

Broadband Connectivity

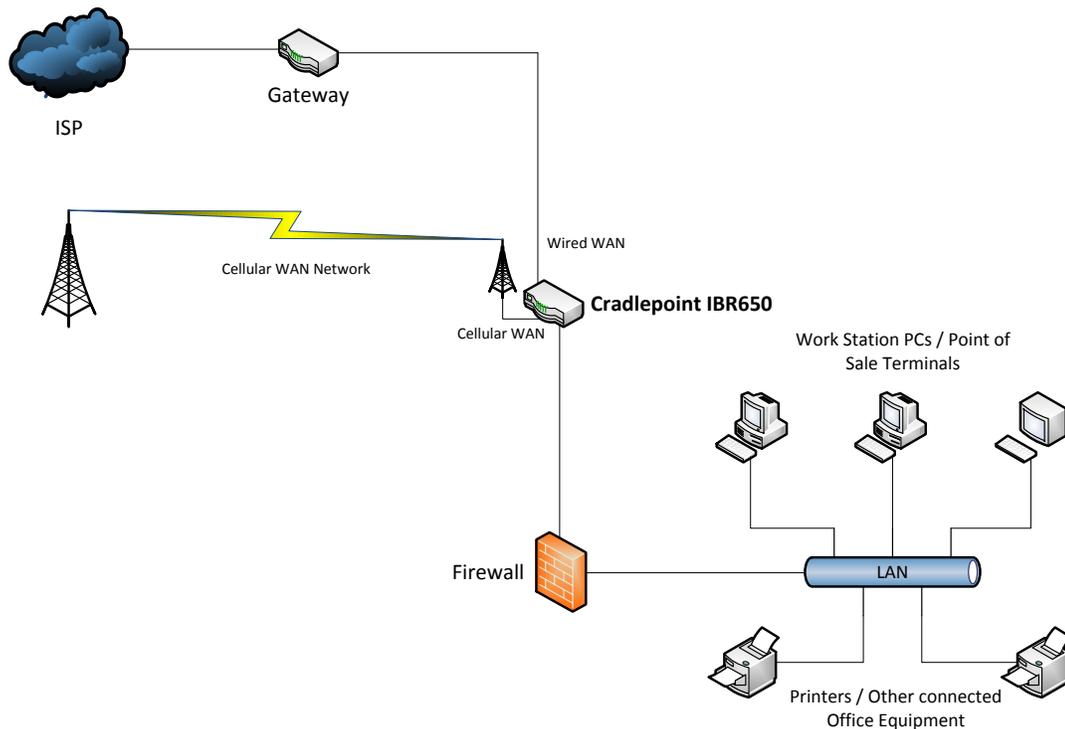
Utilizing Cradlepoint 350, 600 and 650 Series Devices

The Velocity CellCast service is designed to provide truly managed wireless services for enterprise applications. It can enhance IP network reliability by supplying the customer with a backup solution for Wired IP Broadband (Failover) at their remote locations, or in cases where there is no existing Wired Broadband service, CellCast can provide a full-time Cellular IP Broadband connection. The following are examples of the various Cradlepoint devices used in the CellCast system, and a description of how each device may be used to provide Broadband connectivity.

There are three main configurations for Cradlepoint devices in the CellCast system. They are:

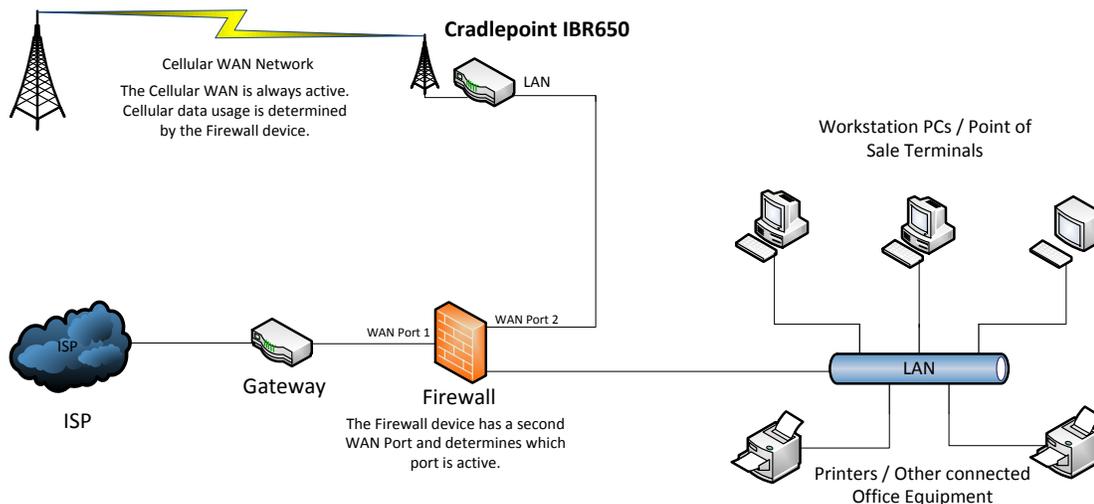
- **Failover** – The device is configured to accept the Wired WAN from the customer IP Gateway on a WAN port, and the Cradlepoint device continuously monitors the connection to determine when the Wired WAN has failed and switches over to the Cellular WAN and routes the Cellular WAN IP Broadband connection via a LAN port to the end-user IP equipment.

Basic Failover Application



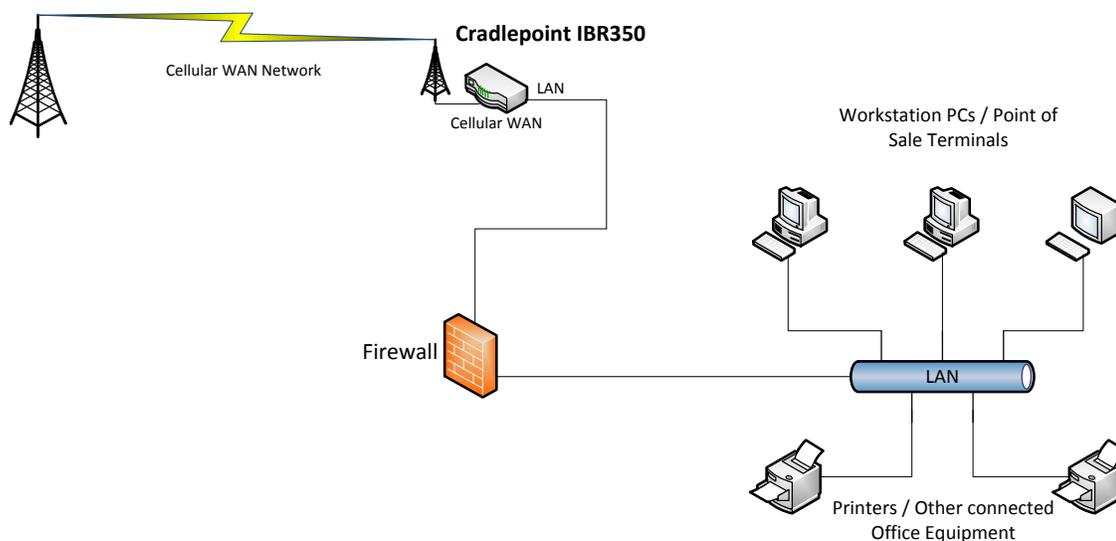
- IP Passthrough** – The device is configured to pass the Static IP Address assigned to the Cradlepoint device by the carrier directly to the remote customer IP equipment. In essence, the Cradlepoint device acts as a Cellular IP Gateway device, and the customer equipment acquires the Static IP Address of the Cradlepoint device. When used with a Firewall / Router that has two WAN ports, the IP Passthrough configuration can also serve in a Failover capacity. The difference between this configuration and the Failover configuration is that the Firewall / Router determines when the switch to the Cellular WAN occurs, not the Cradlepoint device. This is compatible with most of the newly-emerging SD-WAN products in the marketplace

Basic IP Passthrough Application



- **Cellular WAN Only** – The Cradlepoint device is configured to pass Network Address Translated packets via a private IP Address to the customer IP equipment. The most common configuration is for the Cradlepoint device to act as a DHCP server, and the customer IP equipment to act as a DHCP client.

Basic Cellular WAN Only Application



The Cradlepoint devices currently in use in the configurations above are:

- **IBR650** – This device is capable of Failover configuration, Cellular WAN Only configuration, and can also be configured for IP Passthrough configuration.
- **IBR600** – This device has the same capabilities of 650 series, plus adds Wi-Fi router capability.
- **IBR350** – This device is designed for applications that don't require Failover or IP Passthrough capability.

In Failover or Cellular WAN Only configuration, the Cradlepoint device can be configured for Network Address Translation and Port Forwarding, which will allow the customer to reach a computer or other device behind the Cradlepoint unit from the Internet. A Cradlepoint device configured for IP Passthrough cannot route the IP traffic, since the unit's address is assigned to the customer IP equipment.

Which configuration is right for my application?

If you have basic Wired WAN Broadband at your remote locations, but you want to improve the reliability of your network connectivity, CellCast configured for **Failover** is a dependable solution. The Cradlepoint device will be configured to automatically switch your connectivity from your Wired WAN to our Cellular WAN whenever there is a failure of the Wired WAN. When the issue that caused the failure of the Wired WAN has been resolved, the Cradlepoint device will seamlessly switch back to the primary Broadband connection. Also, our operations center will send you email alerts giving you an up-to-date overview of your network status, letting you know if you need to contact your ISP to resolve any outage issues while you are connected via CellCast.

If you have a system that uses enterprise routers with multiple WAN ports and traffic encapsulated in VPN Tunnels, our **IP Passthrough** configuration can give you a Static IP address via Cellular directly to a secondary WAN port on your router. Your equipment will be the termination point of your tunneled data, eliminating the need to terminate the VPN on a third-party device which will ensure compatibility.

If you have locations where you just can't get Wired Broadband service, our **Cellular WAN Only** configuration is a simple solution for quick and reliable connectivity to the Internet.

In all cases, the Microspace CellCast solution gives you access to a web portal that allows you to see Cellular data usage of each device in your system.

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