

CCP Colt IP Access

Service Description



1 Overview

Colt IP Access provides a dedicated permanent access to the public Internet and a range of features such as Managed Router, Backup Options, DNS and SMTP relay. The Service includes installation, configuration and management.

2 Network access

Colt IP Access Services can be provided via the following access options

- Using our fibre end-to-end for premises directly connected to our network (On-Net)
- Using secure 3rd party leased fibre (Fibre ULL)
- Using DIA (Dedicated Internet Access) or Broadband Internet Access provided by third-party other licensed operator (OLO) tail
- Using third party DSL services backhauled to Colt infrastructure (Wholesale DSL)
- Using 3G/4G wireless circuit through public mobile internet for backup of primary circuit (3G/4G Wireless backup).
- Services that are completely provided by a 3rd party with no part of the service provided by Colt (Colt Internet Access Resell)

Colt IP Access services are installed during business hours. Business hours are 8.30 AM to 5.30 PM local time, Monday to Friday, excluding public or bank holidays. If you request installation of your Service outside of business hours this may be subject to additional installation charges.

3 Colt IP Access Features

The following features are available free of charge:

Feature	Description
Provider- aggregatable IP addresses	A /29 network of fixed, dedicated provider-aggregated IP addresses is provided as a standard.
Provider-independent IP addresses / AS number	Customers can use provider-independent IP addresses with most of the access technologies. Customers can also use their own AS number.
Border Gateway Protocol-4 (BGP-4) feed	We can provide a BGP-4 feed for most access technologies (containing all or part of the BGP routes of the Internet). The BGP feed will periodically consume bandwidth on the access circuit. BGP is available in different variants and free of charge, with the exception of "BGP/Full with Managed Router".
Online Performance Reporting	Online service performance and service management reports are available as part of the IP Access service.
Billing	Colt offer fixed as well as usage-based billing (UBB) for IP Access Services. Colt IP Access Services provided on a fixed billing basis have a monthly recurring charge for the service regardless of actual usage. Colt IP Access Services provided with a UBB billing model can be offered on a per-port or on aggregate basis. For UBB services, Customer commits to a monthly recurring charge derived from an agreed Committed Data Rate (CDR) or Aggregated CDR (ACDR), expressed in Megabits per second (Mbps) multiplied by the billing rate/Mbps as detailed in the Order Form. The CDR/ACDR is the minimum Internet bandwidth that will be charged each month in advance to the Customer regardless of actual usage. Any burst traffic above the CDR/ACDR is invoiced at the billing rate/Mbps detailed in the order form in arrears. Where UBB is provided on an aggregate basis according to the agreed ACDR, usage is measured across all services included in the ACDR, with aggregate usage above the ACDR being invoiced. In both cases, UBB is measured using the 95th percentile methodology with a sample taken on ingress and egress traffic every 5 minutes.
Proactive Monitoring and Notification	Proactive monitoring, customer notification via email as well as auto ticketing are standard for IP Access with Colt managed router.
IPv6	IPv6 dual stack is available at no extra charge and compatible with all features/options.

SMTP mail relay/backup	SMTP mail relay and SMTP mail backup services are available for all Colt IP Access customers.
Domain Name System (DNS)	Colt offers recursive or authoritative DNS services. Usage of Colt DNS Resolvers is open to all Colt customers. The IP Addresses can be found on the handover documentation.

4 IP Access Options

The following options may be available, depending on the specific implementation you require.

Options	Description
Managed router	We can supply, install, configure, manage and maintain a router in our customers premises as part of the service. Following new technology developments, we may at our own discretion choose to install a Managed Virtual Router instead of a physical device on site, but in either case the customer will not have to provide their own CPE router or layer-3 routing function. A CPE router or layer-3 routing function must be present on site.
Unmanaged router	We can supply and install an unmanaged router in our customers premises as part of the service. The customer will be responsible for the management/configuration, Colt will replace the hardware if it fails – unmanaged hardware is not actively managed. The SLA for the replacement is in line with standard service SLAs.
No Colt Router (Wired Only)	No physical/virtual router provided from Colt. Customer is responsible for procure, install, configure, and manage router(s).
Resilient dual access with managed router	Colt can provide two separate IP Access circuits with automatic failover. For this service the following network components are guaranteed to be redundant: • L3 CPE • L2 CPE • Access Circuits (Any of On-net, Fibre ULL, OLO, or EFM can be used in primary connection..Secondary connection can use any of On-net, Fibre ULL, OLO, EFM, DSL, or 3G/4G wireless) • Colt Access Router The following network components will be redundant when operationally possible: • Fibre Path • Provider Edge Router Diversity, in other words redundant network components geographically separated, cannot be guaranteed for any network component and will be provided on a best effort basis.
Resilient dual access without Colt router or unmanaged router	Colt can provide two separate IP Access circuits without managed router optimized for customer managed failover. For this service the following network components are guaranteed to be redundant: • L2 CPE • Access Circuits (Any of On-net, Fibre ULL, OLO, or EFM can be used in primary connection. Secondary connection can use any of On-net, Fibre ULL, OLO, EFM, or DSL) • Colt Access Router The following network components will be redundant when operationally possible: • Fibre Path • Provider Edge Router Diversity, in other words redundant network components geographically separated, cannot be guaranteed for any network component and will be provided on a best effort basis.
Layer 2 Protection for On-net Services	Standard IP Access local circuits are not protected; in other words, they have no layer 2 backup path. This is available as an add-on, it will provide a layer 2 backup fibre but does not include CPE or PE redundancy. The fibre path of the backup fibre is not guaranteed to be diverse.
DSL Backup	We can protect the primary access circuit using a separate DSL circuit for backup purposes. This does not provide L3 CPE redundancy.

Link Aggregation (LAG)	Colt can provide multiple Ethernet links that can be combined into a single logical link to increase bandwidth. This can be provided between the edge of the Colt network and the Customer's own equipment or, where Colt provides a Managed router, between the LAN ports on the Colt provided Managed router and the Customer's equipment.
3G/4G Wireless Backup	3G/4G Wireless Backup over mobile internet: GRE tunnel across wireless Internet into Customer's IP Access provides a backup path for the primary connection. This is offered as one of variants of resilient dual access with managed router. A tunnel is built back to Customer's IP Access via a gateway on Colt's network. Colt will manage the remote router and the GRE tunnel from the remote router. Customer has the choice of providing and managing the wireless Internet access and activation of the SIM card themselves or by obtaining this service as a Colt managed service. For backup circuit using 3G/4G wireless, it is the Customer's responsibility to ensure good mobile radio signal quality and strength at the exact location where the Colt CPE router (including SIM/antenna) will be installed. Any SLA metric given for 3G/4G wireless backup is for parts owned and provided by Colt. 3G/4G Wireless Backup is fixed monthly charge regardless data usage. However this is subject to additional charge in case of primary link failure was caused by customer, or a customer intentionally cut or damage primary link.
Multi ISP Backup - Load-share - Primary & Backup	Colt can set up and operate a multi homing / multi ISP solution on behalf of the customer. Colt will provide one of the two circuits and both managed router, the customer provides the second circuit from a different provider. Traffic routing can be either "Load-share" or "Primary & Backup" depending on the customer's requirements. A prerequisite for Multi ISP is a customer owned AS and a /24 PI IP address range. LAN connectivity between the Primary Managed Router and Secondary Managed Router must be completed by the scheduled Colt installation date. Any rescheduling of the installation or revisit of Colt on-site engineer due to customer's inadequate LAN connection is subject to an additional charge. As per the nature of this service the following network components are guaranteed to be redundant: • L3 CPE • L2 CPE • Access Fibre • Access Router Diversity, in other words redundant network components geographically separated, cannot be guaranteed for any network component and will be provided on a best effort basis.
Network Address Translation (NAT)	Static/Dynamic NAT is available with a managed router free of charge.
Dynamic Host Configuration Protocol (DHCP)	DHCP server services are available with a managed router free of charge.
Router configuration views and Event Viewer	Read-only access to router configuration and events information is available via a secure website. This is available with a Colt Managed Router.
SNMP read-only access	Provides visibility for the optional managed CPE router which terminates the IP access circuit at your site. This is available with a Colt Managed Router.
Cloud Prioritisation	The Cloud Prioritization features comes with a guaranteed RTD SLA to the cloud providers next public peering. The customer can choose the service bandwidth dynamically reserved for this traffic – between 10% and 80% of the service bandwidth. The services is currently only available in Northern Europe, Western Europe and Southern Europe
IP Access provided on an alternative Autonomous System (AS)	If Colt provides IP Access on an alternative AS, the following caveats will apply: • Not all IP Access features and options will be available • Diversity cannot be guaranteed for any network component when provided in conjunction with another Colt IP Access service • In the unlikely scenario where Colt is unable to continue to provide a service on AS that the service originally provided, Colt will inform the Customer and migrate the IP Access Service to an alternative AS

Colt IP Domain (Europe, Japan)

We can register a domain name on your behalf, subject to availability. Two types of domain names can be registered:

- Country specific domain extensions (example: .de, .fr, and .it)
- Generic top level domains (example: .com, .org, .net)

The IP Domain - Registration service includes:

- Initial registration of your domain
- Ongoing administration of your domain - charges may apply

5 Colt IP Access 4G/5G Wireless Access Features

Colt IP Access 4G/5G Wireless Access provides an internet connectivity through 4G LTE/5G Wireless. This service is provided by partnership with MNO (Mobile Network Operator) and MVNA (Mobile Virtual Network Aggregator). Mobile router and its installation, SIM card, Data, and 24x7 monitoring & operation are packaged in a service and included as based charge. The following are features of Colt IP Access 4G/5G Wireless Access.

Feature	Description
Bandwidth Speed [Mbps]	2/2, 5/2, 5/5, 10/5, 10/10, 20/10, 40/10, 50/20, 100/20, 200/20, 300/30 (Down Stream Max Bandwidth / Upstream Max Bandwidth) 50% of Bandwidth Speed is guaranteed.
Data Plan	<u>Unlimited Data (Primary Plan)</u> No limit on the amount of data sent/received (no overage charges) <u>Limited Data (Failover Plan)</u> Maximum bandwidth will be limited to 1 Mbps if the bundled data volume in a billing month is exceeded. (No overage charges)
IP Address	<u>Private IP Address (Default)</u> Private IP will be translated to public IP by dynamic NAT in the MNO. One subnet is configured on the LAN side. <u>Public IP Address (Add-on option with extra charge)</u> For public IP address, communication will be via a gateway (located in Hong Kong, Singapore, the Netherlands, the United States, and Australia). Latency may increase if this option opt-in depends on customer location. Geo IP for public IP address is based on gateway location.
Router	Router is provided as default and mandatory. Price for router is included in pricing.
Mobile Network Operator Redundancy	Two (2) SIM cards are inserted into mobile router for higher resiliency if multiple MNOs are available.
Monitoring & Management	24x7 (Mobile CPE Router at a customer site is not covered by the SLA. The standard Service Equipment replacement time is within the next business days or forty-eight (48) hours, whichever is earlier.)

Add-on options	<u>30GB Data top-up option</u> Applies to “Limited Data (Failover Plan)” plan only, Only bandwidth equal to or less than 40/10 <u>Public IP address</u> “/30 (Usable IP = 1)” or “/29 (Usable IP = 5)” are available. <u>Wi-Fi Interface</u> 2 x SSIDs provided. Wi-Fi communication status and throughput are not guaranteed. <u>Multiple LAN Interface</u> Configuring more than 2 switched ports on LAN interface of mobile router.
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6 General Comments

For customers connected to other providers in addition to Colt (Multi ISP / multi-homed customer) please note: If traffic on another provider's network due to an attack on the customer is redirected to the Colt IP/MPLS network we will be entitled to drop all the BGP sessions announcing the customer in order to protect the Colt IP/MPLS network.