Fibre Ethernet & Fibre Broadband

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Agenda

- Review fibre services

- Product differences

- Resiliency options

- Product updates & developments

Fibre Connectivity

- Fibre Broadband
  - FTTC – Fibre to the Cabinet broadband (VDSL)
  - FTTP – Fibre to the Premises broadband

- FTTC Ethernet

- Fibre Ethernet

Fibre Broadband

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Fibre to the Cabinet (FTTC) broadband

- BT Wholesale & TalkTalk Business

- Requires copper line

- Up to 80Mbps downstream & 20Mbps upstream

- Bandwidth decreases over distance

- Quality of connection dependent on copper quality

Fibre to the Cabinet (FTTC) broadband

- Available across 96% of the UK
  - 27.7m premises

- Standard & Premium variants available
  - Premium offers prioritised traffic at peak times

- Future product - SoGEA

Fibre to the Cabinet (FTTC) broadband

- Cost
  - 24 Month – Free installation, connection & router
  - VDSL 80/20 Standard: £27.00 / month
  - VDSL 80/20 Premium: £35.00 / month

- Line rental from £10.00 / month

- Check availability via Spitfire website

- Create own quotes & order online

Fibre to the Premises (FTTP) broadband

- BT Wholesale (TTB product by Mid Year)

- Full Fibre – No copper line required

- Up to 330Mbps downstream & 50Mbps upstream

- Standard & Premium variants available

- Intention to add 500Mbps and 1Gbps variants to portfolio when available

Fibre to the Premises (FTTP) broadband

- Openreach Fibre First Project – Network growing
  - 103 locations including major cities
  - Openreach & Government working to deliver rural fibre

- Already available at 1.8m premises across the UK

- Openreach plans to increase availability to:
  - 4m premises by end of March 2021
  - 15m premises by 2025 if "conditions are right"

- Where available, lead time is 3-6 weeks

Fibre to the Premises

How much is FTTP?

- FTTP 80/20 Standard: £39.00 / month

- FTTP 330/50 Standard: £89.00 / month

- FTTP 330/50 Premium: £99.00 / month

Reduced rate if a Spitfire analogue line is ordered

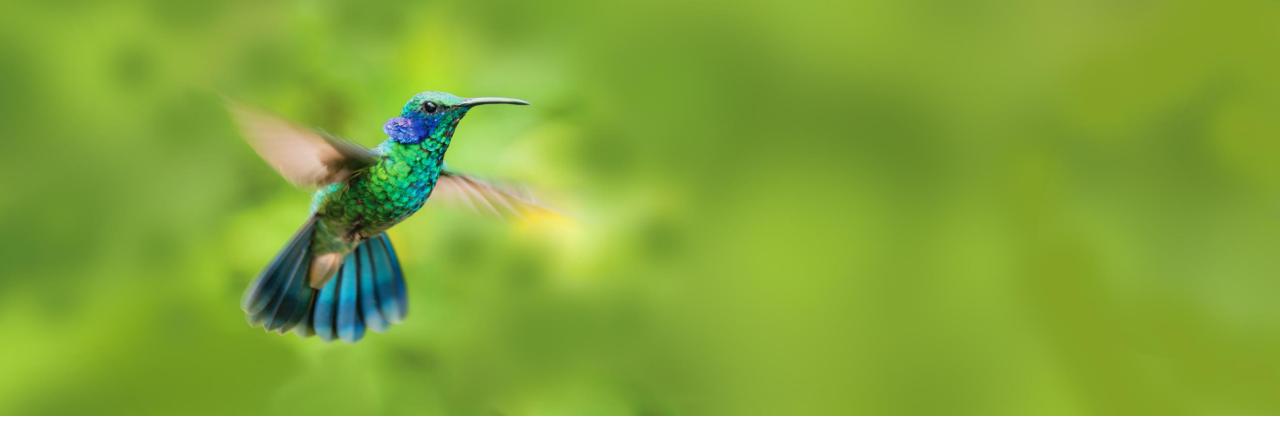# Fibre to the Premises

- Fibre vs. Copper
  - Reliability
  - Higher bandwidth capabilities

- Check availability via Spitfire website

G.fast

- "Ultrafast" Fibre to the Cabinet broadband

- Up to 330Mbps downstream

- Copper length of less than 200m – 300m from cabinet

- Bandwidth issues

- Not currently supplied as a product to customers

FTTC Ethernet

FTTC Ethernet

- BT Wholesale or TalkTalk Business

- Ethernet connectivity over FTTC infrastructure

- SLAs for latency, jitter, packet loss & bandwidth throughput
  - Voice approved

- Bandwidth decreases over distance from cabinet

FTTC Ethernet

- Up to 80Mbps downstream & 20Mbps upstream

- Lower overheads – higher performance against VDSL

- Traffic prioritised over broadband traffic

- 7 clock hour target clearance

FTTC Ethernet

- Available at majority of places where VDSL is available

- Suitable for converged voice & data

- Lead time typically between 15 to 20 working days

FTTC Ethernet

- How much does FTTC Ethernet cost?

  - TTB backhaul, incl. copper pair: £75.00 / month

  - BTW backhaul: ~~£99.00~~ £80.00 / month

- BTW – Separate analogue line sometimes required
  - Analogue line (service level 4):   £15.50 / month

FTTC Ethernet

- Router options to meet all budgets
  - New lower cost Draytek routers available for TTB product

- Check with your account manager for availability

Fibre Ethernet

Fibre Ethernet

- Flexible dedicated bandwidth

- Symmetrical speeds up to 10Gbps

- 100% target uptime SLA

- 5 Clock Hour target clearance

- New Cisco C11XX router range

Fibre Ethernet Wholesale Access Providers

- Maximum coverage across the UK

- Vendor diverse provision

- Ensures Spitfire remain competitive in the market

- Services terminate on to Spitfire core network
  - End-to-end Spitfire solution

Fibre Ethernet

- Available throughout the majority of the UK

- Quoted lead times of around 30 – 70 working days

- Excess construction charges (ECCs) may apply

Fibre Ethernet

- Costs vary depending on a number of factors
  - Location
  - Wholesale provider

- Account Manager **may** be able to provide **indicative** ECCs

Fibre Ethernet SLAs

Support SLAs

Wholesale Access Provider	System Failure Target Response Time	System Failure Target Clearance Time
All Wholesale Providers	30 Minutes	5 Clock Hours

Fibre Ethernet SLAs

Performance SLAs

Wholesale Access Provider	Uncontended Throughput	Target Uptime	Max Packet Loss Target	Latency Target	Jitter Target
BT Wholesale (premium)	100%	100%	N/A	<10ms	<3ms
TalkTalk Business	100%	100%	0.5%	<40ms	<25ms
Virgin Media Business	100%	100%	0.01%	<15ms	<8ms
COLT	100%	100%	0.01%	<10ms	<3ms

Product Comparison

Product Comparison

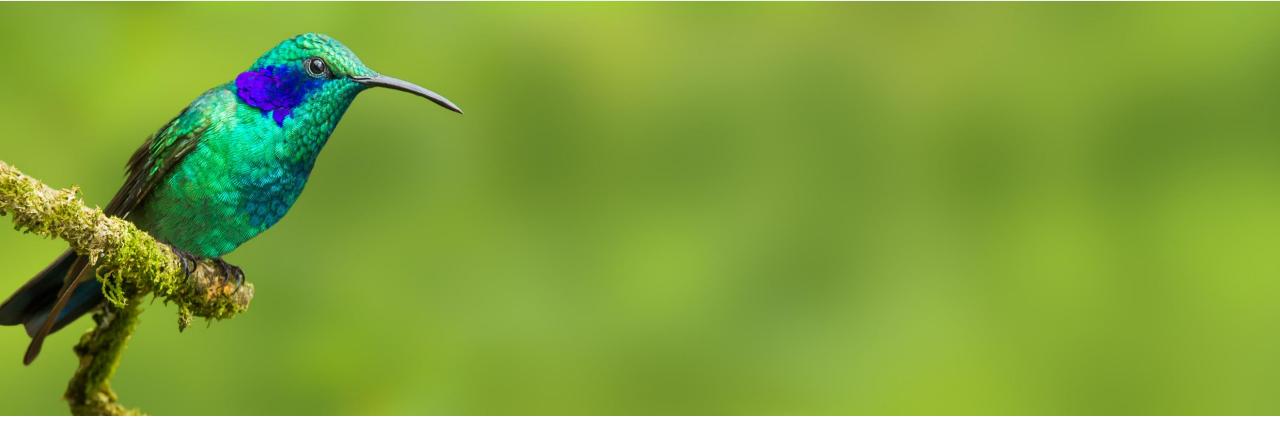|	FTTP Broadband	Fibre Ethernet
SLAs for bandwidth throughput	No	Yes
SLAs for Latency, Jitter or Packet Loss	No	Yes
Uptime target SLA	None	100%
Automatic failover to back-up available	No	Yes
Fix time target SLA	40 Clock Hours	5 Clock Hours
Maximum Downstream	330Mbps	10Gbps
Maximum Upstream	50Mbps	10Gbps
Dedicated Bandwidth	No	Yes
Wholesale Network QoS	No	Yes

Resilience Options

Resilience Options

- Low cost back-up ADSL or VDSL circuit

- Secondary Ethernet circuit

- RAO2 Diverse Plus
  - Two BTW Fibre Ethernet circuits, to separate exchanges

Resilience Options

- Different wholesale backhaul network

- Terminate on separate Spitfire core network node

- Same IP details as Primary circuit

- Automatic failover & multiple router options

Takeaway Points

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Takeaway Points

- New Cisco C11XX routers on Fibre Ethernet
  - Lower upfront cost than Cisco 1921 & cards

- TTB FTTC Ethernet now at £75.00 / month

- Lower cost Draytek routers on TTB FTTC Ethernet

- New higher bandwidth FTTP products in the pipeline

- Fibre Strategy and wholesale suppliers