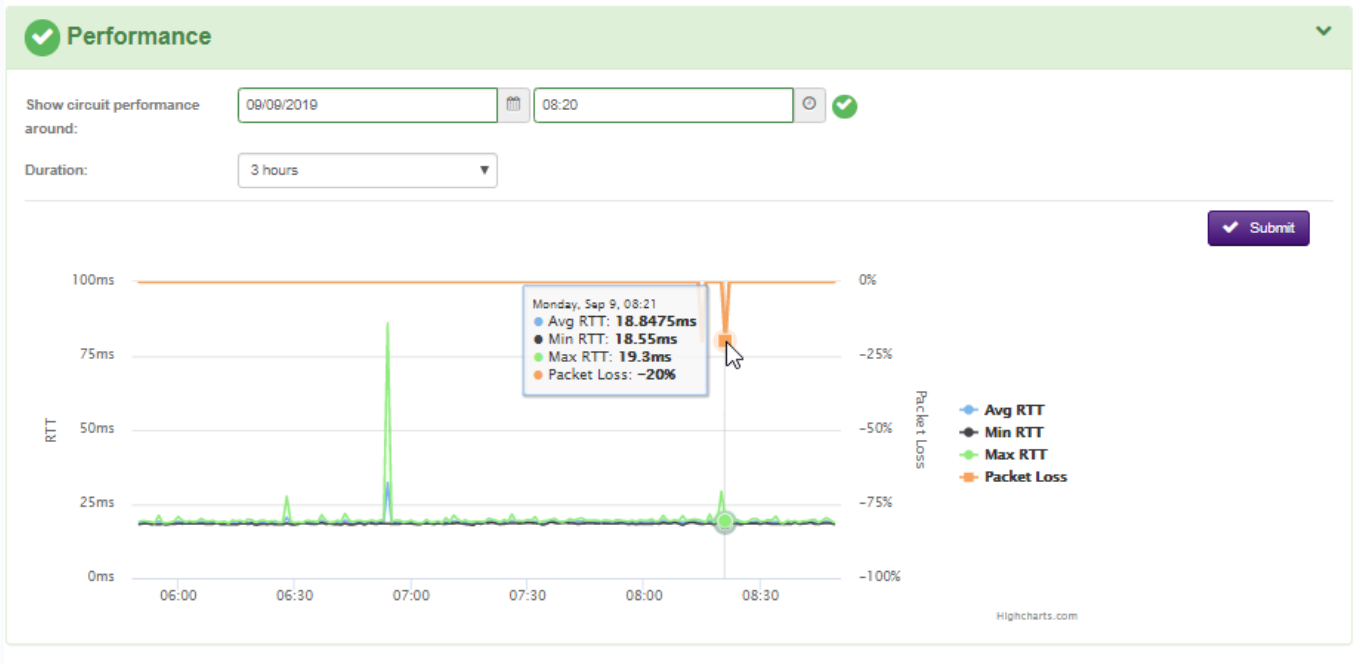
At the bottom right of the interface, there is a purple button with a magnifying glass icon and the text 'Start Diagnostics'.

# Performance

This panel allows you as a user to monitor your service with us and get a view of its performance over a specified time period. We will have the data from your service since the day it was activated with us and you will be able to filter by a specified time range of your choice, as well as being able to specify the 'duration' length you would like the graph to cover. When reviewing this tab you will be able to identify any performance issues on your customers line by reviewing the statistics on RTT (Round trip-time) and packet loss.



As you can see in the screenshot above, the different indicators on the graph are colour co-ordinated so you can easily distinguish between the information. For specific figures, you can simply hover your mouse over the area of the graph you are looking at and specific information will be displayed, for example in the screenshot below the user has been able to identify 20% packet loss on the line at this specific point.



## End User Checks

If you have reviewed all the available information on the health check and you feel there isn't anything else you can do there, the next step of the diagnostics journey is to run through some of the end user checks. For any fault you raise into Gamma, we will always recommend that you have completed all of the first line checks which are listed in this page.

**End User Checks**

**Physical Line Check**  
With a telephone handset plugged into the test socket, is it possible to make a successful call?

Not Completed ▾
Help

**Router Power Cycle**  
Have you turned the customer router off and back on again?

Not Completed ▾
Help

**Router NTE5 Test Socket Check**  
With the router plugged directly into the NTE5 test socket, is it possible to establish a working broadband connection?

Not Completed ▾
Help

**Broadband Filter Change**  
With a new filter attached to the socket, is it possible to establish a working broadband connection?

Not Completed ▾
Help

**Issue Type**  
Please confirm the type of issue being experienced:

Performance Issue ▾

**Run Speed Check**  
Run the speed test on gamma speed test with just one device connected. Have the speed test results improved with this setup?

Not Completed ▾
Help

**Banded Profile Check**  
Does the line have a banded profile?

Not Completed ▾
Help

**Fault Notes**

← Back
→ Continue

You will notice in the testing details panel at the top of the page that the end user image will turn Green or Amber at certain points, this is purely a visual representation of the responses you have put into our end user check questions in the journey. Essentially if the image is showing as Amber, this means you have entered that all the end user checks have not been conducted, the reason we mark it amber is that we suggest you do so (meaning for beginner users, it's a clear representation that there is possibly more they can do before raising the fault into us).

## Supplier Diagnostics

Once you have been through the health check/End user checks and acted accordingly, the next step is just to answer a few basic questions and confirm whether or not you would like to run an intrusive line (KBD) test.

**Supplier Diagnostics** Help

Please select the type of problem being experienced: \*  ✓

Is the problem you are experiencing permanent or intermittent? \*  ✓

Please select the damaged equipment: \*  ✓

Fault Notes:

\* I accept that continuing will trigger an intrusive diagnostic check which will impact the end user's connection for the duration of the test.

Once you are done here, you can hit the continue button and then a KBD check will be run in the background for you (this can take a couple of minutes to process).

## KBD results page

Once this page has loaded you will be presented with all the information you can consume from a KBD check. When Gamma run diagnostics within BT's systems we use a KBD check to complete diagnostics and identify any obvious issues within the customers/BT's network before deciding on whether an engineer is required (so now as a user you have access to the same tool we would use internally). It is worth noting at this point that unless a KBD check has been run, BT will not allow any fault to be raised directly to them. Please also be aware that for copper based services, the KBD check is intrusive and service affecting meaning you will see your service drop for approximately 5 minutes, however this is not impacting for fibre services.

As you can see in the screenshot below, when we run a KBD check, BT will provide us with a RAG based response which will show you as a user if there is an issue on BT's network, this response will be easily visible on the 'BTW' image in the testing details panel as shown in the screenshot below.

# Broadband Fault Process

## Diagnostic Results

### Service Details

Service ID: 185823  
CLI: 01817902179  
Customer Name: Michael Lewis  
Post Code: M20 1NA  
Broadband Product: FTTC 80:20

### Testing Details

End User 

BTW 


 Gamma




#### Tests Pass

No fault has been found with the Broadband service, please click continue to complete further checks.

 Back

 Download

 Resolve Fault

 Continue

On this page, you will also be able to see a full breakdown of the KBD results which have been returned from the check and you will also be given the ability to download the file itself for your own personal use.

### Decision

Status: In Service

#### Decision Data

ID: NF507

##### Message

**Problem:** No issues have been identified in the BTW network.

**Resolution:** KBD tests indicate no BTW network fault. Please perform all CP and End User checks. BTW Performance/Speed test has not been run.

##### Status

**Overall RAG Status:** G

**BTW Status:** G

#### Additional Information

Circuit Service Status: The current circuit service status is IN SERVICE

##### DLM Info

Service Option:	N/A	Indicative Line Quality:	N/A	Indicative Line Rate:	N/A
Capped Or Banded Profile Info:	Rate Adaptive	SNR Reset:	-		

- Consistency Check Test Results >
- Radius Details >
- Additional Inventory Details >
- IP Test Results >
- Manage Associate Test Results >
- GEA Service Test >

Please see below a list of some of the various values you will see returned in a KBD check for both fibre and copper circuits, with information on how to interpret them:

## Fibre Results

Decision	
<b>Consistent Check Test Results</b>	Your sync speed should match the with profile, or BRASMSAN, speed. This is useful for performance issues. If this is a "Pass" then it is OK, though any mismatches could cause drops in connection and speed issues.
<b>Radius Details</b>	This checks for successful log in's, including the login ID. It also shows any rejections with the user name and password (authentication/PPP details). This also shows you the dates and times of when a user was logged in and how long the session has been live for, as well as how much data the connection has received and sent.
<b>Additional Inventory Details</b>	
<b>IP Test Results</b>	This shows you how many packets are being sent and received on the connection, as well as any packet drops.
<b>Manage Associate Test Results</b>	This checks the BT Wholesale network for any potential issues, such as outages. If there is an issue this will display a message from BT Wholesale.

## Copper Results

Decision	
<b>Status Check Results</b>	This shows the line stats, such as Loop Loss, SNR Margin, Errored Seconds, HEC Errors, Cell Count, maximum stable rate, fault threshold rate, mean time between retrains and mean time between errors.
<b>Copper Line Test Results</b>	This lets you know if the line is OK and within limits. This will show you if an appointment is required and also lets you know the distance between the exchange and the NTE.

<b>Consistency Check Test Results</b>	Your sync speed should match the with the profile, or BRASMSAN, speed. This is useful for performance issues. If this is a "Pass" then it is OK, though any mismatches could cause drops in connection and speed issues.
<b>Access Profile Results</b>	This shows you the change of the profile of the line by the DLM over a period of time.
<b>Radius Details</b>	This checks for successful log in's, including the login ID. It also shows any rejections with the user name and password (authentication/PPP details). This also shows you the dates and times of when a user was logged in and how long the session has been live for, as well as how much data the connection has received and sent.
<b>Additional Inventory Details</b>	
<b>IP Test Results</b>	This shows you how many packets are being sent and received on the connection, as well as any packet drops.
<b>Manager Associate Test Results</b>	This checks the BT Wholesale network for any potential issues, such as outages. If there is an issue this will display a message from BT Wholesale.
<b>DP Neighbouring Data</b>	If available this will give you some information on similar lines near your customer's. Does not always return information and will never display information that you can use to identify the line.
<b>Access Details</b>	This shows you an analysis of the lines performance over the last 14 days.

## Fault Submission

Once you reviewed the results of the KBD check, if you have not been able to diagnose/identify the cause of the issue and resolve it yourself, you are presented with the fault submission page, this page is where you can request to raise a fault into Gamma. On here you will be asked to enter some basic information such as contact details from your perspective as well as a site contact, in case it is needed further down the line (for engineer appointments etc.).

## Submit Fault

[Help](#)

Fault Type:

Book Earliest Available Appointment?  Yes

Site Hazard Details:

Site Access Availability:

Site Contact First Name:

Site Contact Surname:

Site Contact Phone:

Reseller Contact Name:

Reseller Contact Phone:

Reseller Contact Email:

Receive Automated Email Updates?  Yes  No

Has the service ever worked?  Yes  No

Have there been any recent changes or orders?  Yes  No

Allow disruptive tests?  Yes  No

Is there 24 hour access to the site?  Yes  No

Has the end user equipment been disconnected?  Yes  No

Fault Notes:

test

By clicking 'Submit' and raising this fault you accept that the information provided is accurate and the relevant end user checks are complete.

The fault may need to be logged with our supplier and as a result an engineer visit may be required. If this is the case and the fault is found to be in the end user premises you will be liable for any resulting charges.

\* I confirm and accept the above statement.

[← Back](#)[Save Fault](#)[Submit ✓](#)

Once you have hit submit, you will be presented with a support call reference which you can use to view your fault on the Gamma portal through the View my support call function.

# REIN and SHINE

## What is REIN & SHINE?

Repetitive Electrical Impulse Noise (REIN) and Single Isolated Impulse Noise (SHINE) is interference found on an ADSL connection and is caused by electrical impulses from such electrical items as a faulty power supply which can result in line errors, slow speed and even disconnections. Usually, power sources and an ADSL connection can co-exist happily. SHINE happens in a burst (i.e. when a device is switched off), whereas REIN is constant throughout a device's usage.

Whilst all electrical equipment will generate some "noise", it should comply with the Electromagnetic Compatibility (EMC) directives, thus avoiding disturbance by radio and telecommunications equipment, though some equipment may be old, foreign or faulty.

## How do I look for a REIN or SHINE fault?

Diagnosing REIN or SHINE faults can be complicated. It is the End User who would diagnose these faults and it is simply a process of elimination. You should get an AM/MW radio and set it to 612KHz. If you place the radio next to your modem/router, you'll hear the ADSL signal. If you then place the radio next to another power source, such as an LCD monitor, you'll hear a distinct sound and such fade out as you move it away. By using the radio, you may be able to see where the noise is coming from, and switch off that power source and then retest your ADSL connection.

Not all noise you may hear will affect your ADSL connection, this is just to help you find the potential cause.

If you are unable to find the cause within the site of the ADSL connection, it could be further afield, such as a neighbour's equipment, or something along the route of the ADSL connection from the exchange, such as roadworks or a faulty streetlight. If the source is external, then you should call into the service desk who will then be able to assist you further.

Please note:

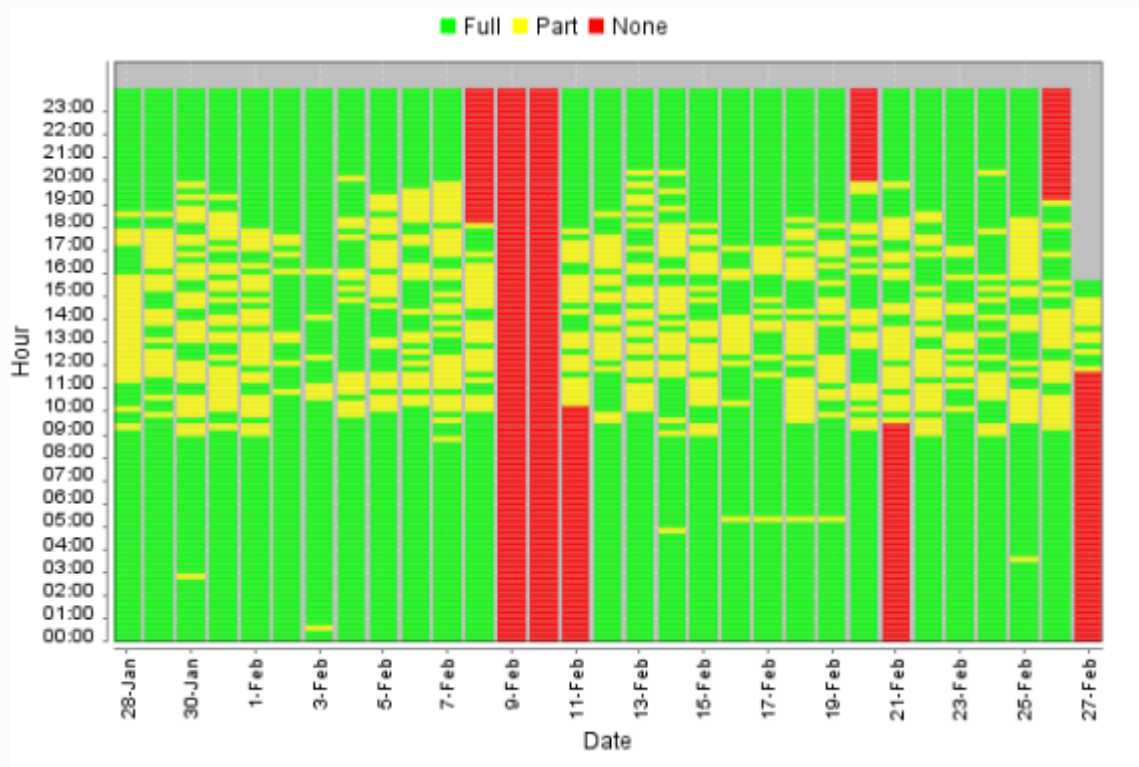
REIN and SHINE faults can be complicated and can take months to resolve. In extreme cases, the cause cannot be eliminated.

## Typical REIN and SHINE Causes

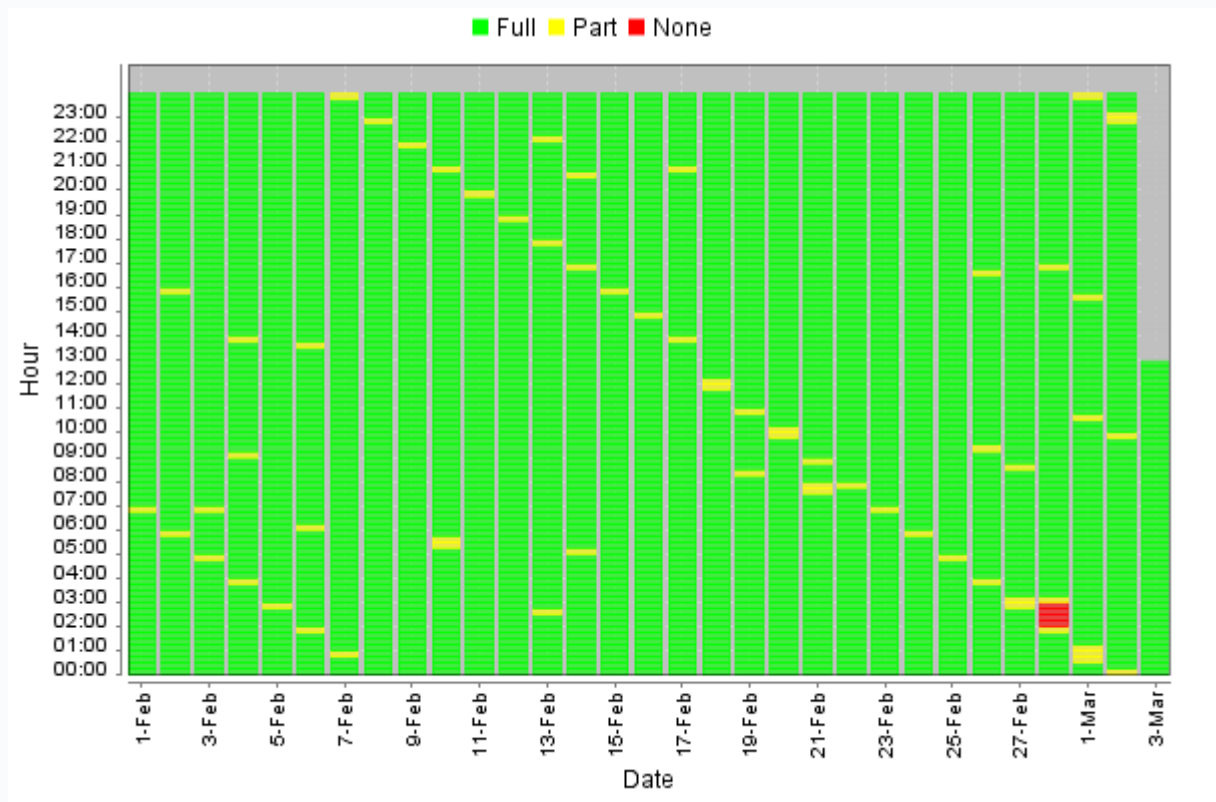
- Faulty Power Adapters
- Christmas tree lights
- Thermostats (central heating etc)
- Railway cables
- Electric fences / motors
- Street lighting
- Laptops / TVs / Set top boxes for Sky, Virgin, Freeview etc.
- Roadworks
- Florescent lights

Please see below for some example pictures for RIEN & SHINE

**RIEN -**



**SHINE-**



## How can I help fix a REIN problem?

If you suspect that you have a REIN fault, you still need to do standard fault diagnostics. BT Openreach will only escalate a suspect REIN fault to their specialist REIN engineers once standard fault finding (including their normal engineers) have run tests and tried to avoid REIN.

It's also important to note that once the initial engineer is satisfied that everything has been done to avoid REIN and whatever is causing the fault is not on BT's network is when the REIN engineer will be assigned. Therefore this is not subject to a normal BT service level agreement and the BT REIN engineer maybe take a couple of weeks to attend the site. You may also be charged for this visit as the REIN is likely caused by an appliance or configuration at your site.

You can see if the problem is attributed to REIN yourself, and sometimes even track it down. You should make a log of the dates and times the internet goes down (you'll be able to see this using our Fault Diagnostics tool). If there is a pattern, such as the internet goes down between 9am and 5pm the interference must be by an electrical appliance that is active within that time frame. Try unplugging different electric items near the telephone line or the router from the mains supply and see if this resolves the issue. Remember when doing this it could take up to 2 minutes before you see

if it works.

If the cause of REIN is offsite then REIN engineers can ask the owner of the kit to turn it off but the owner is not obliged to do so.

## Fibre to the Premises

With the introduction of FTTP, Openreach now use ONT (Optical Network Termination) boxes. The ONT is the device that is used to terminate the fibre cable into the property, then connecting into the users CPE. Moving forwards, Openreach will install a version of the ONT that contains one data port and one voice port. This is after they disregarded the original models that came with 4 data ports and two voice ports. These legacy ONT devices will still be seen in some cases from their original installation.

The below diagram shows the external casing of the ONT followed by an internal view showing the ONT along with the Battery Back Up.

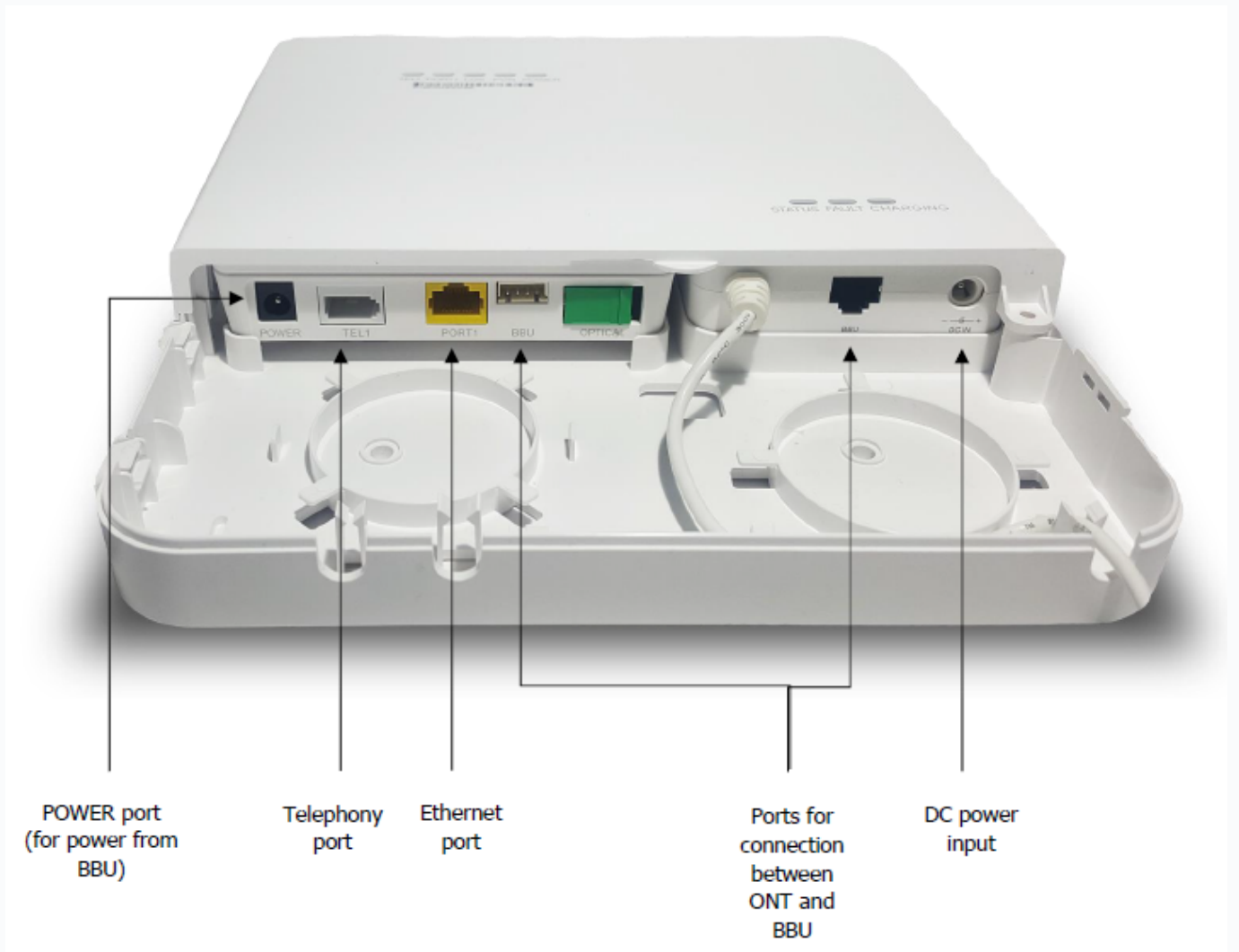
## Enclosure



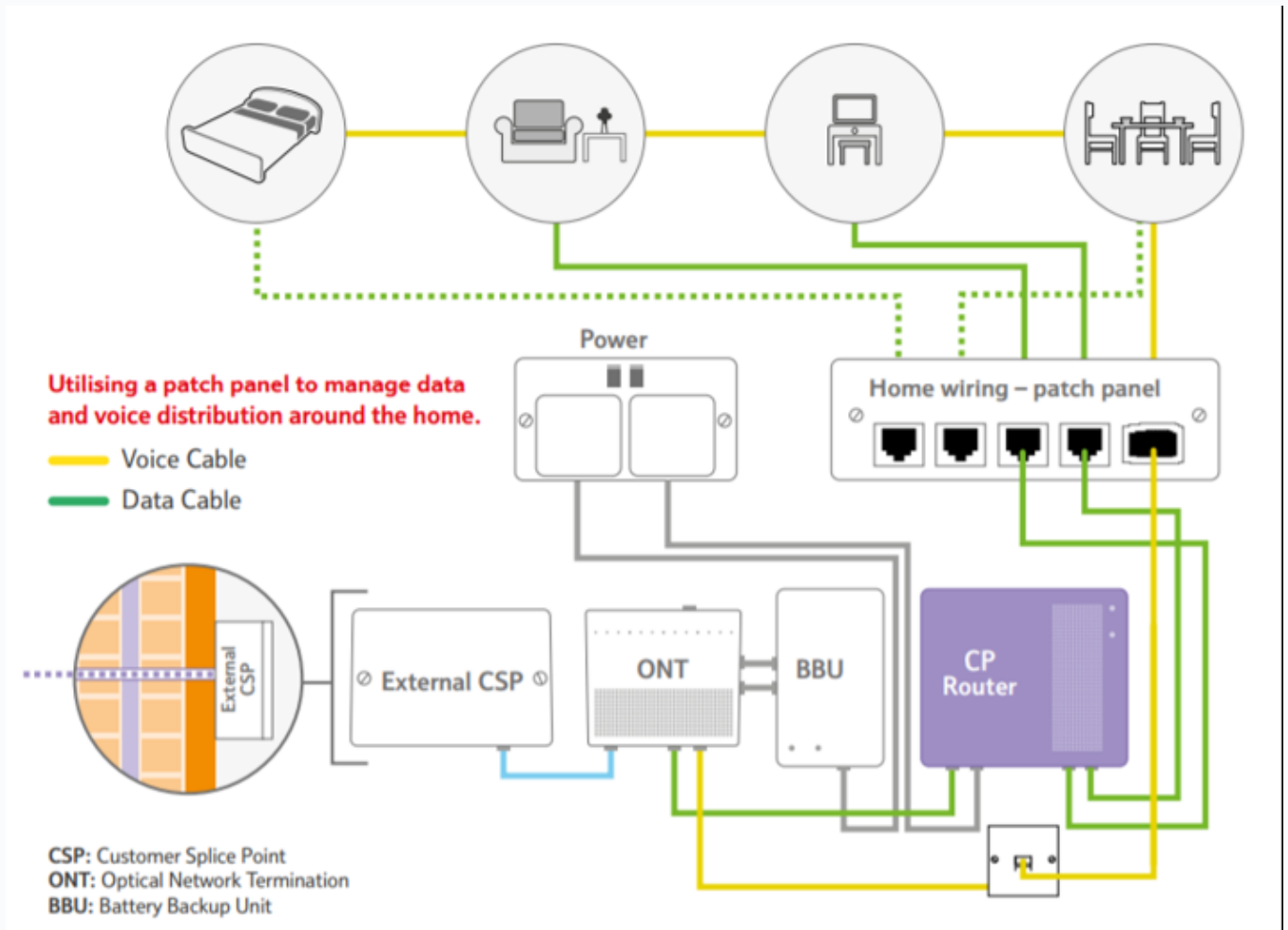
## Internal Setup



The below diagram shows the ports of both the ONT and the BBU.



Below is a diagram to physically show how the ONT fits into these new circuit types



**Note - The ONT in the diagram shows the standard 1+1 (1 Data + 1 Voice) ports that Openreach will be using. Please be aware that some legacy 4+2 ONTs will still be in use.**

Although the ONT is owned and maintained by Openreach, you can find below some information on diagnosing faults with the device to either confirm or rule it out of your checks if an issue is present with your FTTP circuit.

## Indicator Description



Table 1 Indicator status description 1 of the ONT

Indicator	Status	Description
TEL1	On	The connection between the TEL port and the voice server has been set up.
	Blinks twice a second	The voice service of the TEL port is established and is in the off-hook or ringing state.
	Blinks once two seconds	The voice service of the TEL port is registering.
	Off	The voice service is not enabled on the TEL port.
PORT1	On	The Ethernet connection is in the normal state.
	Blinking	Data is being transmitted on the Ethernet port.
	Off	The Ethernet connection is not set up.
LOS/PON	See Table 2.	
POWER	Green	The terminal is powered on.
	Orange	The backup battery is supplying power.
	Off	The power supply is cut off.

Table 2 Indicator status description 2 of the ONT

Status No.	Status		Description
	PON	LOS	
1	Off	On	<ul style="list-style-type: none"> <li>The GPON terminal is not connected to optical fibers or does not receive optical signals.</li> <li>The receive optical power of the GPON terminal is lower than the receiver sensitivity.</li> </ul>
2	Blinking	Off	The GPON terminal attempts to set up a connection with its upper-layer device.
3	On	Off	A connection is set up between the GPON terminal and its upper-layer device.
4	Off	Off	The ONT is disabled by the OLT.
5	Blinking	Blinking	The ONT is prohibited by the upper-layer device or blinks abnormally, contact the service provider for help.

## Indicator Description



Table 3 Indicator status description of the BBU

Indicator	Status	Description
STATUS	Steady green	The mains supply is working (using the power adapter).
	Off	The mains supply is cut.
FAULT	Steady red	The batteries need to be replaced or are not installed.
	Off	<ul style="list-style-type: none"><li>• The batteries have low capacities.</li><li>• No alarm is generated.</li></ul>
CHARGING	Steady orange	The batteries are being charged.
	Off	<ul style="list-style-type: none"><li>• The batteries are being discharged.</li><li>• The batteries are fully charged or fully discharged.</li></ul>

TEL1 PORT1 LOS PON POWER



STATUS FAULT CHARGING



# DSL and IP Throughput Rates

## WBC

DSL Rate	Throughput
0 to 288kbps	50kbps to 250kbps
288kbps to 576kbps	100kbps to 500kbps
576kbps to 1152kbps	200kbps to 1000kbps
1152kbps to 2272kbps	400kbps to 2000kbps
2272kbps to 8128kbps	1000kbps to 7150kbps
8128kbps to 24384kbps	2000kbps to 21000kbps

## WBC Premium Variants

ADSL Sync speed	Throughput
0 to 288kbps	100kbps to 250kbps
288kbps to 576kbps	100kbps to 500kbps
576kbps to 1152kbps	400kbps to 1000kbps
1152kbps to 2272kbps	800kbps to 2000kbps
2272kbps to 8128kbps	1200kbps to 7150kbps
8128kbps to 24384kbps	4000kbps to 21000kbps

# Configure a routed IP on your router

Routed IP addresses are not provided as standard as they are only required in certain circumstances.

For more information on IP addressing please [click here](#).

## Step 1

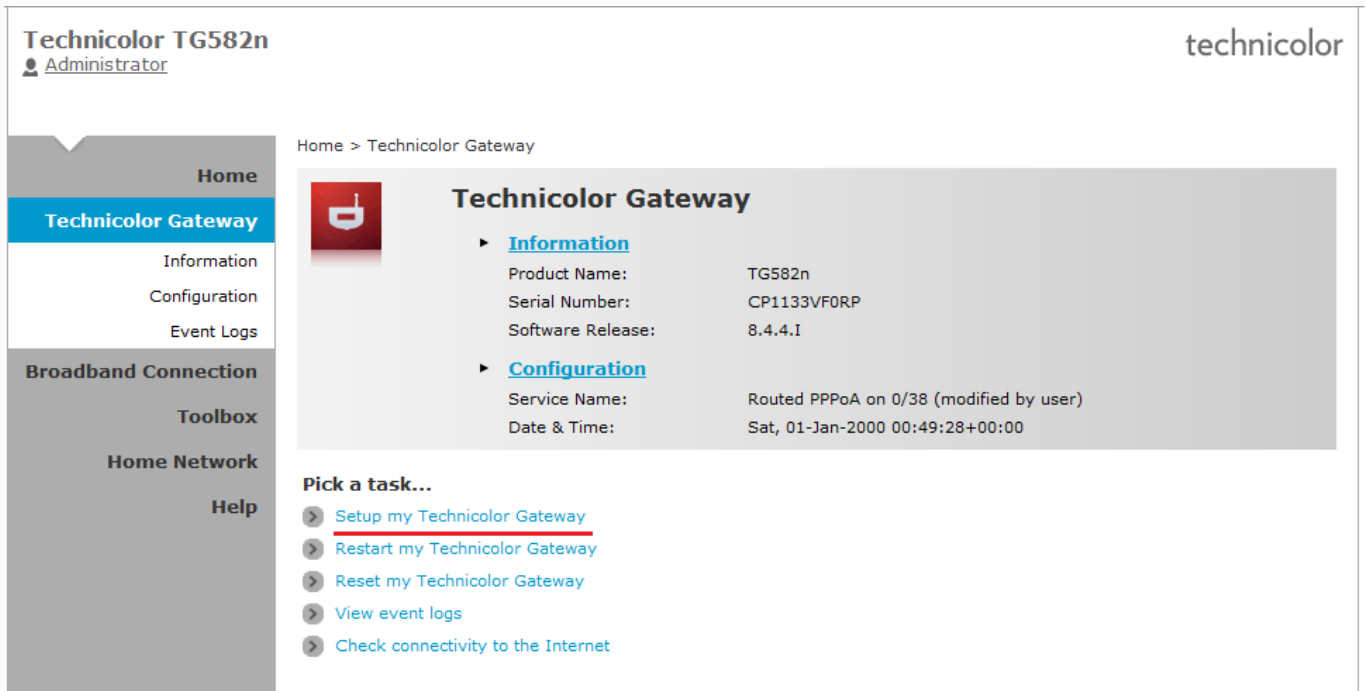
Open your browser and access the routers web interface.

If your router is supplied by Gamma, you can follow these steps:

- Enter 192.168.1.1 to the address bar
- Input the admin logon details
- Default username = Administrator
- Default password = XXXXXXXX-Admin or GREF-Admin

## Step 2

Click on 'Setup my Technicolor Gateway', then click 'Next'



The screenshot displays the Technicolor TG582n web interface. The top left shows the device name 'Technicolor TG582n' and the user 'Administrator'. The top right features the 'technicolor' logo. A left sidebar contains navigation options: Home, Technicolor Gateway (selected), Information, Configuration, Event Logs, Broadband Connection, Toolbox, Home Network, and Help. The main content area shows the breadcrumb 'Home > Technicolor Gateway' and a 'Technicolor Gateway' header with a red icon. Below this, there are two expandable sections: 'Information' and 'Configuration'. The 'Information' section lists: Product Name: TG582n, Serial Number: CP1133VF0RP, and Software Release: 8.4.4.I. The 'Configuration' section lists: Service Name: Routed PPPoA on 0/38 (modified by user) and Date & Time: Sat, 01-Jan-2000 00:49:28+00:00. At the bottom, a 'Pick a task...' section lists five tasks: 'Setup my Technicolor Gateway' (highlighted with a red underline), 'Restart my Technicolor Gateway', 'Reset my Technicolor Gateway', 'View event logs', and 'Check connectivity to the Internet'.

## Step 3

For ADSL connections: Select 'ADSL (Expert)' and click 'Next'.

For FTTC/SoGea/FTTP connections: Select 'Eth WAN (Expert)' and click 'Next'.

## Service Selection

You need to select the service you want to connect to.



Select the service of your DSL account. Click Next to continue.

### Select a service:

Eth WAN (Standard)	▲
Eth WAN (Expert)	▬
ADSL (Expert)	▼

### Description of selected service:

DESCRIPTION	UK Custom Routed PPP connection (Public Subnet config etc)
REGION	UK
PROVIDER	All

< Back   Next >   Cancel

## Step 4

Enter the username / password for the broadband circuit (available on Broadband Service Management via the Gamma Portal).

## Access Control

Please specify a **Username** and **Password** to prevent unauthorised access to the Thomson Gateway management interface.



User Name

Enter a user name.

Password

Enter a password.

Confirm Password

Re-enter the password.

**NOTE:** The password defaults are no password, we strongly recommend setting one to protect your router

## Step 5


Leave the WAN - VLAN parameters as they are defined in the text boxes and click "Next".

Technicolor TG582n: 1121VF481 - Mozilla Firefox

10.0.0.138/cgi/wizard/?be=0&l0=-1&l1=-1

### Router Type

Please select the type of connection your require.



**Public Addressing Scheme**

Single IP NAT

Independent Router IP

Inclusive Router IP

Specify the appropriate option for your ISP connection

**Note:**

**Single Public IP**  
Standard connection with one Public IP Address.

**Independent Router IP**  
Public Subnet with a Router IP Address not in the same Subnet.

**Inclusive Router IP**  
Public Subnet with a Router IP Address in the same Subnet.

< Back   Next >   Cancel

## Step 6

Again leave these text boxes with the data that is already in them on the UpStream QoS screen.

Technicolor TG582n: 1121VF481 - Mozilla Firefox

10.0.0.138/cgi/wizard/?be=0&l0=-1&l1=-1

### Router Addressing

Enter the Router IP address information.

**Routed IP Address End**

Router IP address

Note: Add this as the default gateway on any static PC clients.

Subnet Mask

Enter the subnet mask.

**Note:**

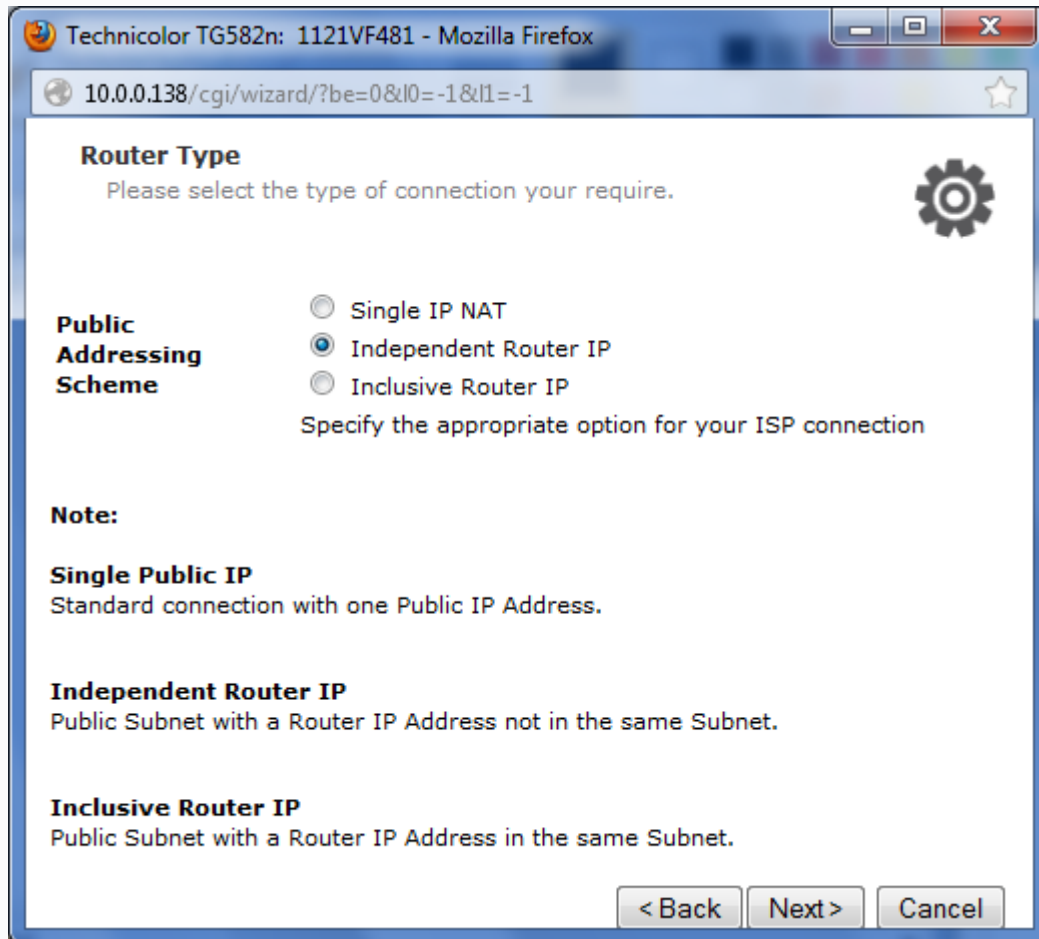
If you have chosen the Single Public IP option this will be the LAN Router address used in conjunction with the DHCP range on the following page.

For Public Subnet configurations you will need to input the details provided by your ISP.

< Back   Next >   Cancel

## Step 7

Select 'Independent Router IP'.



## Step 8

Input the details you entered on **Step 1**.

## Access Control

Please specify a **Username** and **Password** to prevent unauthorised access to the Thomson Gateway management interface.



User Name

Enter a user name.

Password

Enter a password.

Confirm Password

Re-enter the password.

**NOTE:** The password defaults are no password, we strongly recommend setting one to protect your router

## Step 9

Ensure you input the correct subnet mask that was provided with your routed IP request. The Router IP should be the end routed IP address, and not any other.

Technicolor TG582n: 1121VF481 - Mozilla Firefox

10.0.0.138/cgi/wizard/?be=0&l0=-1&l1=-1

### Router Addressing

Enter the Router IP address information.

**Routed IP Address End**

Router IP address

Note: Add this as the default gateway on any static PC clients.

Subnet Mask

Enter the subnet mask.

**Note:**

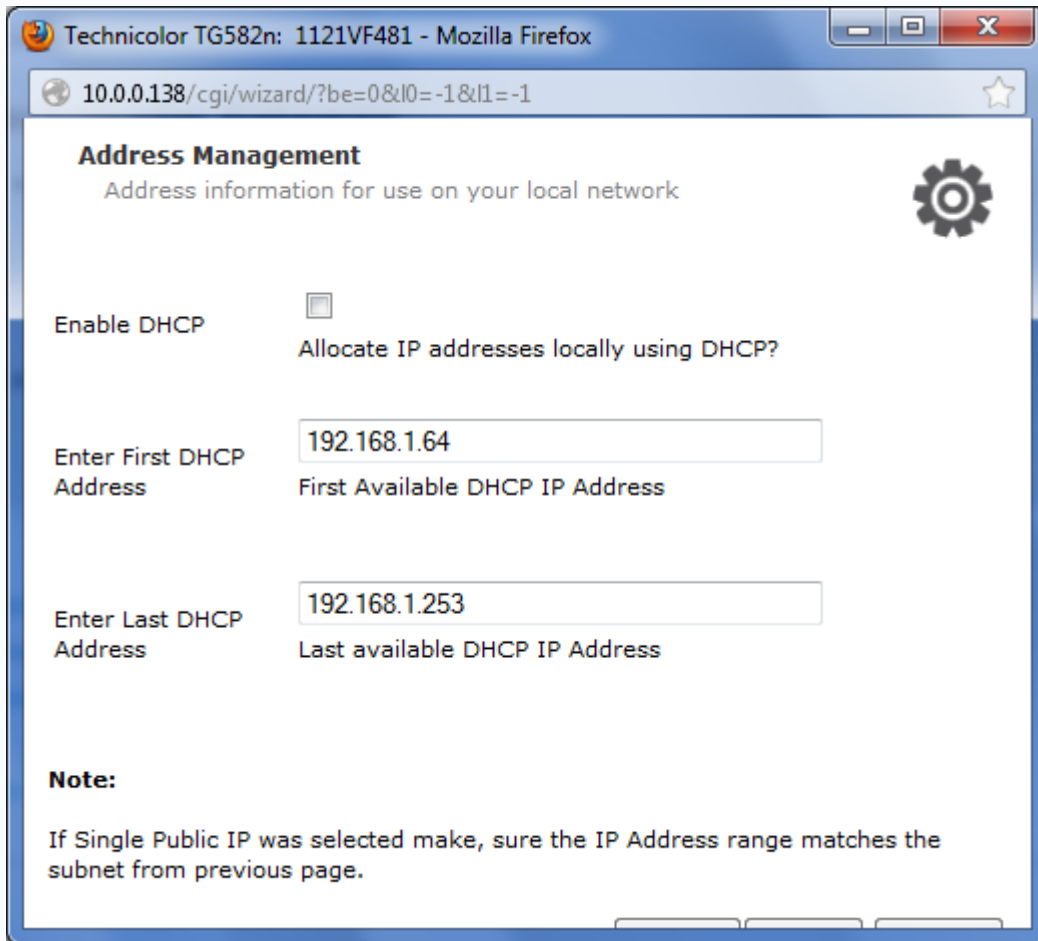
If you have chosen the Single Public IP option this will be the LAN Router address used in conjunction with the DHCP range on the following page.

For Public Subnet configurations you will need to input the details provided by your ISP.

< Back   Next >   Cancel

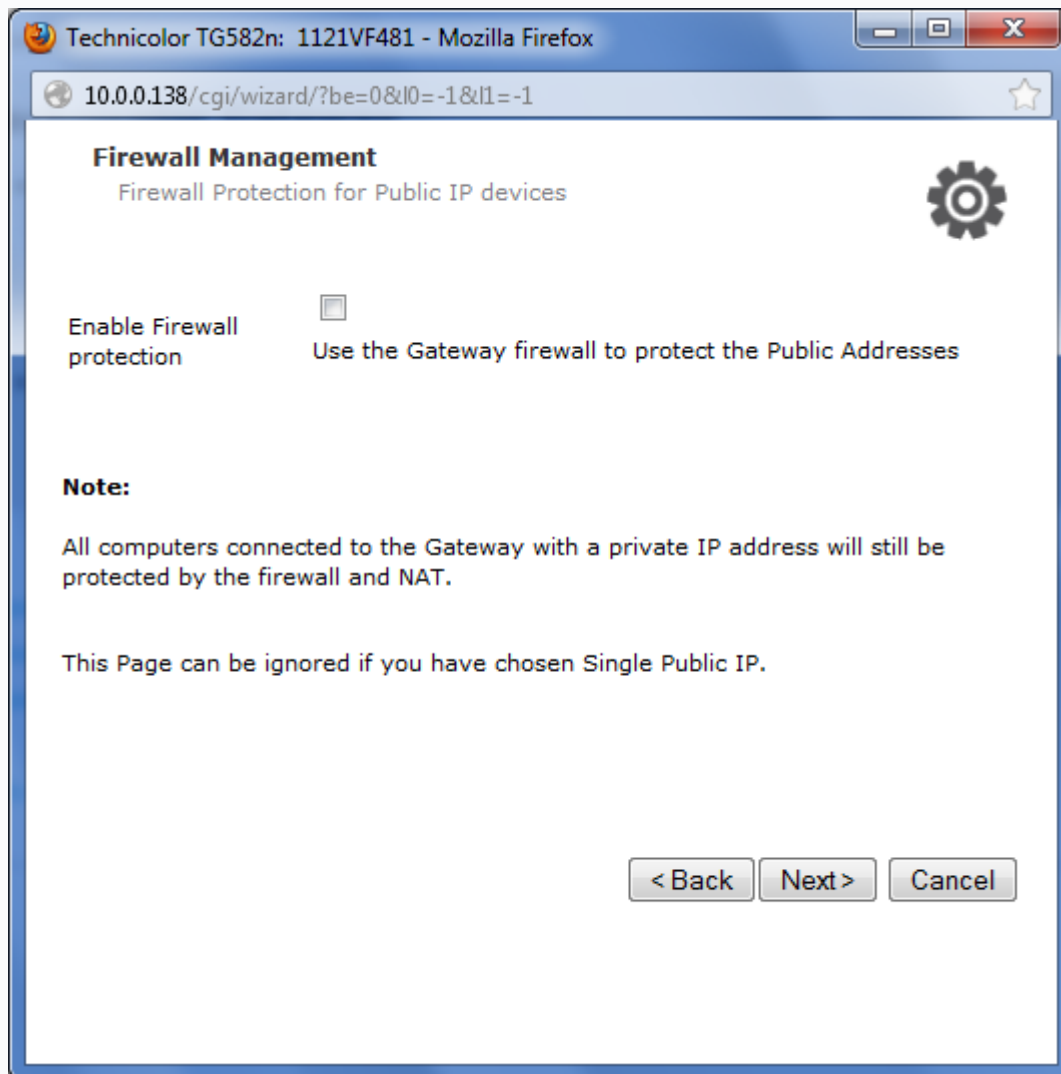
## Step 10

Ensure DHCP is unchecked.



## Step 11

The remainder of the settings can be configured as you see fit.



## DNS based Vulnerabilities and DDOS Attacks

Open DNS relays and related malware are threats to local and remote users of the Internet, and typically employed to overload network resources by issuing multiple DNS requests which are then amplified by the systems responding. A useful explanation can be found [here](#).

Users can check for open relays/resolvers on their systems by employing the checks detailed [here](#).

In addition to the open-relay vulnerability similar attacks utilising DNS can also be launched by malware resident on the local system. Customers should employ virus and malware checking on all

their systems and ensure that this is fully up to date.

## IP Addresses

### WAN IP Address

Gamma provides a single fixed IP address on all connections, free of charge.

### Routed IP Address / Non-NAT Configurations

Where the end customer does not want to use NAT and needs to assign public IP addresses to machines on their LAN, Gamma will provide the following routed IP subnets:

<b>Subnet size</b>	<b>Useable IPs</b>
4	2
8	6
16	14

Please see the Price List for charges.

## Do I Need Routed IPs?

You need routed IPs if you are running a complex set up and have multiple instances of the same service, such as multiple HTTPS servers or you have other network services that do not support being configured behind a NATed router.

In this instance, NAT is disabled on the router and a range of External IP addresses are assigned to the LAN side of the router (usually a range of 4 with 2 usable or a range of 8 with 6 usable). This then allows you to assign these externally accessible IP addresses to the devices on the network. However you will need to ensure that you have enough IP addresses for each device you wish to connect.

The WAN IP address is assigned to the WAN/ADSL port on the Customers router.

## How do I configure the connection without routed IPs?

The router can be configured using NAT with local IP addresses (for example 10.0.0.0/8, 172.16.0.0/12 or 192.168.0.0/16 ) assigned to the network devices on the LAN side.

If you are running services that need to be externally accessible port forwarding can then be used. Port forwarding allows you to forward traffic though for specific ports to individual devices on the local network for example SMTP onto a mail server or SIP traffic to a PBX.

## DSL Credentials

DSL credentials are also known as PPP Credentials, please see below for more information regarding these.

# Gamma DSL Realms

All new orders are provisioning on @b2bdsf.

Services migrated in from the old third party network will be on @business-dsl.co.uk

## Finding User Credentials

User credentials can be found in the Broadband Service Management page of the Gamma Portal.

Once you have logged on to the portal go to Data Services-> Broadband -> Broadband Service Management. Using the filters find the subscriber you are looking for:

**Broadband Service Management**

Partner Account:

CLI:  Service ID:

Service Status: (Any) Broadband Category: (Any)

Customer Name:  Site Postcode:

IP Address:  CPE Username:

Records Per Page: User default (10) Max results returned: User default (100)

Showing 1 to 10 of 100

Service ID	Channel Partner	Broadband Product	Service Status	CLI	Customer Name	Postcode	Actions
<a href="#">144610</a>		Gamma Unlimited Business 2+	Active	016		M1	<input type="button" value="Actions"/>

Click on the Service ID, far left of the table as shown above, and you will be taken to a screen that shows all the service details for that subscriber. This includes the DSL credentials needed to configure the customer's service.

## Broadband Service Details

### Basic Service Details

Service ID:	11111
CLI:	0161 111111
Broadband Product:	Gamma Unlimited Business 2+
Service Status:	Active
Session Status:	Offline

### Product Details

Care Level:	Standard Care
Router Model:	Supplied By Customer
DSL Username:	XXXXXXXXXX
DSL Password:	XXXXXXXXXX
WAN IP Address:	188.XXX.XXX.XXX

## Connecting to the SMTP Relay

This is a closed service only available to Gamma NextGen Broadband customers. This is a relay service only and Gamma takes no responsibility for email content filtering or other regulatory compliance e.g. logging of message traffic.

Gamma's SMTP relay can be found at [smtprelay.business-access.co.uk](https://smtprelay.business-access.co.uk). No other credentials are required.

## **Bulk Mailing**

Gamma's SMTP Relay does not support bulk mailing. Bulk mailing is defined as:

E-mails with more than 120 recipients per email

Sending E-mails at a rate of over 10 emails per minute

## **Other Restrictions**

Gamma's SMTP Relay will not process E-mails that are larger than 28 Mega Bytes (MB) in size.

## **Potential Error Messages**

Relaying denied - Not a recognised IP address.

Relaying denied by ISP - We have specifically blocked this user. There may be an active ticket regarding it.

Admin Prob - Max recipients reached, as above.

Rate Limit exceeded - Limit above reached.

Size too big - As above, for the email and it's attachments.

Please note:

**We explicitly reserve the right to change the rules governing the SMTP relay service at any time with or without prior notice.**

## Gamma's DNS servers are

Primary: **88.215.61.255**

Secondary: **88.215.63.255**

## Suspend and Resume

### Purpose

This functionality allows you to stop a subscribers' service from working without having to cease the line. Suspending a user simply removes them from our RADIUS disabling their service. The service can be resumed (using the same credentials and IP addresses) by simply reinstating them on the

RADIUS.

## Suspending or Resuming a Service

### Step 1

To Suspend / Resume services you can do this from the Service Management screen, identifying the circuit you want to suspend and then using the Actions menu select "Suspend Service".

### Broadband Service Management

Account:

CLI:  Service Id:

Service Status:  Broadband Category:

Records Per Page:  Max results returned:

Showing 1 to 10 of 33

Service Id	Account Name	Broadband Product	Service Status	CLI	Customer Name	Street	Town	Postcode	CPE Username	CPE IP Address	Actions
<a href="#">83642</a>	Gamma Telecom	Gamma Converged 2+	Active	01954252580	Mr Cook	High Road	Colchester	CO1 1AA	01954252580@gamma.com	192.168.1.1	<input type="button" value="Actions"/>
<a href="#">82814</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	01514201306	Mr Latham	London Road	Colchester	CO1 1AA	01514201306@gamma.com	192.168.1.1	<input type="button" value="Actions"/>
<a href="#">82751</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	0142082100	Mr Latham	London Road	Colchester	CO1 1AA	0142082100@gamma.com	192.168.1.1	<input type="button" value="Actions"/>
<a href="#">67641</a>	Gamma Telecom	Gamma Home Worker WBC	Active	01883624487	Mr Latham	London Road	Colchester	CO1 1AA	01883624487@gamma.com	192.168.1.1	<input type="button" value="Actions"/>
<a href="#">60330</a>	Gamma Telecom	Gamma Home Worker WBC	Active	01617077407	Mr Latham	London Road	Colchester	CO1 1AA	01617077407@gamma.com	192.168.1.1	<input type="button" value="Actions"/>
<a href="#">60153</a>	Gamma Telecom	Gamma Home Worker WBC	Active	01614428401	Mr Latham	London Rd	Colchester	CO1 1AA	01614428401@gamma.com	192.168.1.1	<input type="button" value="Actions"/>
<a href="#">60067</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	01612320212	Mr Latham	High Road	Colchester	CO1 1AA	01612320212@gamma.com	192.168.1.1	<input type="button" value="Actions"/>
<a href="#">59456</a>	Gamma	Gamma Home	Active	01253780066	Mr Latham	High Road	Colchester	CO1 1AA	01253780066@gamma.com	192.168.1.1	<input type="button" value="Actions"/>

- Disconnect Service
- Fault Diagnostics
- Line Profile Summary
- Ping IP Address
- Regrade Service
- Request Cease
- Request MAC
- Suspend Service**
- Usage Report
- View

## Step 2

To Suspend / Resume services you can do this from the [Service Management](#) screen, identifying the circuit you want to suspend and then using the Actions menu select “Suspend Service”, or if an account is already suspended you’ll be able to select “Resume Service”.

### Suspend Service

Basic Service Details	
ServiceID:	00000000000000000000000000000000
CPE Username:	00000000000000000000000000000000 sl
CLI:	00000000000000000000000000000000
Broadband Product:	Gamma Converged 2+

Suspend Service	
Do you wish to suspend this Service?	
<input type="button" value="← Back"/> <input type="button" value="Suspend"/>	

Please note: to find users who have been suspended, use the ‘Status’ filter when searching in the ‘Service Management’ page.

# Broadband Service Management

Account

CLI

Service Status

Records Per Page

Service Id

Broadband Category

Max results returned

Showing 1 to 10 of 33

Service Id	Account Name	Broadband Product	Service Status	CLI	Customer Name	Street	Town	Postcode	CPE Username	CPE IP Address	Actions
<a href="#">83642</a>	Gamma Telecom	Gamma Converged 2+	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>
<a href="#">82814</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>
<a href="#">82751</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>
<a href="#">67641</a>	Gamma Telecom	Gamma Home Worker WBC	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>
<a href="#">60330</a>	Gamma Telecom	Gamma Home Worker WBC	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>
<a href="#">60153</a>	Gamma Telecom	Gamma Home Worker WBC	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>
<a href="#">60067</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>
<a href="#">58456</a>	Gamma Telecom	Gamma Home Worker WBC	Active	0182222222	Mr Jones	High Street	Colchester	CO1 1AA	0182222222	192.168.1.1	<input type="button" value="☰ Actions"/>

## Signing Up to Push Reports

Please use the below guide to help you set up push reports.

### Step 1

Login to the Gamma Portal and hover over the 'Reporting' tab which will present a drop down list. From this list select reporting then push reporting.

REPORTING BILLING HELP & SUPPORT

Reporting ▶ Push Reporting

Broadband ▶ Notifications

Provisioning ▶

Following Gamma products have Knowledge Base click on one to be taken to the relevant page.

## Step 2

The next page shown will allow you to select the reports that you want and will also allow you to select the frequency daily, weekly or monthly. Once you have selected these please press the update subscription button.

### Push Reporting

The selections you make here determine the reports you will receive to your Portal account email address. You can select as many or as few reports as you wish and by a frequency of your choice. For more Traffic Monitoring reports please click [here](#). If you need to check or change your Portal email address, please [click here](#).

#### Reports

Show 200 entries Search Category / Report:

Showing 1 to 19 of 19 entries

Report Name	Category:	Daily	Weekly	Monthly
Customers And Mailboxes	Billing & Management Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data Services - Broadband 100 Percent usage	Billing & Management Reports	<input type="checkbox"/>	n/a	n/a
Data Services - Broadband 60 Percent usage	Billing & Management Reports	<input type="checkbox"/>	n/a	n/a
Data Services - Broadband 80 Percent usage	Billing & Management Reports	<input type="checkbox"/>	n/a	n/a
Gamma SIP Trunks No Bandwidth	Billing & Management Reports	n/a	<input type="checkbox"/>	n/a
Mobile Contract Renewal	Billing & Management Reports	n/a	n/a	<input type="checkbox"/>
New Provide Orders	Billing & Management Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Provide Orders In Service Training Period	Billing & Management Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WLR Direct Dialed CDRs	Billing & Management Reports	<input checked="" type="checkbox"/>	n/a	n/a
Combined CPS,IDA and NTS	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
CPS Ceases	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
CPS Rejections	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
Featureline Tracker	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
Good CPS and IDA Orders	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
IDA Ceases	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
IDA Report	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
Other CPS Status Changes	CPS Provisioning Reports	<input type="checkbox"/>	<input type="checkbox"/>	n/a
IDA Provisioning Alerts	NTS Provisioning Report	<input type="checkbox"/>	<input type="checkbox"/>	n/a
NTS Provisioning Alerts	NTS Provisioning Report	<input type="checkbox"/>	<input type="checkbox"/>	n/a

Showing 1 to 19 of 19 entries

Update Subscriptions

# Usage Report

If you're wanting to see what a service is using data wise, you can do this using our Usage Report from the Service Management screen.

## Step 1

Once you're in the Service Management screen, using the Actions drop down select "Usage Report".

The screenshot displays the 'Broadband Service Management' interface. At the top, there are search filters for Account (Gamma Telecom - 44000002), CLI, Service Status (Any), Records Per Page (200), Service Id, Broadband Category (Any), and Max results returned (1000). Below the filters are 'Reset' and 'Search' buttons. A 'Download' button is located on the left, and 'Showing 1 to 33 of 33' is on the right. The main table lists services with columns for Service Id, Account Name, Broadband Product, Service Status, CLI, Customer Name, Street, Town, Postcode, CPE Username, and CPE IP Address. The 'Actions' column for service 83642 is expanded, showing options: Disconnect Service, Fault Diagnostics, Line Profile Summary, Ping IP Address, Regrade Service, Request Cease, Request MAC, Usage Report (highlighted), and View. A 'Usage R' button is also visible at the bottom right of the expanded menu.

Service Id	Account Name	Broadband Product	Service Status	CLI	Customer Name	Street	Town	Postcode	CPE Username	CPE IP Address	Actions
83642	Gamma Telecom	Gamma Converged 2+	Active	0123456789	John Smith	123 Main St	London	EC1A 1AA	0123456789@gamma.com	192.168.1.1	Actions
82814	Gamma Telecom	Gamma Fibre Home Worker	Active	0123456789	John Smith	123 Main St	London	EC1A 1AA	0123456789@gamma.com	192.168.1.1	Actions
82751	Gamma Telecom	Gamma Fibre Home Worker	Active	0123456789	John Smith	123 Main St	London	EC1A 1AA	0123456789@gamma.com	192.168.1.1	Actions
87641	Gamma Telecom	Gamma Home Worker WBC	Active	0123456789	John Smith	123 Main St	London	EC1A 1AA	0123456789@gamma.com	192.168.1.1	Actions
80330	Gamma Telecom	Gamma Home Worker WBC	Active	0123456789	John Smith	123 Main St	London	EC1A 1AA	0123456789@gamma.com	192.168.1.1	Actions
80153	Gamma Telecom	Gamma Home Worker WBC	Active	0123456789	John Smith	123 Main St	London	EC1A 1AA	0123456789@gamma.com	192.168.1.1	Actions
80067	Gamma Telecom	Gamma Fibre Home Worker	Active	0123456789	John Smith	123 Main St	London	EC1A 1AA	0123456789@gamma.com	192.168.1.1	Actions

## Step 2

Select the start date and end date and whether you want to display the data broken down by each day or by each month. Click “Query” and then this will display the Upload, Download and Total data used for that circuit.

### Broadband Service Management

Account:

CLI:  Service Id:

Service Status:  Broadband Category:

Records Per Page:  Max results returned:

Showing 1 to 33 of 33

Service Id	Account Name	Broadband Product	Service Status	CLI	Customer Name	Street	Town	Postcode	CPE Username	CPE IP Address	Actions
<a href="#">83642</a>	Gamma Telecom	Gamma Converged 2+	Active	0000000000	Gamma Telecom	Gamma Street	Gamma	Gamma	0000000000	0000000000	<input type="button" value="Actions"/>
<a href="#">82814</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	0000000000	Gamma Telecom	Gamma Street	Gamma	Gamma	0000000000	0000000000	<input type="button" value="Actions"/>
<a href="#">82751</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	0000000000	Gamma Telecom	Gamma Street	Gamma	Gamma	0000000000	0000000000	<input type="button" value="Actions"/>
<a href="#">67641</a>	Gamma Telecom	Gamma Home Worker WBC	Active	0000000000	Gamma Telecom	Gamma Street	Gamma	Gamma	0000000000	0000000000	<input type="button" value="Actions"/>
<a href="#">80330</a>	Gamma Telecom	Gamma Home Worker WBC	Active	0000000000	Gamma Telecom	Gamma Street	Gamma	Gamma	0000000000	0000000000	<input type="button" value="Actions"/>
<a href="#">80153</a>	Gamma Telecom	Gamma Home Worker WBC	Active	0000000000	Gamma Telecom	Gamma Street	Gamma	Gamma	0000000000	0000000000	<input type="button" value="Actions"/>
<a href="#">60067</a>	Gamma Telecom	Gamma Fibre Home Worker	Active	0000000000	Gamma Telecom	Gamma Street	Gamma	Gamma	0000000000	0000000000	<input type="button" value="Actions"/>

type=Service&serviceId=83642

## Incident Status

Within this screen, you can check to see if there are any BT incidents (Major Service Failures, Planned Engineering Works etc), Gamma Broadband alerts, or any support calls linked to a service.

## BT Network Incident Check

This table will alert you to any known outages or planned engineering works which the service is linked to. If any issues are identified, you can find further information from here.

To find the further information, click on the number of either Major Service Failures, Planned Engineering works or BTW Trouble Tickets (highlighted in below screenshot)

#### BT Network Incident Check

BT Network Incident Checks			
Service Linked to Major Service Failure?	No	✓	This Service is linked to <b>0</b> Major Service Failures.
Service Linked to Planned Engineering Work?	No	✓	This Service is linked to <b>0</b> Planned Engineering Works.
Service Linked to BTW Trouble Ticket?	Yes	✗	This Service is linked to <b>1</b> BTW Trouble Tickets.

## Gamma Broadband Alerts Check

This table will show you if there are any known Gamma Broadband alerts which have been raised in the last 7 days.

To find further information for any Gamma Broadband Alerts, click on the number of alerts as highlighted in the image below:

#### Gamma Broadband Alerts Check

Gamma Network Incident Check			
Gamma Broadband Alerts raised in the last 7 days	No	✓	There are <b>0</b> Gamma Broadband Alerts raised in the last 7 days. <b>Note:</b> The presence of a Gamma Broadband Alert does NOT imply this Service is affected - please refer to the alerts details to assess if this Service could be affected by it.

## Gamma Support Call

This table will show you the fault history of the circuit, including any service requests. You can get more information for open support calls against the service, previous service requests (30 day limit) and previous fault support calls.

To find this further information, click on the number of of support calls or service requests as highlighted in the image below.

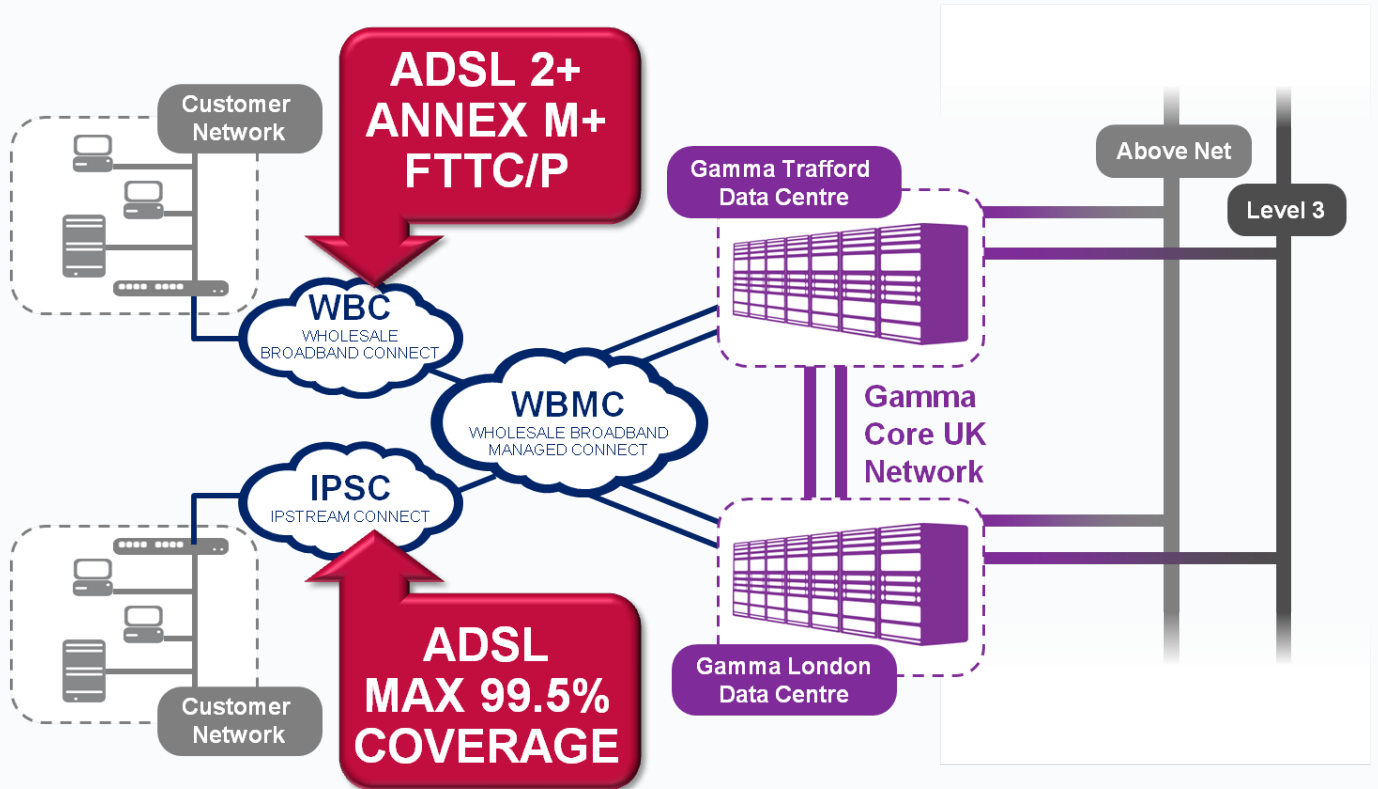
### Gamma Support Call

Please note that Gamma support calls listed below only show those that were raised via the portal and those that you have called through to the support teams may not be listed below.

Support Calls			
Are there any open support calls against this Service? This test checks for any open support calls in ITSM for the Service, which might be of use for diagnosing the fault	Yes		There are <b>1</b> open support calls against this Service.
Are there any previous service requests against this Service in the past 30 days? This test checks for any previous service requests in ITSM for the Service, which might be of use for diagnosing the fault	No		There are <b>0</b> previous service requests against this Service in the past 30 days.
Are there any previous fault support calls against this Service? This test checks for any previous fault support calls in ITSM for the Service, which might be of use for diagnosing the fault	Yes		There are <b>4</b> previous fault support calls against this Service

## Network Overview

Gamma's Next Generation Network provides the benefit of both the latest ADSL technologies, such as Annex 2+, FTTC, SoGea and FTTP, the coverage provide by BT's IPStream network. The N+1 resilient design of the network ensures the level of service businesses would expect from their ISP.



## Feedback

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