

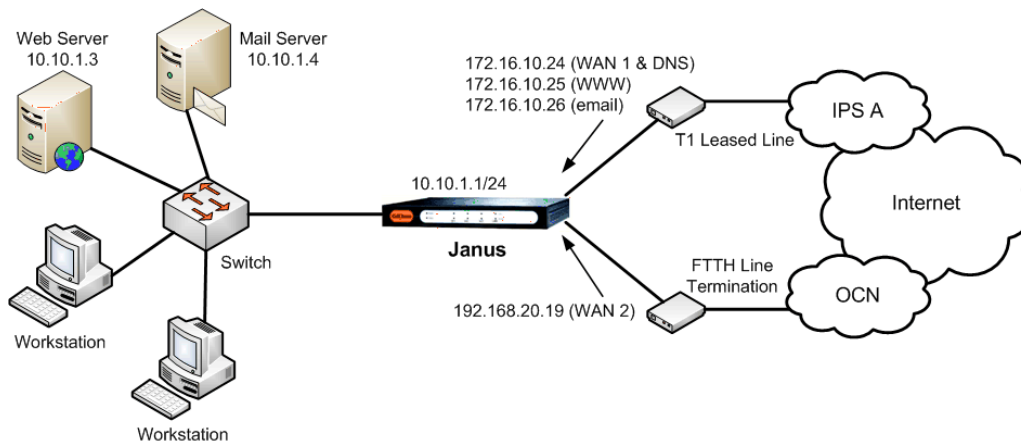
2009-04-30 Cell Janus Delivers High-Performance for Carrier's Broadband FTTH Services

Introduction

Many businesses today rely on a single xDSL and private lease line of T1/E1 as their dedicated access to the Internet. When it comes to increasing the available bandwidth to the Internet from the IP broadband or Metro-Ethernet network services, traditional approaches either require installing a line from the same ISP, Internet Service Provider or incurring very high costs (as in the case of upgrading to full DS3). Here the problem is that while the second line does offer the added bandwidth, it does not offer back up capability places this solution out of the range of the vast majority of businesses. Clearly businesses need another approach to gain extra bandwidth while providing sufficient backup, optimize the bandwidth and the application at a cost-effective solution.

Innovative Deployment of Janus Technology into Japan Carriers

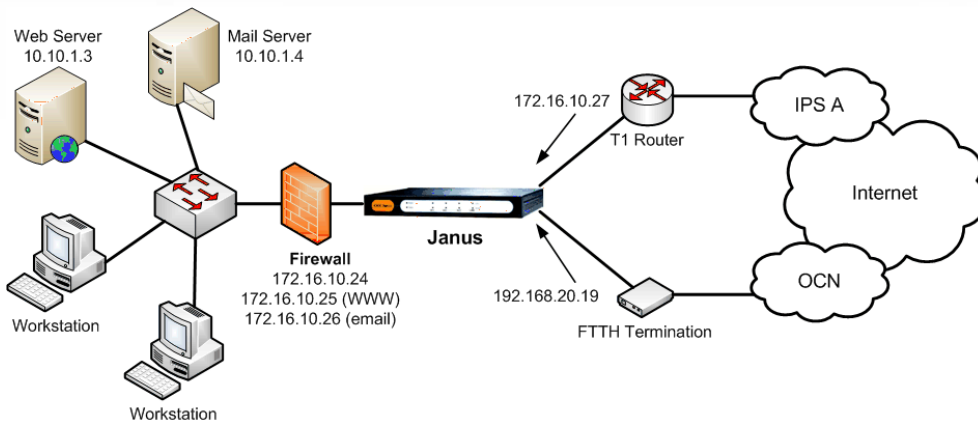
The one of largest carriers in Japan has been offering 10 Mbps to 100 Mbps or even higher Fiber Ethernet Service to businesses. Bundled with Janus (iSurfJanus, a Japanese brand name deployed in Japan) family of products, the objective of the carrier solution is to offer existing T1 or Fractional leased line customers to deploy Fiber Ethernet (FTTH) Service in conjunction with their existing services, thereby gaining the advantages of greatly increased bandwidth and reliability at a very reasonable cost. Specifically, the carrier's 10 Mbps service is offered to businesses at a very reasonable cost as backup for their existing T1 service, as well as to provide a very significant increase in bandwidth availability to their existing or new customers. In additional, additional bandwidth can be delivered with no charges to the customer's network configuration.



"Drop-in" Integration with Existing WAN Links

The Cell Janus product family can provide 100Mbps, 300Mbps and up to 1Gbps system throughputs and very reliable network performance for carrier network services. It can also offers a "transparent configuration mode" to allow easy installation into a network without requiring configuration changes in existing LAN/WAN equipment. For T1/E1 or leased line connections, Cell Janus can be easily installed between the LAN switch and WAN router without reconfiguring LAN clients or the router. Specifically, it allows transparent communication between WAN1 and the LAN port. When the T1/E1 or leased line is operational, traffic between the LAN and T1/E1 pass through as if Cell Janus were not there. During a WAN outage, Cell Janus passes traffic to the fiber link, activating an optional VPN if needed. And for added a bandwidth, using the additional link full time to augment the T1/E1 is as simple as changing Cell Janus from backup mode to load balancing mode.

Case Study

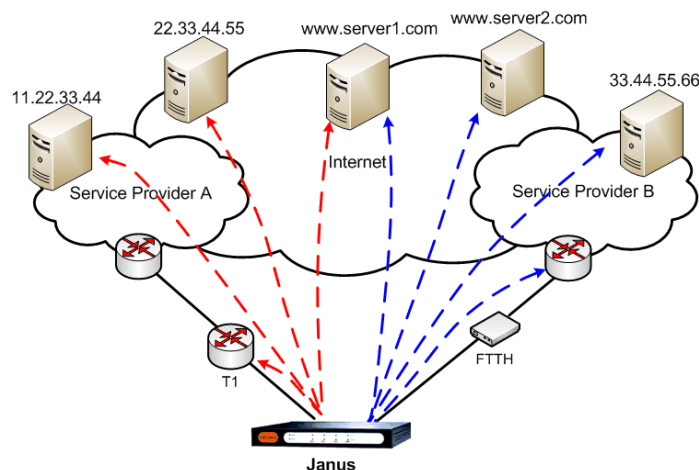


Multiple Service Providers for Increased Availability

ISPs, likely many broadband services, have suffered from the perception that they experience a high occurrence of network outages. Worse, with more and more Service Providers going out of business, businesses are increasingly sensitive to the longevity and reliability of their Service Providers. Cell Janus provides a simple method to resolve these issues: use more than one Service Provider. When one Service Provider goes down (technically or financially) a second Service Provider most likely will still be available. Using multiple Service Providers, two links with 95% availability can combine to give the network 99.75% availability. Cell Janus is designed with the intelligent IP mapping needed to simply and easily support multiple Service providers in one network without required either Service Provider's cooperation.

Automatically Detects Physical and Network Outages

There are many reasons why communication may be lost through a particular WAN link, a cut in the copper or fiber cable, a crashed DNS server, and ISP router problems all can cause connectivity problems. With this in consideration, Cell Janus uses several methods to determine the health of each WAN link. At the most basic level, it continually checks with the default gateway for physical connectivity. For network-level outages, Cell Janus monitors (PINGs) up to 4 target URLs and IP addresses configured by the Network Administrator.



Maximizes Combined Bandwidth

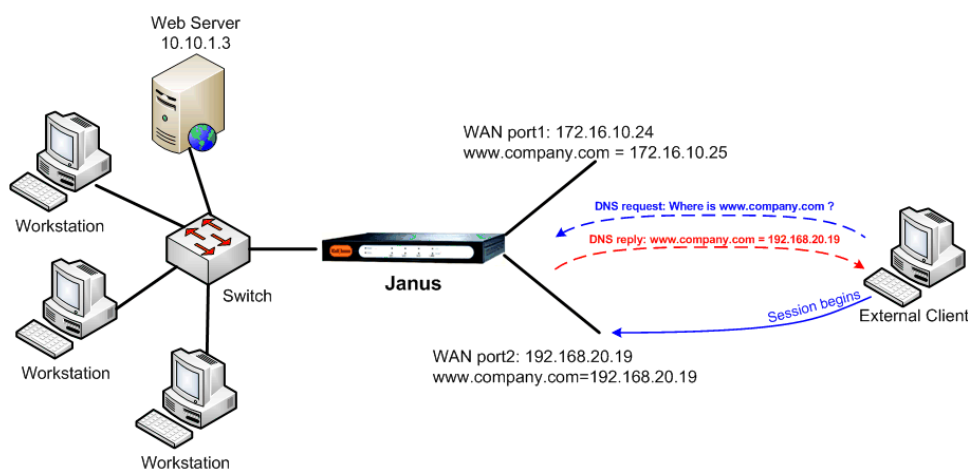
With multiple connections to the Internet, how do you use all the links for your network when these connections may have different bandwidth capacities and may be connected to different Service Providers?

The answer is dynamic session-based load balancing. Cell Janus load balances individual sessions between links, distribution traffic based on the bandwidth capacity of each link. This allows a business to combine FTTH services with a T1/E1 Internet connection. The session-based load balancing also helps optimize application performance in multiple Service Provider environments because it keeps related traffic (individual sessions) on the same network. Without the Cell Janus' session-based load balancing, applications may receive packets that are badly out of order because they

traveled across different networks. Without the Cell Janus' session-based load balancing application performance is degraded; as well, VoIP and Videoconferencing are un-usable.

Balances Internet Traffic to Hosted Internet Servers

Many organizations have at least one hosted Mail, Web, or FTP server. It is critical that external users are able to reach these servers all the time. Cell Janus provides two key services for these hosted servers. First, it provides for continued access to these servers even when individual links fail. Second, it load balances the inbound traffic for these servers to minimize the chances that one link may become saturated when another is available. Cell Janus uses an integrated DNS server and acts as the Domain Authority for hosted servers. The outside world can make DNS requests through any link connected to Cell Janus (requires DSL with static IP addresses on those links). Cell Janus then uses DNS to direct those sessions to the appropriate link for load balancing or backup requirements.



Optional Integrated Stateful Firewall on Each Link

Cell Janus provides an integrated Stateful Firewall. It provides control for predefined and custom TCP/UDP services, blocks many common attacks, and can control access down to the individual host level. The firewall, and each of its services, can be enabled or disabled on each WAN link. Cell Janus can also be deployed with an existing firewall. Cell Janus also supports PPPoE, DHCP, and NAT services (1:1, 1:Many, Many:Many, Port translation) on each WAN port.

About Cell Technology

Cell Technology headquartered at Hong Kong SAR, a network & security technology provider specializes in design, develop and deliver innovative and intelligent IP packet processing platform into software and hardware appliances. Cell product solutions including Cell IPS, UTM, CMC, Janus, TMS, NetsVision and NetsAccess address the business needs that optimize the IP network performance, secure the network security and resiliency, and manage the quality of IP services. For more information, please visit www.cell-technology.net.