

# Managed Broadband WBC Service Description

This document does not form part of any contract. Due to continuous product development, the content of this document is subject to change.

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# Managed Broadband WBC Service Description

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## 1. Introduction

This document provides an overview of the BT Wholesale (BTW) Wholesale Broadband Connect (WBC) service. BTW WBC includes the following types of connectivity:

- BT Wholesale Wholesale Broadband Connect (WBC) ADSL1
- BT Wholesale Wholesale Broadband Connect (WBC) ADSL2+
- BT Wholesale Wholesale Broadband Connect (WBC) ADSL2+ Annex M

This document describes the service and the standard service components. Anything outside the scope of this document will be deemed non-standard and as such follow the Non Standard Solution Process (NSSP).

The components of the BTW WBC service are designed so that end users consume them like a utility. Typically the characteristics of a utility are that users 'just want it to work' and expect to achieve the experience they are paying for at the click of a button.

xDSL can act as building blocks for other business products and services. It offers very low rates of failure, consistent performance and value for money. This new networking infrastructure and supplier technologies provide high quality at mass market volumes, in an efficient manner.

Our broadband provider is Griffin, a channel partner which does not sell direct to end users.



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## Features and benefits

The features and benefits of the BTW WBC service are listed below. Please note that features and benefits which are supplier specific have been highlighted:

### Benefits:

- Huge choice of products, reducing the cost of connectivity
- Reliable connectivity with high uptimes
- Closer control of traffic
- Keep your current PSTN provider
- Ring-fenced network providing a business-grade, resilient service



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## 2. Service components

This service consists of the following service components.

Please note that where traffic managed connectivity is concerned, non-business traffic will be de-prioritised where it may cause a detrimental impact on the experience of those who are using business critical applications during peak periods. By flexing the network Griffin can guarantee the best possible performance for business applications throughout the day.

Please refer to Appendix 1 for more information on the service variants and subsequent guarantees relating to supplier components and the difference between standard and elevated traffic weightings.

### 2.1 BT Wholesale Broadband Connect (WBC) ADSL

BT WBC Max and WBC Max Premium provide downstream line-rate speeds of up to 8Mbit/s and 0.8Mbit/s upstream.

BT WBC ADSL2+ provides downstream line-rate speeds of up to 20Mbit/s and 1Mbit/s upstream.

BT WBC ADSL2+ Annex M provides downstream line-rate speeds of up to 20Mbit/s and 2.5Mbit/s upstream.



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## Service stability options and Customer Controlled Profiles (CCoP)

CCoP gives Partners the opportunity to configure end user circuit stability and reliability at the point of ordering.

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Service options provide alternative versions of the service that can improve the stability of the service but may trade some speed in order to do so. The different versions are detailed in the table below:

WBC	Description
Standard / fast	The service runs at the highest line rate the line can support reliably
Stable	The line rate may be reduced by 800kbit/s or more to achieve increased stability over the service option 1/standard versions
Super stable	The line rate may be reduced by a further 800kbit/s or more to achieve increased stability over the service option 2/stable versions

Service/stability options should not be used as part of initial fault diagnostics, but they may be a useful feature for lines that regularly experience instability and may provide end users with a better experience and the potential for fewer fault reports.

In particular, lines that have been reported as unstable or have experienced dropping connections without supplier line management systems acting may also benefit from a move to a more stable option.

This is because the line management system thresholds that support the service/stability options have been set to act more aggressively to manage line stability. This may provide an improved experience for users and could potentially reduce calls to your service teams.

Please note: When a new service/stability version is chosen, a line will undergo a new stabilisation period. At the end of this time new line attributes will be calculated. This applies to upward or downward option moves. Moving from service option 1 to 3 is likely to incur a 1600kbit/s line rate decrease.

## 2.2 Technologies

Below are the key technologies in use on each supplier service. Please see Appendix 1 for more detailed performance information relating to each service component. Each of the below items can be ordered through a MOPS platform unless specified within the exclusions section.



Networking Infrastructure Solutions  
 Information Worker Solutions  
 OEM Hardware Solutions  
 Licensing Solutions



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 Vat Registration no. 742 2845 34

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### 2.2.1 ADSL1/ADSL2+ Technology

The Managed Broadband service uses powerful error correction and automatic line management technologies to ensure a more stable service performance. This means that the line-rate may fluctuate within a predefined range. This is a normal feature of the service.

Supplier line management platforms are designed to push every single line to its absolute limit while controlling potential faults. For instance, the BT Dynamic Line Management (DLM) system collects line data from every line 4 times an hour. The system uses that data to interpret what speed the line should be at to optimise the speed of the line without compromising the line quality (or inducing additional noise on the line). DLM only acts on a line that is only determined to be unstable, in all other cases the line will be allowed to obtain higher speeds. Other supplier systems work in a similar way.

With respect to BT's DLM platform, the first adjustment should take place within 75 minutes of the service being activated and then in 4 hour intervals thereafter. Below is an indication of how long the training period may last for:

- New provides/activations = 7-10 calendar days
- Singleton migrations from LLU to WBC = 7-10 calendar days
- Singleton migrations from IPStream Connect to WBC = 5 calendar days
- Bulk migrations from Griffin IPStream Connect to Griffin WBC = 3 working days

During the first 10 days of service the phone line will be automatically measured to establish what speed it can support, and in particular at what speed the line will remain stable. The supplier tests will look to find out the lowest broadband speed received during the last 10 days. End users should expect to see sync speeds vary during this time, and it's possible that there may be disconnections from time-to-time. Whilst the testing is being carried out, you should advise your end users to regularly make new connections to the Internet.

All other suppliers have similar systems. Whilst it may not be something you can directly record or notice it is important to understand that every ADSL circuit does require time to adapt to its surroundings.

ADSL2+ technology is much more at risk to poor quality micro filters, long phone extension cables and electrical interference, where a lower broadband speed might have been more tolerant. To help prevent problems end users should ensure that anything within their control is setup properly including broadband hardware, internal wiring, filters etc. This also means that the line rate (sync rate) for any line may vary at any time due to the prevailing line, weather or home environment conditions.

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More than a third of all faults raised to our technical team about ADSL are issues relating to items which are not directly within our control. Unless specified, it is the Partners responsibility to perform basic checks and diagnostics before raising faults via MOPS.

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### 2.2.2 ADSL2+ Annex M Technology

Annex M is an optional feature of the ADSL2+ standard that boosts the upstream speed by trading off a small amount of the downstream speed (approximately 10%-15%). The ADSL2+ Annex M standard used in the UK means that routers should be configured to this standard or multi-mode to allow the device to train to the higher upstream speeds:

- ADSL2+ Annex M ITU-T G.992.5

Annex M is a rate adaptive component and will synchronise up to the highest upstream line rate possible. It is primarily targeted at end users who require higher upstream bandwidth support for services such as high quality voice/SIP Trunking/ISDN replacement and VPN tails.

Please note that Annex M may not be available on all lines.

Pushing higher upstream speeds from a router is intensive on the device. Some devices are not built to cope with the additional upstream speeds. Please make sure you are using Midland Computers recommended Customer Premise Equipment (CPE) or CPE which has been certified for Annex M use.

### 2.3 Compatible hardware

Below is an overview of the hardware tested by Midland Computers, recommended for use on Midland Computers connectivity services:

#### 2.3.1 ADSL compatible hardware

Midland Computers has carefully tested all Managed Broadband services in conjunction with a number of Zyxel, Billion, Zoom and Draytek devices to ensure full compatibility on both the Midland Computers and respective supplier networks. It's important to note that Midland Computers recommended hardware has been thoroughly tested and subsequently added to supplier 'approved hardware lists'.

If you choose to source your own hardware for use with this service, we recommend that you ensure the hardware vendor is ADSL1, ADSL2+, ADSL2+ or Annex M compatible and works at the optimum level with regards to rate adaptive services. Any devices which do not adhere to the UK standards will extend resolution times in a fault scenario and Midland Computers have the right to provide one of their own routers to resolve the fault, at cost to the customer. To help Midland Computers technical support teams diagnose issues more quickly please check that the end user device is using the appropriate drivers/firmware before contacting our support teams.



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### 3. Service delivery

This section describes how a Partner operates the service and the support available to Partners.

#### 3.1 Ordering, provisioning and change management

Please see below for lead times on all possible change management events, split by supplier.

##### 3.1.1 BT Wholesale (WBC) ADSL

BT offer their standard change management guarantees across the WBC components. Midland Computers offer slightly extended lead times to those offered by BT to ensure that each order is dealt with within a reasonable timescale. A number of account activities may require human intervention which can extend lead times.

Lead times may vary but Midland Computers will make best endeavours to keep to the following lead times where possible.

ADSL Product Event	Lead Times
New Provide	7 working days
Migration	7 working days
Managed bulk migrations/re-grades*	60 working days
Re-grades*	5 working days
Annex M re-grades*	5 working days
Modify*	5 working days
Ceases*	5 working days
Fast track (expedite)	Unavailable

\*Must be performed as a request through the helpdesk. For Annex M specifically: to Annex M from other WBC components is classed as an Annex M re-grade. Changing from IPStream Connect or other LLU suppliers is classed as a migration.

### 3.3 Technical support

This service is supported by the Midland Computers Support team. First line support is provided as part of this service.

Technical support is available Monday to Friday from 0900 – 1700. Extra support options are available. Please contact your Account Manager for the most up to date information.

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### 3.3.1 BT Wholesale WBC

It is important to note that the BT line checker can test potential upstream and downstream speeds prior to installation which dictates the services which are available to the end user. As with BT's IPStream Connect, WBC components utilise rate adaptive technology. This means that the line is subject to the usual environmental factors which may restrict the line from receiving the lines sync speed.

## 4. Service levels

The service is delivered in a fault-tolerant configuration to provide High Availability (HA). This is detailed in the technical overview section.

### 4.1 Care levels

Griffin offers care levels to allow Partners to better configure the response time of our suppliers and Griffin in fault based scenarios.

#### Standard Care

- Supplier fault clear time: 48 hours (Griffin fix time SLA is within 5 days)
- Supplier response time: updated every 4 hours

In addition Partners with BT IPStream Connect and WBC can also select Enhanced Care with the features below:

#### Enhanced Care

- Supplier fault clear time: 24 hour clear time, with Griffin and supplier fault fix time of 48 hours
- Faults outside the SLA are credited using the standard compensatory process (provided the site had 24 hour access throughout the life of the fault)
- Supplier response time: updated every 2 hours

### 4.2 BT Wholesale WBC ADSL throughput

Please note that Griffin will also contend services within the Griffin network relative to the value of the service component.



**4.2.1 WBC ADSL minimum throughput matrix**

For non-SBC products the minimum throughput is 8Mb/s for 90%\* of the 3 busiest hours of the day, Standard Based Charging products have separate minimum throughputs.

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During outages or network incidents Griffin reserve the right to temporarily manage the network in a manner which may cause throughput to drop below the minimum throughputs outlined below.

Product	SBC	Non-SBC
Max	1200kbps*	90% of line rate up to 8Mb/s**
Max Premium	2400kbps*	90% of line rate up to 8Mb/s**
ADSL2+	1200kbps*	90% of line rate up to 8Mb/s**
ADSL2+ Premium	2400kbps*	90% of line rate up to 8Mb/s**
ADSL2+ Annex-M	1200kbps*	90% of line rate up to 8Mb/s**
ADSL2+Annex-m Premium	2400kbps*	90% of line rate up to 8Mb/s**

\* Where the minimum throughput cannot be achieved due to line distance or quality the minimum throughput becomes 90% of the line rate.

\*\* When the product is elevated the minimum throughput is 90% of line rate up to 12Mb/s, where the minimum throughput cannot be achieved due to line distance or quality the minimum throughput becomes 90% of the line rate.



Networking Infrastructure Solutions  
 Information Worker Solutions  
 OEM Hardware Solutions  
 Licensing Solutions

