

Network Services

VPN (Cellstream, IP Converge)

Schedule to the General Terms

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Network Services

Where the Customer selects VPN (Cellstream, IP Converge – Marketed as IP Connect UK, IP Converge) as detailed in the Order Form, the following terms shall apply:

1. Virtual Private Network (“VPN”)

- 1.1 BT's VPN Service includes CellStream and IP Converge. The Customer may access the Service by fixed LAN access or a dial access line. Unless specifically stated otherwise in this Contract, where the Customer accesses the Service via a LAN, the Customer is responsible for providing an appropriate connection linking the Service to the Customer's LAN and for providing and maintaining a suitable LAN infrastructure.
- 1.2 IP Enabling Overview (Cellstream)
 - 1.2.1 IP-enabled PVCs: IP-enabled PVCs offer any-to-any connectivity for IP traffic between all connections into the Customer's VPN(s) and supplement the point to point connectivity currently supported by normal PVCs.
 - 1.2.2 Connectivity: IP - enabled PVCs enable communication with Sites as well as supporting dial-in access via PSTN, ISDN or a mobile telephone to Sites connected to BT's CellStream Service. The IP PVCs link each Site directly to the IP (MPLS) network. The PVC carries IP packets only, via the IP network to any other IP-enabled Site.
 - 1.2.3 Bandwidth: Bandwidth from each Site into the VPN can be selected to reflect the Site's traffic needs. The Customer may have one or more VPN's within its IP-enabled Service to support different connectivity requirements. The IP VPN will operate in parallel with the Customer's existing VPN service(s).
- 1.3 CellStream
 - 1.3.1 Where the Customer has chosen connection via CellStream, the Service offers a range of data services to allow the Customer to create a VPN using IP or ATM at a variety of speeds over the BT Network, some speeds allow a Standard Access Circuit, Secure Access Circuit or a Secure+ Access Circuit.
 - 1.3.2 The Service offers Access Lines in order to create a hub or mesh network. The Service is delivered to the Site via Access Lines and terminated on a Customer NTE.
- 1.4 IP Converge

1.4.1 General

- a) Where the Customer has chosen connection via IP Converge, the Service offers a range of data services to allow Customers with IP connectivity between two or more sites to create a VPN at a variety of speeds over the BT Network. The Service offers Access Lines in order to create a hub or mesh network. The Service is delivered to the Site via Access Lines and terminates on a Customer NTE. Internet access can also be provided if required, at an additional charge.
- b) The Service is offered as a bundled Service. All IP Converge options include network access and predefined CPE terminating on a Managed Router or switch (BT Equipment).
- c) IP Converge Access and Flex options also includes as standard Project Management with BT Desk Based Project Manager, Business Premium Care, Rapid Fault Diagnostics or Standard Incident Management, Proactive Alarm Monitoring, Archive and Restore, bronze reporting and Service Level Agreement Options of On Time Delivery Service Level, Service Availability & Restoration Service Level - Tier 1 and Core Network Performance Service Level.
- d) EFM Services also include as standard; Project Management with BT Desk Based Project Manager, Business Premium Care, Rapid Fault Diagnostics or Standard or Enhanced Incident Management , Archive and Restore and Service Level Agreement Options of On Time Delivery Service Level, Service Availability & Restoration Service Level - Tier 1 and Core Network Performance Service Level.
- e) ADSL Connect Services also include as standard: Project Management with BT Desk Based Project Manager, Standardcare or Business Care, Rapid Fault Diagnostics or Standard ADSL Incident Management and Archive and Restore. ADSL Connect Services are available at an additional charge with Proactive Alarm Monitoring 15mins.
- f) Super-fast Standard, Super-fast Premium and Super-fast Backup include as standard; Project Management with Desk Based Project Manager, the Maintenance option described for each Super-fast service , Rapid Fault Diagnostics or Standard or Enhanced Incident Management and Archive and Restore. Super-fast is available at an additional charge with Proactive Alarm Monitoring every 15mins.
- g) IP Converge is available at an additional charge with the DSCP Class of Service Model.
- h) The Service includes a configuration service whereby BT will archive Configuration Files and carry out configuration restoration in the event of a network failure. BT will also upgrade Software when it believes that Software upgrades are operationally necessary.
- i) Where the Customer has chosen IP Converge as part of a WAN network IP Converge Discounts will apply to rental charges as outlined in the IP Converge discount table in the Order Form. The IP Converge discount table will specify the eligible spend and achieved discount as applicable at the commencement date of the Contract, however these will be subject to change in the event that Sites are terminated or additional Sites are added. Further details on this discount scheme can be obtained from your account manager.
- j) IP Converge is available at an additional charge with the Managed MPLS Extranet Service.

1.4.2 IP Converge Access

- a) The Service offers copper and fibre delivered fixed link Access Lines supporting a range of access speeds from 64k to 155Mbps in order to create a hub or mesh network, some speeds allow a Secure Access Circuit or a Secure+ Access Circuit. The Service will be configured and designed in accordance with the design summary that is prepared between BT and the Customer and is delivered to Site by the fixed links that are terminated on CPE. Fixed Access Lines are delivered via a BT access circuit and presented to the Customer via a BT maintained NTE device via one (or more) LAN presentations on the Customer Site. One NTE will be provided for each fixed link connection to the Service.

1.4.3 BT Supplied Internet Access

- a) Where the Customer has chosen BT to provide Internet access, the Service will be provided by the BTnet Internet Access product which provides connectivity to the Internet with an access circuit, internet port and router at a variety of speeds.
- b) There are two options available, both of which can be provided via network terminating equipment, which is BT Equipment, at the Customer Site:
 - i) BTnet Standard is an entry level Internet access service available in two sizes of access bearer. The Customer can select the size of access bearer and then select Internet bandwidth requirement within the chosen access bearer. The Customer can then increase or decrease the Internet bandwidth within the bounds of their access type; and
 - ii) BTnet Premium is a premium Internet access service available with a range of various size access bearers. The Customer can select the size of access bearer and then select Internet bandwidth requirement within the chosen access bearer. The Customer can then increase or decrease the Internet bandwidth within the bounds of their access type.

1.4.4 IP Converge Flex

- a) IP Converge 2M Flex, 10M Flex, 100M Flex, 1000M Flex and 10000 Flex are access variants to the IP Converge Service.

The Service offers the following bandwidth speeds:

- i) 2M Flex - offering bandwidth from 265Kbps through to 1984Kbps in 64Kbps increments;
 - ii) 10M Flex – offering bandwidth from 2Mbps to 10Mbps in 2Mbps increments;
 - iii) 100 Flex – offering bandwidth from 2Mbps to 10Mbps in 2 Mbps increments and from 10 Mbps to 100 Mbps in 5Mbps and 10Mbps increments;
 - iv) 1000M Flex – offering bandwidth from 2Mbps to 1000Mbps in 2Mbps, 5Mbps, 10Mbps, 50Mbps and 100Mbps increments; and
 - v) 10000M Flex – offering bandwidth from 2Mbps to 10000Mbps in 2 Mbps, 5 Mbps, 10 Mbps, 50 Mbps and 100Mbps increments.
- b) IP Converge 2M Flex is supplied with a 2M access bearer to each Site as standard. IP Converge 10M Flex is supplied with a 10M access bearer to each Site as standard. IP Converge 100M Flex is supplied with a 100M access bearer to each Site as standard. However at the time of initial deployment the Customer must specify a given bandwidth rate for each Site to which the Service will be limited.
 - c) The relevant pre-defined BT maintained NTE device will be supplied according to the Flex bandwidth selected by the Customer.

- d) 10M Flex, 100M Flex and, 1000M Flex can be provided as a Local Flex access variant provided the Customer Site is served by a BT Exchange which has a co-located PoP.
- e) IP Converge 2M Flex is offered as Standard Access Circuit or Secure + Access Circuit. , 10M Flex, 100M Flex and 1000M Flex are offered as a Standard Access Circuit, Secure Access Circuit, or Secure+ Access Circuit.
- f) IP Converge Flex Services support the DSCP Class of Service Model. However, the initial set up of CoS bandwidth and its subsequent management over Flex re-grades means that CoS bandwidth and Flex access bandwidth must be managed simultaneously by the Customer.
- g) The Customer may upgrade the bandwidth within the Minimum Period, subject to the charges advised by BT from time to time.
- h) The pricing for an increase in bandwidth will equate to the equivalent annual rental charge for the higher rate. Therefore a Customer Site at any contracted rate can boost its bandwidth for a minimum period of thirty days, for the equivalent of 30/365 of the annual rental at the higher rate. No further connection charge or one-off charge will be applied if the work takes place during Business Hours, additional charges will apply for work at the Customer's request outside of Business Hours. The change will be permanent and the increased annual rental charge will subsequently be applied for that Access Line.
- i) The Customer must place a re-grade order if they wish to revert to the original bandwidth or for further changes; for 1000m Flex a re-grade or downgrade of bandwidth below the original contracted bandwidth is not possible within the first twelve months of Service.
- j) The Customer may make a bandwidth re-grade request during Business Hours.
- k) Where a bandwidth request is received on a Business Day, BT will try and complete the work within ten Business Days of the request being placed, but all dates are estimates and BT will not be liable for failure to meet proposed completion dates.
- l) The Customer may increase bandwidth up to a maximum of 1984K in steps of 64kb/s for 2M, 2M increments for 10M Flex and 2M increments up to 10M and 10M increments for 100M Flex, for a single request; For 1000M Flex, upgrades must be to one of the stated bandwidth levels. (2-100 in 2 Mbps, 5 Mbps and 10Mbit/s increments, 100-500 in 50Mbit/s increments & 500-1000Mbit/s in 100Mbit/s increments); and for 10000M Flex, upgrades must be to one of the stated bandwidth levels. (2-100 in 2 Mbps, 5 Mbps and 10Mbit/s increments, 100-500 in 50Mbit/s increments, 500-2500Mbit/s in 100Mbit/s increments).
- m) A Customer request for a bandwidth re-grade of more than 10Mbits/s will be treated as a project and will not be subject to the standard lead time for the Service. BT will consider the capacity available and negotiate a mutually acceptable date for completion with the Customer.
- n) Where resilience options are implemented, the access rates and CoS parameters will be the same on both legs of the resilient access. Also both legs of Secure+ Access Circuit accesses will be flexed together at the same access rates.
- o) Flexes in Bandwidth may cause changes in CoS. Customers must indicate the amount of Voice Class (EF) bandwidth, Assured Forwarding Class (AF) percentage, If the Voice Class bandwidth or Assured Forwarding Class percentage or both are different from that which had been previously been configured, then BT will raise additional charges for any modifications required to CoS.

- p) The ability to upgrade is determined by the choice of CPE. BT recommends that a router which has the capability to support the full bandwidth speed is deployed on the circuits to ensure that the Flex capability is maintained.
- q) Where the router deployed does not have the capability to support the full bandwidth speed then it is the Customers responsibility to ensure that bandwidth requests do not exceed the capacity of the router used. It is the Customers responsibility to validate all Customer requests to ensure CPE compliance. Where the CPE is not compliant, BT will treat this as standard change request that will then be subject to standard lead-times, technical design and pricing. A one off connection Charge will apply in addition to the rental Charge for the new bandwidth where a router has to be changed to support a higher bandwidth re-grade.
- r) Service down-time may be experienced during the Flex of the access. This will not count towards aggregate down time for the purpose of claiming service credits under the Service Availability & Restoration SLA.
- s) For upgrades a re-grade order will be necessary.
- t) To upgrade resilience options on 10M, 100M, 1000M or 10000 Flex Local access variants, a re-grade order will be necessary.
- u) For upgrades from 10M to 100M (up to 15M CDR) a re-grade order will be necessary, for upgrade from 10M to 100M CDR above 15M a re-grade order will be necessary and a router change will be necessary.
- v) Pricing for IP Converge 10M, 100M, 1000M and 10000 Flex is based on distance, any distance calculation will be based on the nearest POP to the Customer's Site. The Service is provided on a fixed rental basis. Where the fixed rental charge has a charge band, determined by the nearest POP to the Customer's Site, IP Converge (Zonal) discount will only apply to the Port element of the rental charge. Where standard delivery is not available BT may offer a bespoke delivery service subject to survey and charges may differ from standard pricing. Also UDS (Zonal) discount will only apply to the Port element of the rental charge.
- w) IP Converge discounts will apply.

1.4.5 IP Converge EFM

- a) IP Converge EFM is an access variant to the IP Converge Service and offers bandwidth speeds between 2Mbps and 30Mbps. EFM access includes pre-defined CPE as standard.
- b) IP Converge EFM is offered as a Standard Access Circuit only.
- c) IP Converge EFM can be provided if the Customer Site is served by an EFM enabled BT Exchange although the maximum port speed supported will be dependent upon the capacity between a Customer's Site and the EFM enabled BT Exchange.
- d) IP Converge EFM requests may be subject to survey. If the survey indicates that the supply of Service is not technically feasible, or if other circumstances beyond BT's control prevent BT from accepting the Customer's Order, the Customer will be notified of the reasons for the rejection.
- e) Flexing of bandwidth is not permitted where there are enough copper pairs available to enable the new required Committed Data Rate (CDR). IP Converge EFM Services installed prior to 12th December 2011 cannot be flexed beyond 10M/bits CDR and any upgrades to higher speeds will require a cease and re-provide order. IP Converge EFM Services installed after the 12th December 2011 can be flexed up to the full 30M/bit CDR.

- f) To upgrade from IP Converge EFM to any other Service a cease and re-provide order will be necessary.
- g) The Customer must place a re-grade order to increase the original bandwidth.
- h) IP Converge EFM is available at an additional charge with the DSCP Class of Service Model.
- i) Pricing for IP Converge EFM is based on bandwidth, not on the distance between the BT serving exchange and Customer Site.
- j) Where the Service is delivered over 20CN (20th Century Network) and provided on a fixed rental basis, discounts do not apply to IP Converge EFM but IP Converge EFM rental charges will contribute to the overall spend which determines the discount level for Services eligible for UDS discounts.
- k) Where the Service is delivered over 21CN (21st Century Network) and provided on a fixed rental basis discounts do apply. Where the fixed rental charge is associated with a charge band, determined by the nearest POP to the Customer's Site, UDS (Zonal) discount will apply to the port element of the rental charge only.
- l) At the time of initial deployment the Customer must specify a given bandwidth rate for each Site to which the Service will be limited.
- m) The ability to upgrade the bandwidth of IP Converge EFM is determined by the choice of CPE. BT recommends that a router which has the capability to support the full 30M throughput is deployed on these circuits to ensure that the 10M Flex capability is maintained.
- n) Where the router deployed does not have the capability to support the full 30M throughput then it is the Customers responsibility to ensure that bandwidth requests do not exceed the capacity of the router used. It is the Customers responsibility to validate all Customer requests to ensure CPE compliance. Where the CPE is not compliant, BT will treat this as standard change request that will then be subject to standard lead times, technical design and pricing.

1.4.6 IP Converge ADSL Connect

- a) Where the Customer has chosen ADSL Connect as its access mechanism, the Service offers ADSL based access via rate adaptive broadband technology.
- b) ADSL Connect Access Lines are presented to the Customer on a BT maintained NTE device via single LAN presentation on the Customer Site. One NTE device will be provided for each ADSL Connect connection. ADSL Connect access is offered as an access circuit only, and should not be used as a gateway access circuit at a gateway or host Site and should not be offered for Auto Fall-back.
- c) The NTE device requires local mains power directly from a wall mounted socket or an appropriately approved mains extension lead which is the responsibility of the Customer to provide; The Customer must provide a dedicated 240v mains power supply for the broadband router. High currency electrical equipment should not be used on the same mains power supply. In the event that power noise occurs on the mains power supply, the Customer shall be responsible for resolving the power noise issue by using either a mains conditioner or UPS system.

- d) ADSL Connect Access Lines use advanced 'Rate Adaptive' broadband technology. This type of technology does not run at fixed speeds. The speed of the Service will be the fastest speed that the Customer's analogue direct exchange line can support. Typically downstream speeds of between 8M -20M may be achieved for ADSL Connect ADSL2+, ADSL Connect Premium, ADSL Connect Back-up and ADSL Connect Plus. Where a Customer has selected the ADSL1 option, downstream speeds will be restricted to up to 8M and upstream speeds will be restricted to up to 832k for ADSL Connect, ADSL Connect Premium, ADSL Connect Back-up and ADSL Connect Plus. Downstream Speeds of between 4M-8M may be achieved for ADSL Connect Max maximum downstream speed is 8Mbit/s and the maximum upstream speed is 832kbit. The Customer acknowledges and accepts that the downstream speeds outlined above are not guaranteed and BT will have no liability to the Customer for failing to reach specific speeds.
- e) ADSL Connect Access Lines downstream and upstream capabilities will vary depending on various factors which include proximity of the Customer Site to the BT Local Exchange, the length and quality of any internal wiring; the processing speed of the router or modem being used, the speed of the connection between the computer and the router/modem; time of day; levels of congestion on the BT network.
- f) The Customer acknowledges and accepts that the downstream and upstream performance of the Service will vary depending on factors outlined in paragraph e).
- g) Following provision of the ADSL Connect Service, dynamic line management will occur on the Service to stabilise the line at the most appropriate speed. Dynamic line management may last for up to ten days and may result in short outages (lasting several seconds) of the Service. Short outages as a result of dynamic line management can also occur regularly as part of normal operation of the Service. This does not constitute a service failure. Intermittent service loss can occur up to 3 times in a 24 hour period where the Super-stable option has been configured. A service failure is a continuous loss of Service to the Site. The Customer accepts and acknowledges that such outages will not be deemed as a fault in the Service by BT, and BT will only accept faults in the Service where the Customer experiences a continuous loss of Service.
- h) It may be possible that the ADSL Connect Service cannot be used effectively by the Customer for their specific application. In these rare cases, service settings can be adjusted on request by the Service Desk. This does not constitute a fault. Service speed can be traded off against service stability, error performance and latency. A higher service speed with a higher risk of errors (standard mode) or a lower service speed with a lower risk of errors (super-stable mode) can be set on request.
- i) Where the Customer has ordered an ADSL Connect fixed rate access option these services are not rate adaptive (in the downstream direction). Options available are downstream 0.5Mbit/s, 1Mbit/s and 2Mbit/s. The speed ordered is the speed the Customer can expect to receive. The speed will not change in life and no dynamic line management will occur on the Service. Class of Service is supported on fixed rate access options for ADSL Connect Plus and ADSL Connect Premium.
- j) The terms of paragraph 2 of this Service Schedule shall apply to the IP Converge ADSL Connect Service.
- k) Service Options
The Service offers 5 options:
 - i) ADSL Connect (ADSL2+);
 - ii) ADSL Connect Plus;
 - iii) ADSL Connect Premium;

- iv) ADSL Connect Backup; and
- v) ADSL Connect Max.

Each option is an access variant of the ADSL Connect Service and offers ADSL based access via rate adapted broadband technology. The key differences between the options include the different maintenance levels offered, differences around support of Class of Service and eligibility of discounts.

- l) ADSL Connect Backup can only be used as a backup service. ADSL Connect Backup can be used as backup for the following access types only: ADSL Connect ADSL2+, ADSL Connect Premium, ADSL Connect Plus, ADSL Connect Max, Leased Line up to 8M, 10M Flex, 10M Flex Local, EFM and 100M Flex up to 15M. No diversity is guaranteed.

1.4.7 IP Converge Super-fast

- a) The Service provides a broadband based Access Line with maximum download speeds of up to 80Mb/s and upload speeds of up to 20Mb/s using FTTC capabilities and a maximum download speeds of up to 100Mb/s and upload speeds of up to 15Mb/s using FTTP.
- b) The FTTC Service takes Fibre optic cable to the street cabinet (known as the DSLAM), then uses conventional copper-based broadband to the Customer Site. The FTTP Service takes Fibre optic cable all the way to the customer's premises.
- c) The FTTC Service requires the Customer's line to be capable of supporting 2M/bits of downstream bandwidth. The FTTP Service requires the Customer's line to be capable of supporting 5Mb/s of downstream bandwidth.
- d) The Service bandwidth offered will depend on the technology available to deliver the Service and the Service option selected by the Customer. FTTC is a rate adaptive service where the speeds may change over time. FTTP is not rate adaptive, the line rate will achieve the ordered value. Customer premises will either be enabled for FTTC or FTTP, never both.
- e) The FTTC Service does not operate at fixed speeds. The downstream and upstream speeds are not guaranteed and will vary depending on various factors which include:
 - i) proximity of the Customer Site to the BT Local Exchange;
 - ii) the length and quality of any internal wiring;
 - iii) the processing speed of the router or modem being used;
 - iv) the speed of the connection between the computer and the router/modem;
 - v) time of day; and
 - vi) levels of congestion on the BT Network.
- f) The Customer acknowledges and agrees that all the speeds outlined in this paragraph are not guaranteed and BT will have no liability to the Customer for failing to reach specific speeds.
- g) The actual rates that can be supported on any individual line will be influenced by the following:
 - i) distance of the copper connection from the User Site to the cabinet; and
 - ii) the number of Users using the common cable which will determine cross-talk noise impact.

Either of these two factors may result in the User experiencing a drop in the original speed achieved. The Customer acknowledges and agrees that this does not qualify as a fault in the Service.

- h) The downstream throughput achieved on the Service will include a small element of bandwidth used to support traffic management.
- i) The Service is delivered to the Customer via a DSL Modem (BT Equipment) and a Cisco Router (BT Equipment).all referred to herein as “devices”.
- j) Each device requires local mains power directly from a wall mounted socket or an appropriately approved mains extension lead, which is the Customer’s responsibility to provide.
- k) The Service must not be used as, a Gateway Site or at a Host Site or for the purposes of Auto Fall-back resilience.
- l) For the FTTC service Dynamic Line Management will occur to stabilise the line at the most appropriate speed and. may result in short outages (lasting several seconds). The Customer acknowledges and agrees that such outages are not faults in the Service, and BT will only accept faults in where the Customer experiences a continuous loss of Service exceeding 3 minutes. Dynamic Line Management does not apply to the FTTP Service and there is no stabilization period.
- m) For the FTTC Service the Customer can choose between three options to relinquish some of the downstream speed for more stability. These options are Standard, Stable and Super Stable. The FTTP Service does not offer these stability options.
- n) Where a Customer wishes to change an existing access type to move to the Superfast Service a cease and re-provide order will be necessary.
- o) Where a Customer wishes to change an existing bandwidth on the Service, the Customer must place a re-grade order.
- p) Where a Customer wishes to change from one Superfast Service option to another Superfast Service, the Customer must place a re-grade order.
- q) The terms of paragraph 2 of this Service Schedule shall apply to the IP Converge Superfast Service.
- r) Where Standard Care maintenance applies it can either be selected with a SLA or not. The SLAs that can be selected by the Customer are: Service Availability, On-time Delivery, Repair and Core Network Performance. All SLAs are subject to additional charges.
- s) Service Options
 - The Service offers 3 access variant options comprising:
 - i) Super-fast Standard;
 - ii) Super-fast Premium; and
 - iii) Super-fast Backup.
 - Each option is an access variant of the Super-fast Service and offers a broadband based Access Line. The key differences between the options include the different maintenance levels offered, differences around support of Class of Service, target throughput and eligibility of discounts.
- t) The following throughput targets are offered:
 - i) Superfast standard offers a bandwidth speed of 16Mbps for 90% of the time over the busiest 3 hour period. (the measurement is made during the 3 busiest hours of the day);

- ii) Super-fast Premium offers a bandwidth speed of 16Mbps for 90% of the time over the busiest 3 hour period. (the measurement is made during the 3 busiest hours of the day); and
- iii) No throughput target is offered with Super-fast Backup.

The Customer acknowledges and agrees that BT is not liable for failure to achieve these targets.

- u) Super-fast Premium is provided using an 'Elevated' profile where User traffic is given preferential weighting providing higher throughput under congestion.
- v) Super-fast Backup can only be used as a backup service for resilience purposes. Super-fast Backup can be used as backup for the following access types only: ADSL Connect ADSL2+, ADSL Connect Premium, ADSL Connect Plus, Leased Line up to 155M, 10M Flex, 10M Flex Local, 100M Flex, 100M Flex Local, 1000M Flex, 1000M Flex Local and 10M EFM. No diversity is guaranteed for the purposes of resilience. For full resilience a Secure Access Circuit or Secure+ Access Circuit must be selected by the Customer under this Contract.

1.4.8 IP Converge IP version 6

- a) The IP Converge Service includes an option for network architecture which allows both IPv4 and IPv6 network traffic to coexist within the same VPN. Referred to as 'dual stack', this allows Customers to retain existing IPv4 network connectivity whilst introducing native IPv6 based applications/traffic.
- b) The Service will support IP version 6 (IPv6) for the following access types:
 - i) IP Converge Access;
 - ii) IP Converge Flex; and
 - iii) IP Converge 10M EFM.
- c) The charges associated with IPv6 are:
 - iv) Connection Protocol Version Modify; and
 - v) BGP Prefixes.
- d) A Connection Protocol Version Modify charge applies per site VPN connection, where an existing VPN connection requires modification to the IP Protocol version supported.
- e) Sites with single VPN connection must retain an IPv4 connection for CE management purposes.
- f) A Connection Protocol Version Modify charge does not apply when the Connection Protocol (IPv4, IPv6) is ordered as part of a new service provide and VPN connection.
- g) BGP Prefix charges apply where Customers choose to increase the level of v6 BGP Prefixes supported per site connection, to a number greater than the 50 prefix default service configuration.

2. ADSL/Broadband Provisions

- 2.1 The terms of this paragraph shall apply to VPN (Cellstream, ~~IP Clear~~, IP Converge).
- 2.2 BT will provide a managed ADSL Service under this Contract, which includes an ADSL access, router and value add services.
- 2.3 Access requests may be subject to survey. If the Access request is rejected, BT will notify the Customer of the reasons for the rejection and indicate whether the survey indicates that the supply of

Service is not technically feasible, or if other circumstances beyond BT's reasonable control prevent BT from carrying out the survey.

- 2.4 BT will accept or reject each access request. The Customer acknowledges that the acceptance of an order and the installation of BT Equipment or CPE does not mean that an access can be successfully activated in respect of the Service.
- 2.5 The Customer acknowledges and accepts that there may be some technical limitations and issues within the BT Network that may not become apparent until after the Service has been installed. In such circumstances, and at BT's sole discretion, the Service for some individual Users may need to be withdrawn, down-graded to a lower speed or replaced with an alternative Service. Where appropriate, BT will refund any Charges paid in advance by the Customer. Where the Service is being downgraded to a lower speed or replaced with an alternative Service BT will notify the Customer of the appropriate charges associated with the new Service.
- 2.6 Except in respect of a refund referred to in paragraph 1.6 above, BT will have no liability to the Customer relating to the provision of the Service (or BT's inability to provide the Service), the performance of the Service, its effect on other services or equipment or the withdrawal of the Service.
- 2.7 All PSTN Lines which are provided as part of an ADSL/Broadband provision for data use only as part of a WAN or IP network will be provided with outgoing call barring with 999 access, unless the Customer specifies otherwise. The Customer is responsible for the payment of all applicable usage Charges that may accrue on all of their PSTN lines. The Customer is also responsible for use of all of their PSTN lines including any potential fraudulent use that may occur.
- 2.8 The Customer must have a contract for the use of a BT provided analogue direct Exchange Line which terminates on a BT public switched telephone network master socket forming part of the BT Network for the duration of the Contract.
- 2.9 Where a NTE device is being provided as part of the Service it requires local mains power directly from a wall mounted socket or an appropriately approved mains extension lead which is the responsibility of the Customer to provide. The Customer must provide a dedicated 240v mains power supply for the broadband router. High current electrical equipment should not be used on the same mains power supply. In the event that power noise occurs on the mains power supply, the Customer shall be responsible for resolving the power noise by using either a mains conditioner or UPS system.
- 2.10 Some ADSL/Broadband services use advanced 'Rate Adaptive' broadband technology (Dynamic Line Management). This type of technology does not run at fixed speeds. The speed of the Service will be the fastest speed that the Customer's analogue direct exchange line can support.
- 2.11 Where the Customer has either selected the ADSL1 option or has a router that can only support ADSL1, downstream speeds will be restricted to up to 8M and upstream speeds will be restricted to 416K.
- 2.12 The Customer acknowledges and accepts that the downstream speeds outlined above are not guaranteed and BT will have no liability to the Customer for failing to reach specific speeds.
- 2.13 ADSL/Broadband downstream and upstream capabilities will vary depending on various factors which include proximity of the Customer Site to the BT Local Exchange, the length and quality of any internal wiring; the processing speed of the router or modem being used, the speed of the connection between the computer and the router/modem; time of day; levels of congestion on the BT Network and electrical interference noise in the Customer environment.
- 2.14 The Customer acknowledges and accepts that the downstream and upstream performance of the Service will vary depending on factors outlined in the paragraph above.
- 2.15 The Customer acknowledges and accepts that Repetitive Electrical Impulse Noise (REIN) or other types of noise generated within, or near the Customer's Site, does not constitute a fault in the Service.

- 2.16 Following provision of an ADSL/ Broadband Service, dynamic line management will occur on the Service to stabilize the line at the most appropriate speed. Dynamic line management may last for up to 10 days and may result in short outages (lasting several seconds) of the Service. Short outages as a result of dynamic line management can also occur regularly as part of normal operation of the Service. This does not constitute a service failure. Intermittent Service loss can occur up to 3 times in a 24 hour period where the Super-stable option has been configured. A Service failure is a continuous loss of Service to the Site. The Customer accepts and acknowledges that such outages will not be deemed as a fault in the Service by BT, and BT will only accept faults in the Service where the Customer experiences a continuous loss of Service.
- 2.17 It may be possible that the Customer's chosen ADSL/ Broadband Service cannot be used effectively by the Customer for their specific application. In these rare cases, service settings may be adjusted on request to the Service Desk. This does not constitute a fault in the Service. Service speed can be traded off against service stability, error performance and latency. A higher service speed with a higher risk of errors (standard mode) or a lower service speed with a lower risk of errors (super-stable mode) can be set on request. This is however dependent on the Service being provided.
- 2.18 Where the Customer has ordered a fixed rate ADSL option, these Services are not Rate Adaptive (in the downstream direction). The speed ordered is the speed that the Customer can expect to receive. The speed can only be changed in life by ordering a different speed option as no dynamic line management will occur on the Service. Class of Service is supported on fixed rate access options.
- 2.19 From time to time the UK broadband network is affected by planned engineering works. These outages are usually for a short duration, and normally take place between 12am and 6am and affect a small geographic area.
- 2.20 Unless agreed otherwise by the Parties, BT will not follow the Broadband Notification of Transfer switching process in relation to ADSL or Broadband services provided as part of the Service. The Customer may terminate a Service under the Contract by giving Notice to BT as set out in paragraph 18 of the General Terms.

3. Network Services - Customer Responsibilities

- 3.1 All Customer Equipment and any access circuits leased by the Customer directly from a Third Party shall be the sole responsibility of the Customer and are not included as part of the Service.
- 3.2 Unless otherwise stated, the Customer is responsible for providing suitable computer hardware, Software and telecommunications equipment and services necessary to access and use the Service.
- 3.3 The Customer shall be responsible for providing a suitable IP addressing scheme (that must be at least a /24 address block) that is registered with an approved Internet registration authority, otherwise it will not be accepted by BT. The Customer shall ensure that it has a single IP address within the Customer Network. Unless the Customer has selected the Configuration Management option, the Customer shall also be responsible for devising any IP addresses which may be required for the purposes of WAN, LAN or both as appropriate, network management.
- 3.4 If the Customer accesses the Service via a LAN, the Customer is responsible for:
- (a) providing and maintaining a suitable LAN and IP router capable of interfacing satisfactorily with the Service; and
 - (b) configuration of the IP router.
- 3.5 The Customer shall be responsible for the creation, maintenance and design of all Customer Information.

- 3.6 The Customer warrants that it will comply with all consumer and other legislation, instructions or guidelines issued by regulatory authorities, relevant licences and any other codes of practice which apply to the Customer or BT and which relate to the provision of Customer Information provided that BT has given notice to the Customer of those which apply to BT.
- 3.7 Where appropriate, the Customer must specify the volume of traffic required for each CoS level.
- 3.8 The Customer must adhere to the recommended bandwidth, access rate or specified volume of traffic as specified by BT for each CoS level. The Customer acknowledges that if it exceeds such recommended bandwidth, access rate or specified volume of traffic, then this may result in service degradation for which BT will not be liable.
- 3.9 To enable BT to provide a CoS level, classification of traffic must be carried out. Unless the Customer has requested to carry out classification of traffic via Professional Services such classification will be the sole responsibility of the Customer.

4. Network Services - General

- 4.1 Where an IP address or Domain Name is allocated to the Customer, it may only be used in connection with the Service. Except where expressly registered in the Customer's name, all BT based IP addresses and domain names made available on the Customer's behalf in connection with the Service shall at all times remain the property of BT and shall be non-transferable. The Customer shall have no right to use such IP addresses or domain names upon termination of the Service, at which time they will revert to BT.
- 4.2 Where the Customer has requested network address translation, BT will configure the Service in accordance with the details specified in the design summary. Where the Customer subsequently requests BT to make a change to the network address configuration, the Customer shall pay BT's reasonable Charges for the work carried out.
- 4.3 The Customer will give BT as much notice as possible if it intends to use the Service or to encourage or require the use of the Service in such a way as to distort users natural usage patterns, including, by way of example, running promotions which require users to log on within a short space of time or on a "first come, first served" basis.
- 4.4 The Customer acknowledges that the quality of the Service may be impaired by the uploading and downloading of data when using an ADSL enabled Line.

5. Service Management Boundary

- 5.1 BT will provide and manage the WAN Services up to the bridge router interface to the Customers LAN and will not extend beyond the Customer LAN ("Service Management Boundary").

6. Defined Terms

In addition to the defined terms in the General Terms and the Managed Service from BT Schedule to the General Terms, the following defined terms apply in this Service Schedule (and in the case of conflict between these defined terms and the defined terms in the General Terms and the Managed Service from BT Schedule to the General Terms, these defined terms will take precedence for the purposes of this Service Schedule):

"21CN" means BT's 21st Century Network technology. The following access types can be provided via 21CN technology: ADSL Connect, ADSL Connect Plus, ADSL Connect Premium, ADSL Connect Back-Up Super-fast Standard, Super-fast Premium, Super-fast Back-Up, 10M EFM, 10M Flex, 100M Flex, 1000M Flex and 10000M Flex.

"Access Line" means a circuit connecting a Site to the BT Network.

"ATM" means Asynchronous Transfer Mode, the recognised international standard for data packet transport.

“DSLAM” means digital subscriber line access multiplexer.

“IPv4” means the fourth version of the Internet Protocol (IP).

“IPv6” means the sixth version of the Internet Protocol (IP).

“Link” or **“Links”** means any hypertext, graphic, button and/or similar function provided by the Customer capable of linking to other websites including non-BT websites.

“Main Access Line” means the Main Customer’s Access Line which is used to provide the Service.

“Managed Router” means a Router owned and provided by BT for use with the Service, as further defined in paragraph 2.3 of this Schedule.

“Mbit” means a unit of information equal to 1,000,000 bits.

“Secure Access Circuit” means two access circuits delivered to Site via diverse routing with a single CPE terminating the circuit. If one of the circuits fail then the Service will route via the remaining circuit. If the CPE or PoP fails then the Service will be lost.

“Secure+ Access Circuit” means two access circuits delivered to Site via diverse routing with two pieces of CPE that terminate the circuits. Where possible, each access circuit is provided via a separate duct. Depending on the Site location, the CPE may be interconnected so that if a single circuit or a single piece of CPE fails then the Service will remain available. Loss of Service will only occur in the event that either both circuits or both pieces of CPE simultaneously fail.

“Standard Access Circuit” means a single access circuit delivered to a Site with a single CPE terminating the circuit.