



Cellular Primary Service Definition

Version v6.0
Date 23rd October 2022

redcentric

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1) Service Overview

The Redcentric Cellular Primary Service is a service enhancement to the Managed IP-VPN Connectivity suite. This service delivers Cellular mobile Broadband based communication services to locations where connectivity options are limited. The Cellular Primary Service uses Multinet SIM cards permitting connectivity to your network using any available 4G mobile Cellular network or lower speeds subject to mobile coverage.

The high specification cellular router ensures the most optimal network and strongest signal are selected. This increases service reliability, by selecting the strongest available Cellular network, security is maintained by connecting to our secure core network. The service is monitored from Redcentric's Network Operations Centre.

2) Service Description

2.1) Associated Products and Dependencies

The Cellular Primary Service is designed to integrate primarily with Redcentric's Managed IP-VPN Connectivity suite of services but can also be used for Direct Internet Access (DIA) to the customer site or as part of an SD-WAN deployment where DIA is required. For additional information on design and integration with our SD-WAN service, please refer to your account manager, additional fees may apply.

The Cellular Primary Service can be used as a fast site connectivity solution to support a permanent or short-term deployment with any of our layered service options and is ideal for providing temporary connectivity whilst a Broadband or Fibre Ethernet Service is scheduled to be installed. It can also be used as a longer-term option, for example, where no other diverse or economically viable connectivity options are available.

If not used for Direct Internet Access, the service uses IPsec tunnels which terminate onto Redcentric's Secure Remote Access Service (SRAS platform). Please refer to the SRAS Service Definition for further information.

The Redcentric Cellular Primary Service is only available with a Redcentric supplied SIM and data bundle.

2.2) Technical Solution Overview

The Cellular mobile service can be configured to deliver one of two services;

1. DIA (Dedicated Internet Access) – An unrestricted Internet access service
2. IP-VPN - the service can be integrated into our SRAS platform where the router builds an IPsec tunnel to an existing endpoint within the SRAS Service that connects to the Redcentric core network. This encrypted tunnel carries Customer application traffic as well as some Redcentric reporting and fault analysis traffic on the SRAS platform.

Where the WAN design incorporates a Redcentric Managed Broadband or Ethernet Service that is added later, the alternate service router can be configured to be part of a VRRP group. Virtual Router Redundancy Protocol (VRRP) is used to provide a gateway address on the router for devices on the Local Area Network (LAN). When configured as a primary or backup service upon failure of the broadband Service or Cellular router, the cellular router adopts that IP address.

Where the WAN design incorporates an SD-WAN overlay service, the Cellular Primary Service can be combined with SD-WAN equipment to build IPsec secured tunnels between endpoints over the Internet. Please refer to your account manager for further details, additional fees may apply.

The Cellular Primary Service delivers Internet connectivity, and IPsec secured tunnels are created between the cellular router and the 4 SRAS VPN endpoints.

In all cases, an IPsec tunnel is additionally configured between the cellular router and the Redcentric core for back-up management and reporting.

2.3) Application Filtering

Redcentric cannot influence throughput (bandwidth) of the Cellular Primary Service as this is determined by mobile cell usage, contention, signal strength, and network technology, etc. Therefore, to offer the best possible performance, customers may choose to restrict the traffic across the cellular network connection so that only business critical applications are supported.

In order to restrict application traffic, it must be able to be filtered based on source/destination IP addresses. This classification and filtering are performed in the router and is effective only for traffic leaving the site towards the core. Port-based application filtering is available and subject to an additional charge.

2.4) Cellular Router

If the firmware or hardware version of your Cellular Router is forecast to become End of Support (EoS) / End of Life (EoL) during a renewal of that contract term, Redcentric will no longer be able to provide security or critical firmware updates for that EoS or EoL CPE.

In order to continue to receive security and critical updates, a hardware refresh of the CPE will be required. Any hardware refresh, including the provision of new CPE, is outside the scope of this Service and will be chargeable. A new Cellular Router would need to be provided by Redcentric for an additional charge.

2.5) Installation

Redcentric offers a choice of 3 installation options, defined in the table below:

Installation	Details	Charging
Self-Install	The Customer installs the mobile router and/or antenna. This is suggested for sites where both parties agree that installation is straight-forward, the Cellular Primary Service connects to the strongest mobile network signal in the area.	●
Managed Installation	Redcentric engineers perform an installation of the cellular router and position an antenna within the same room. The pricing for the Service assumes that for any roll-out project, two sites can be installed per day; if this is not possible, additional Charges may apply. Redcentric cannot guarantee that coverage will be available or acceptable and the Complex Installation of a Cellular antenna may be required at additional cost.	○
Complex Installation	Redcentric will arrange for a specialist contractor to deliver an optimised connection using a higher gain or amplified antenna. This will only be required when the Redcentric install does not offer the level of coverage required. Again, even though this option will be chargeable, Redcentric cannot guarantee that coverage will be available or acceptable. The Customer has the option to cancel the Cellular Primary Service at a location if acceptable coverage cannot be achieved.	○

KEY: ● Inclusive as part of the standard service | ○ Available as an optional upgrade for an additional charge.

During site installations, if applicable Redcentric will need to test fail-over and this will disrupt the primary connection. A brief outage of approximately 30 minutes would be required during the working day (at an agreed time) to test Primary & systems on back-up. If this is not acceptable, an out of hours install can be arranged at extra cost.

If environmental conditions change during the contract period and acceptable signal level is lost, re-installation / relocation of the antenna would be required.

2.6) Hardware Relocation

Customers wishing to relocate the equipment to an alternative site should place an order for re-install at the new location. The Redcentric engineer will recover the hardware, re-configure it as necessary, and install it at the new location.

2.7) Customer Responsibilities

The Customer is responsible for:

- Provision of a suitable location for the router including mains power and space etc.
- Taking appropriate precautions to prevent the router and antenna from being obscured, damaged or moved.

2.8) Redcentric Responsibilities

Redcentric is responsible for the following:

- Configuration of the cellular routers
- Dispatch of the cellular router to the Customer site (based upon Installation option 2.4)
- Configuration of the core components including SRAS when applicable Monitoring of routers and core devices
- Fault management & investigation

If a problem affects the Cellular Primary Service, the following table sets out the party responsible for the costs of corrective work.

Identified Problem	Responsibility for costs	Cost incurred
Faulty router or antenna	Redcentric	Site visit & replacement (subject to Installation option clause defined in 2.4)
Incorrect solution configuration	Redcentric	As required to correct problem
Faulty SIM / contract issue	Redcentric	As required to correct problem
Antenna, cable, or router damaged, relocated etc.	Customer	Site visit & replacement (if required)
Local environment	Customer	Site visit & new set-up if required
Other Customer related fault or issue	Customer	Site visit & other associated costs

2.9) Monitoring

Redcentric polls the router approximately every fifteen minutes to identify service failure mainly out of office hours. This polling period has been chosen as a compromise between identifying faults in a sensible timeframe and minimize data charges. Lack of response to three successive polls automatically triggers the creation of a fault ticket, and the issue is subsequently investigated by a Redcentric engineer.

To minimise false alarms, routers should remain powered on. Redcentric will disable monitoring where local site conditions (e.g. power loss & signal drop) create regular false alarms. The Customer will be notified prior to monitoring being disabled.

2.10) Reporting

Redcentric polls the cellular router every fifteen (15) minutes or so and establishes the following:

- That the cellular router is functioning and is connected to the cellular network

- That there is a session connection from the cellular Router to the cellular network IP-layer.

Lack of response to several successive polls automatically triggers the creation of a fault ticket, and the issue is investigated by a Redcentric engineer.

Additionally, signal strength can be monitored manually as part of the diagnostic procedure.

To minimise false alarms, routers should remain powered on.

2.11) Fault Notification

Redcentric notifies customers of service failure using automated Email using the Support process defined in the Managed IP-VPN service description.

2.12) Latency

It is normal for the Cellular primary service to experience one-way latency in the order of several hundreds of milliseconds. Redcentric is unable to affect these figures as they are a function of the cellular network. Customers should check that their applications will function adequately with latency of this order of magnitude.

2.13) SIM Provision and Data Utilisation

The Cellular Primary Service includes a mobile SIM with data bundle package. The data bundle can be grouped and shared between all of sites where the services are delivered. Redcentric supplies the Cellular Primary Service in conjunction with a SIM / data bundle only. The cellular SIM and data bundle and any excess data transfer are billed separately on a monthly basis in arrears.

2.14) Mobile Operator

Redcentric will deploy as standard a Multinet SIM providing access to any 4G mobile network where coverage is available or at lower speeds the router ensures that the most optimal network and strongest signal is selected. Alternatively, where defined in the SOW a single-net SIM from one of the major UK operators (Three, O2, Vodafone or EE).

Notwithstanding the presence of two slots in the Redcentric supplied router, the Cellular Primary Service only makes use of and supports a single SIM card.

2.15) Mobile Operator Performance

Redcentric has no control over mobile network coverage, individual cell site availability or bandwidth throughput at any point in time. Consequently, no performance assurances are offered.

3) Implementation and Acceptance

3.1) Acceptance Criteria

The following are the Acceptance Criteria applicable to the Cellular Primary Service:

Where deployed as a Primary service –

- A traceroute to a known IP address confirms that traffic is traversing primary circuit

Where deployed with an alternate failover service -

- With primary circuit working, traceroute to a known address confirms that traffic is traversing primary circuit
- With primary circuit disconnected, and after waiting 5 minutes, traceroute to a known address confirms that traffic is traversing the cellular link
- With primary circuit reconnected, and after waiting 5 minutes, traceroute to a known address confirms that traffic is traversing the primary circuit

4) Service Levels and Service Credits

There are no Service Levels or Service Credits applicable to the Cellular Primary Service.

5) Data Processing

5.1) Data Processing Scope

- The Cellular Primary Service delivers the transport of IP packets between locations.
- The Cellular Primary Service does not involve any storage or backing up of data.

5.2) Data Storage and Encryption

- Redcentric encrypts traffic over connections when a public (i.e. Internet based) cellular service is used. Redcentric does not encrypt traffic over connections when a private cellular service is used. Availability of coverage, pricing models and customer preference dictate which type of service is to be used at each customer location.
- Redcentric does not capture, inspect, analyse, store or share the customer's traffic/data under normal circumstances.
- Under certain circumstances, when managing a support ticket, Redcentric may capture, inspect, analyse and/or store a small sample of the customer's traffic in order to investigate and diagnose a very specific problem, e.g. to help resolve a problem relating to IP packet corruption. Such diagnosis would involve the examination of a small sample of IP packets.

5.3) Data Processing Decisions

- Redcentric does not make any data processing decisions in relation to the Cellular Primary Service. Any processing of data over customer systems when using the Cellular Primary Service for transit is instigated, configured and managed by the customer.
- Redcentric Support can be asked by the customer to intervene in the event of an issue with the Cellular Primary Service. In such a case Redcentric may make decisions that affect data processing, but such actions will only be undertaken at the request of and in conjunction with the customer.

5.4) Sub-Processors

- Redcentric's network over which elements of the Cellular Primary Service is delivered uses third party carriers (such as Three, O2, Vodafone or EE) to provide connectivity. These third parties are conduits only for data and have no involvement in the processing or storing of data.
- No other parties are involved in delivering the Cellular Primary Service, and there are no sub-processors appointed by Redcentric.

5.5) Customer Access to Data

- The customer controls its own platforms which use the Cellular Primary Service to carry data, and the customer therefore has full access to its own data.

5.6) Security Arrangements and Options

- The core Infrastructure delivering the Cellular Primary Service is hosted at both Redcentric and third party locations. All locations meet physical security standard ISO27002 section 11.1 or equivalent. The Customer is responsible for ensuring the physical security at customer sites/locations, where the Service terminates, meets its needs.

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