

KCOM

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Wholesale FibreLine Services

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Agenda / Content

- Service Re-Cap – Retail Minus Overview (what is included)
- Service – Wholesale FibreLine Access
 - What is included?
 - What is proposed? Features and Elements Not Included
 - ISP Responsibilities
 - Profiles & SLA's
- Service – Wholesale FibreLine Local Access
 - What is proposed?

Next Steps



Retail Minus Services – Connect Products

What is included?

- Residential Fibre from £15.58pm exc vat (including network access line and PAYG calls)
- Business Fibre from £21.75pm exc vat (excluding Connect Voice service)
- Full retail services with a reseller discount
- Turn key solution with no additional investment required
- Includes Internet connectivity
- Includes IP addresses
- Includes simple billing migration for existing fibre customers

• Further information: kcomplc.com/regulatory/kcom-wholesale/broadband/



Draft Wholesale Reference Offer products

Wholesale FibreLine Access

- Aggregates End users into a central connection from across all exchanges in the Hull Area

Wholesale FibreLine Local Access

- Communications Providers (CP) are providing connectivity from individual exchanges in the Hull Area
- Documents available at: <https://www.kcomplc.com/regulatory/kcom-wholesale/service-information/new-services/>

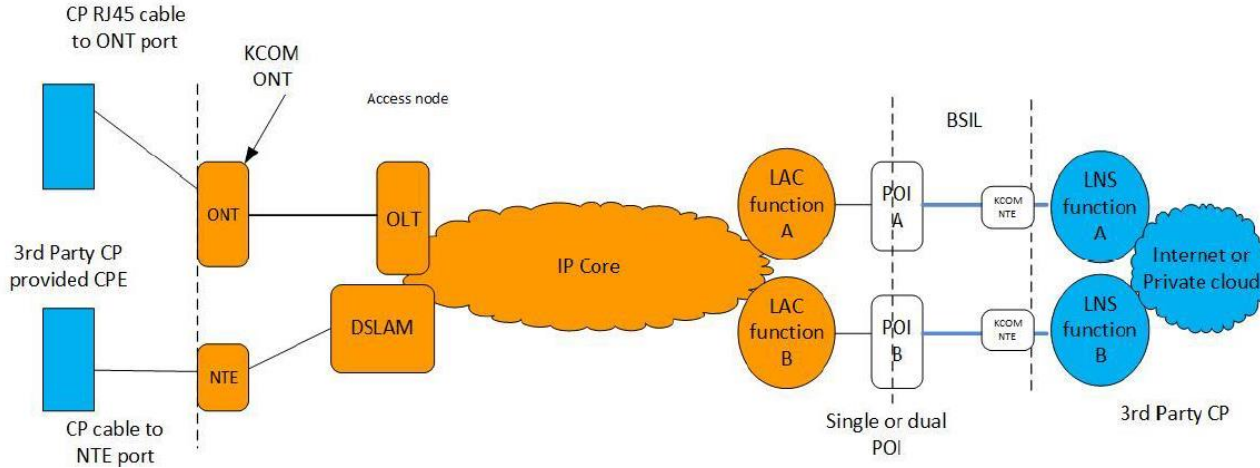


Wholesale FibreLine Access

- Offers an overlay of fibre infrastructure at sites with existing voice services and provides two delivery methods FibreLine-FTTP or FibreLine-FTTC.
- An individual premises will either be served by FTTP or by FTTC, not both, based on KCOM roll-out. This is not a choice. FTTP is the primary product and FTTC is used where FTTP is currently impractical.
- Only available in roll-out areas in the Hull area (OLA)



Wholesale FibreLine Access

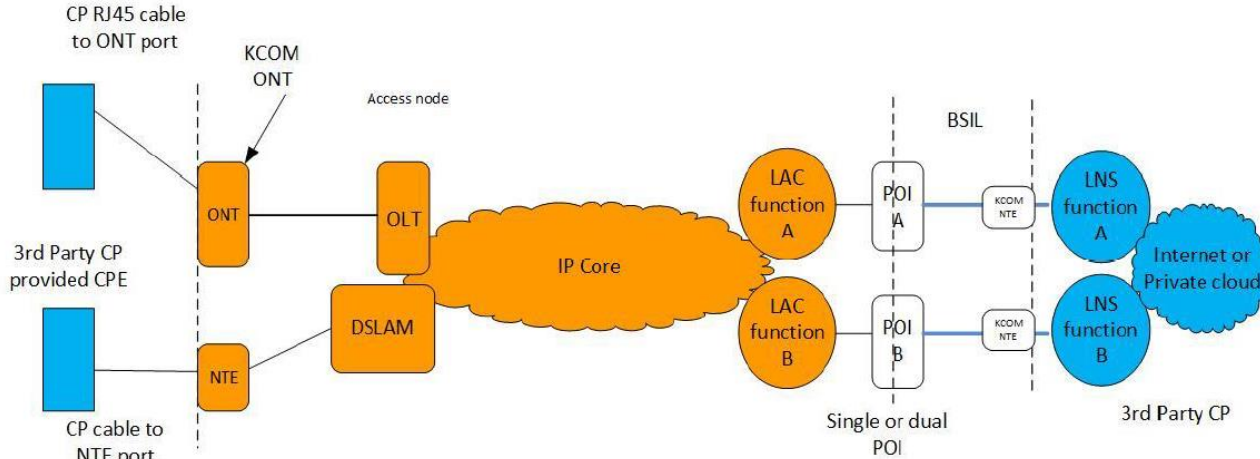


Features

- The service connections are terminated by Optical Network Termination equipment (ONT) installed on the End User premises.
- End User Access circuits / FTTP or FTTC as deployed at premises
- IP Core (Aggregation Point connection & Bandwidth)
- Extension Path
- LAC-LNS: L2TP Access Concentrator (LAC) to L2TP Network Server (LNS)
- L2TP: Layer 2 Tunnelling Protocol



Wholesale FibreLine Access



Elements Not Included

- End User Equipment – Routers
- IP addresses (own IP address allocation required from RIPE, the *Regional Internet Registry for Europe* or end customers private IP's)
- POI: Point Of Interconnect via a Broadband Service Interconnect Link (BSIL)
- Onward connectivity outside the Hull Area (OLA)
- Internet bandwidth



Wholesale FibreLine Access

Commercial Elements

- A. End User Access Connection/Migration One-off charge & Monthly rental
- B. Aggregation Point connection & Bandwidth per month
- C. Extension Path

Commercial Elements outside Wholesale FibreLine Reference Offer

- Broadband Service Interconnect Link (BSIL) to CP site within the OLA
- Onward circuit provision Outside the Hull Area
- Internet Access



Wholesale FibreLine Access End User Access Profiles, SLA's and rentals

SERVICE	FTTP Download Speed / Upload Speed	VDSL Download Speed / Upload Speed	FTTP Minimum Access Speed (Down / Up)	VDSL Minimum Access Speed (Down / Up)	Transition*** End User Rental Per Month Ex VAT		Data Only End User Rental Per Month Ex VAT	
					SLA 1	SLA 2	SLA 1	SLA 2
FibreLine 30/15	30Mbps / 15Mbps	Up to: 30Mbps / Up to:15Mbps	30Mbps / 15Mbps	Check here	£11.00	£14.00	£19.19	£22.19
FibreLine 75/20	75Mbps / 20Mbps	Up to: 75Mbps / Up to:20Mbps	50Mbps / 20Mbps	Check here	£14.00	£18.00	£22.19	£26.19
FibreLine 200/35	200Mbps / 35Mbps	N/A	50Mbps / 30Mbps	N/A	£18.00	£22.00	£26.19	£30.19
FibreLine 250/125	250Mbps / 125Mbps	60Mbps / 15Mbps	60Mbps / 15Mbps	Check here	£20.00	£24.00	£28.19	£32.19
FibreLine 400/35	400Mbps / 35Mbps	N/A	50Mbps / 30Mbps	N/A	£30.00	£38.00	£38.19	£46.19
FibreLine 500/250	500Mbps / 250Mbps	80Mbps / 20Mbps	80Mbps / 20Mbps	Check here	£40.00	£50.00	£48.19	£58.19
FibreLine 750/375	750Mbps / 375Mbps	N/A	100Mbps/30Mbps	N/A	£48.00	£60.00	£56.19	£68.19
FibreLine 1000/500	1Gbps / 500Mbps	N/A	100Mbps/50Mbps	N/A	£64.00	£80.00	£72.19	£88.19



Wholesale FibreLine Access Aggregation Point & Bandwidth & Extension Path

Access Links	Connection Ex. VAT	Rental Per Annum Ex. VAT
Aggregation Point & Bandwidth 1Gb/s	£10,000	£100,000
Aggregation Point & Bandwidth 3Gb/s	£10,000	£209,000
Aggregation Point & Bandwidth 5Gb/s	£10,000	£301,000
Aggregation Point & Bandwidth 10Gb/s	£10,000	£600,000
Extension Path 500Mb	£0	£8,520
Extension Path 1Gb	£0	£17,028
Extension Path 10Gb	£0	£57,060



Wholesale FibreLine Access

Commercial Elements outside FLA

- Broadband Service Interconnect Link (BSIL) to CP site within the Hull Area
 - Finalising definition and commercial pricing for the BSIL
- Onward circuit provision Outside the Hull Area
 - POA
- Internet Access
 - POA



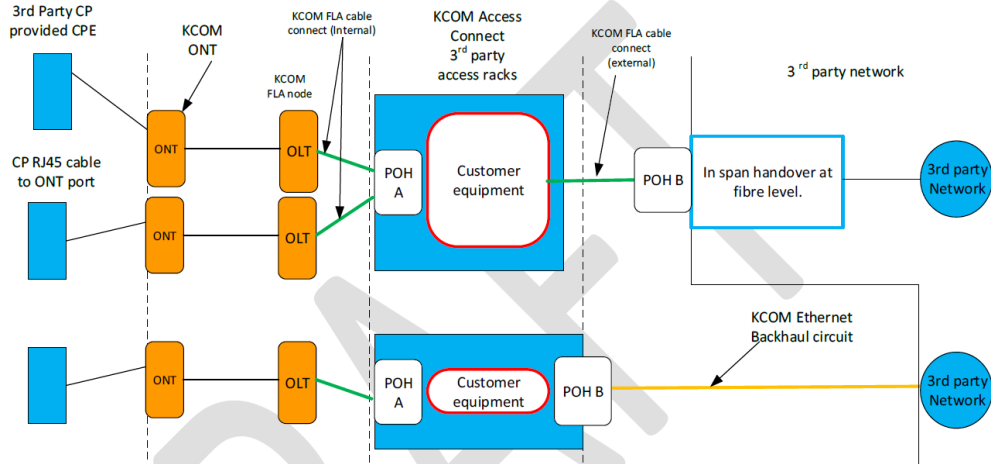
Wholesale FibreLine Access

CP Responsibilities

- Volume Forecasting (Commercially confidential)
- The CP is responsible for ensuring that they have subscribed to sufficient Aggregation Bandwidth & Extension Path capacity in order to meet their own contention ratio obligations
- Internet connectivity – Backhaul, Peering
- *Regional Internet Registry for Europe (RIPE) IP allocation required.*
- First line customer support on End User Access fault reporting
- Email services / webspace
- Compliance with regulatory obligations
- Customer Premises Equipment



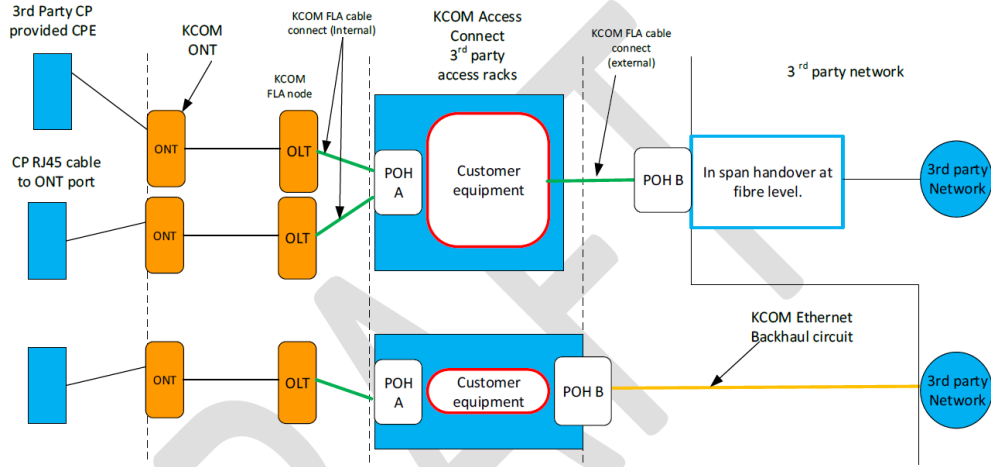
Wholesale FibreLine Local Access



Features

- End User Access (FTTP)
- Internal CableConnect will be used to connect your equipment in WFLLA Site. All WFLLA Sites have more than one OLT and you will need to order a Internal CableConnect to each OLT.
- The service connections are terminated by Optical Network Termination equipment (ONT) installed on the End User premises.

Wholesale FibreLine Local Access



Elements Not Included

- KCOM Accommodation Services
- Transport switch
- Backhaul from exchange (ECAS) or External CableConnect
- Onward connectivity outside the Hull Area
- IP Core aggregation
- Internet bandwidth
- IP addresses (own RIPE allocation required or customers private IP's)



Wholesale FibreLine Local Access

Commercial Elements

- A. End User Access Connections/Migration One-off charge & Monthly rentals
- B. Internal CableConnect to requested OLT Connection

Commercial Elements outside Reference Offer for Wholesale FibreLine Local Access (WFLLA)

- KCOM Accommodation Services
- Transport Switch
- Backhaul from exchange (ECAS) or External CableConnect
- Backhaul Outside the Hull Area (OLA)
- Internet Access



Wholesale FibreLine Local Access

End User Access Profiles, SLA's and rentals

SERVICE	FTTP Download Speed / Upload Speed	VDSL Download Speed / Upload Speed	FTTP Minimum Access Speed (Down / Up)	VDSL Minimum Access Speed (Down / Up)	Transition*** End User Rental Per Month Ex VAT		Data Only End User Rental Per Month Ex VAT	
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FibreLine LA 75/20	75Mbps / 20Mbps	Up to: 75Mbps / Up to:20Mbps	50Mbps / 20Mbps	Check here	£9.95	£12.00	£18.14	£20.19
FibreLine LA 200/35	200Mbps / 35Mbps	N/A	50Mbps / 30Mbps	N/A	£15.61	£20.00	£23.80	£28.19
FibreLine LA 250/125	250Mbps / 125Mbps	60Mbps / 15Mbps	60Mbps / 15Mbps	Check here	£19.00	£23.00	£27.19	£31.19
FibreLine LA 400/35	400Mbps / 35Mbps	N/A	50Mbps / 30Mbps	N/A	£29.00	£36.00	£37.19	£44.19
FibreLine LA 500/250	500Mbps / 250Mbps	80Mbps / 20Mbps	80Mbps / 20Mbps	Check here	£34.00	£42.00	£42.19	£50.19
FibreLine LA 750/375	750Mbps / 375Mbps	N/A	100Mbps/30Mbps	N/A	£44.00	£55.00	£52.19	£63.19
FibreLine LA 1000/500	1Gbps / 500Mbps	N/A	100Mbps/50Mbps	N/A	£60.00	£75.00	£68.19	£83.19



Wholesale FibreLine Local Access Internal CableConnect

Access Links	Connection Ex. VAT	Rental Per Annum Ex. VAT
FibreLine CableConnect 1Gb – Connection	£521	-
FibreLine CableConnect 10Gb – Connection	£1042	-



Wholesale FibreLine Local Access

Commercial Elements outside FibreLine Local Access Reference Offer

- KCOM Accommodation Services (Single and Hostel Applications)
 - Pricing for CP Equipment room at each WFLLA Site is POA
 - Pricing for survey and individual cost components will be published shortly.
- Backhaul (ECAS) from WFLLA Site: http://pricing.kcomhome.com/media/1476/p13-s19_ethernet_connect_access_service.pdf
- Or External CableConnect
 - Pricing for External CableConnect will be available under KCOM's Reference Offer for Leased Line Services.
 - Pricing will be published shortly.
- Backhaul Outside the Hull Area (OLA)
 - POA



Wholesale FibreLine Local Access

CP Responsibilities

- Volume Forecasting (Commercially confidential)
- The CP is responsible for ensuring that they have subscribed to sufficient Internal CableConnect capacity in order to meet their own contention ratio obligations
- Internet connectivity – Backhaul, Peering
- *Regional Internet Registry for Europe (RIPE) IP allocation required.*
- First line customer support on End User Access fault reporting
- Email services / webspace
- Compliance with regulatory obligations
- Customer Premises Equipment



Questions & Feedback

If you have any specific questions or feedback on these proposed services and forecast please contact Chris Dingle. *Chris.Dingle@kcom.com*

Unless marked commercially confidential we will respond back with an open FAQ of all questions raised.

