

AT&T  
ip vpn  
portfolio

RETURN ON COMMUNICATIONS



# integrated



# IP VPN solutions

for the enterprise

 **Communication Systems  
International Incorporated**

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## Applications of IP VPN Technology

### Applications of IP VPN Technology

- Sales Force Automation
- Enterprise Resource Planning
- Remote and Mobile Networking
- Imaging
- Supply Chain Management
- Intranets
- Extranets
- Content Management

## Network Challenges

Business is constantly pushing the limits of networking, requiring higher speeds, more bandwidth, simplified access and tighter security. But because of new technologies for data sharing and application integration, businesses are demanding the ability to extend networks beyond their corporate headquarters to branch offices, remote workers, clients, vendors and partners. The need for flexible networking solutions has never been greater.

IP Virtual Private Networks (IP VPNs) offer enterprise-scale connectivity across multiple IP-based infrastructures by combining many of the performance and security characteristics traditionally found only in dedicated private environments.

IP VPN technology expands networking solution options by leveraging the best of dedicated and shared networks to deliver cost-effective connectivity, security and performance, enabling you to share information among all parties.

## AT&T Leading The Market

AT&T, a market leader known for innovative technologies and engineering, is at the forefront of developing global, scalable, high performance solutions that bridge your current technology investments with the future. AT&T service innovation focuses on leveraging our global network to integrate common IP VPN features across all implementations. In so doing, AT&T delivers a suite of

interoperable IP VPN solutions specifically designed to address the requirements of today's demanding applications. All managed by experienced AT&T personnel.

## AT&T IP VPN Portfolio

The AT&T IP VPN Portfolio offers a customizable suite of global network services that range from individual components to complex custom offers with a continuum of interoperable transport, access and security options - all with management capabilities that offer varying levels of strategic control from "do-it-yourself" to fully out-sourced. Whether AT&T is called upon to fully manage your IP VPN solution, or you prefer to take more management responsibility for your network, AT&T is dedicated to providing a solution designed to meet your individual networking requirements.

### IP VPN Transport Options

- Frame Relay
- Internet
- ATM

### IP VPN Security Options

- Managed Firewalls
- Intrusion Detection
- Network Scanning

**IP VPN Access Options**

- Remote
- Dedicated
- Broadband

**Virtual Private Networks**

With the recent growth and importance of remote accessibility, e-commerce, intranets, and extranets, IP VPNs are playing an important role in today's enterprises by providing the ability to deploy a networking solution that is a cost-effective communication method.

IP VPNs offer flexible architecture options that harness the strength of the network, while extending the reach of its technology to provide simplified, secure and scalable connectivity. IP VPNs allow you to leverage your existing network while maximizing the return on your IT investment.

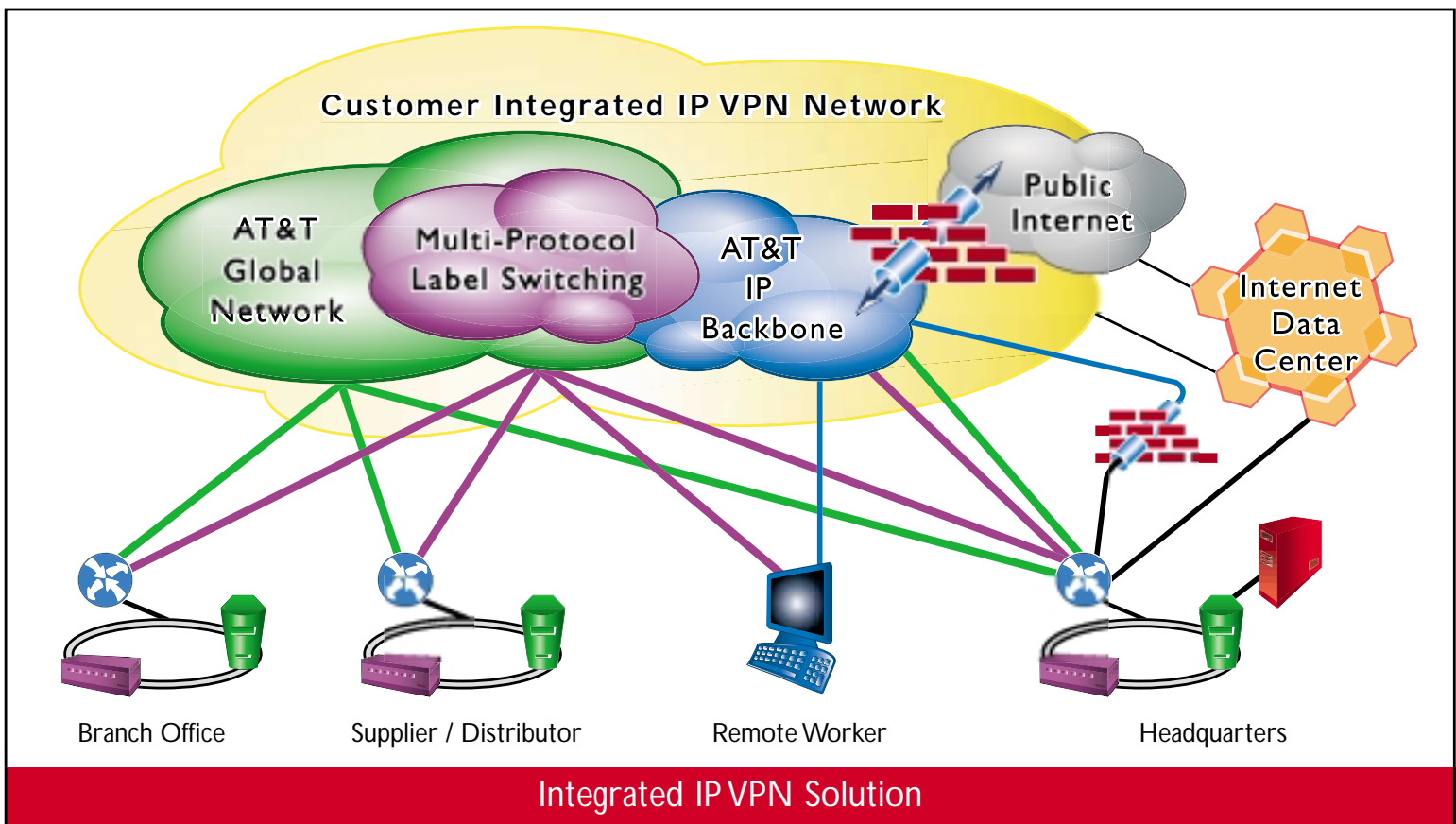
AT&T offers multiple ways to implement an IP VPN: Network Based, Premises Based, and Integrated - a combination of a Premises and Network Based IP VPN.

**AT&T IP VPN Portfolio  
Expanding The Network Continuum**

**Network Based IP VPNs**

AT&T Network Based IP VPNs are delivered via the AT&T global network, which utilizes a Multi-Protocol Label Switching (MPLS)-based IP-enabled network backbone establishing a logical software defined network (SDN) with integrated security and classes of service. MPLS is an advanced IP-routing technology that establishes and prioritizes route assignments, efficiently transporting the IP packets over the AT&T global network. This provides you with high levels of performance, reliability and security, with quality of service (QoS) and service level agreements (SLAs).

For those used to running their mission-critical business applications over frame relay and ATM, Network Based IP VPNs provide a graceful way to evolve your network to an IP VPN while maintaining the same level of performance, reliability, and security.



### Premises Based IP VPNs

AT&T Premises Based IP VPNs are delivered by adding intelligent devices to the customer premises and can be provisioned over the private AT&T IP backbone or the public IP network. Devices such as IP VPN gateways, which terminate IP VPN tunnels, are installed at the enterprise edge and a SDN is established by programming appropriate levels of network security, user access control and bandwidth prioritization.

Premises Based IP VPNs allow you to build upon your current investments by providing dedicated, broadband, and remote access options for connection to the AT&T global network or the Internet. AT&T can fully implement your Premises Based IP VPN, from the largest headquarters' location to traveling sales personnel.

### Integrated IP VPNs

The AT&T IP VPN Portfolio goes one step further by offering Integrated IP VPN solutions. These implementations combine our Premises and Network Based solutions to create a unique IP VPN. AT&T service innovation focuses around an Integrated IP VPN that provides seamless interoperability and additional flexibility within a single network with the opportunity to match infrastructures to applications.

### AT&T IP VPN Portfolio - Management Options

AT&T IP VPN Portfolio boasts a family of Network and Premises Based IP VPNs that provide you with a strategic continuum of management capabilities that include designing, implementing and managing your IP VPN.

A key service characteristic of AT&T IP VPN Portfolio Management Options is designing and implementing Integrated IP VPN networks and integrating them with other AT&T products and services to deliver a complete networking solution.

AT&T works with you to learn what your application and network support requirements are. Based on this assessment, we implement an IP VPN with the appropriate level of AT&T management that allows you to realize the benefit of a solution

that economically meets your business needs. The end result is increased productivity - provided by AT&T.

### AT&T IP VPN Portfolio - Access Options

As a market leader in data communications, AT&T has built a global network with an extensive range of access options. The AT&T IP VPN Portfolio takes advantage of these options and provides integrated solutions that address location requirements across your entire enterprise.

AT&T IP VPN Portfolio Access Options include:

- **Remote**
  - Dial
  
- **Dedicated**
  - Private Line
  - Frame Relay
  - ATM
  - IP
  
- **Broadband**
  - DSL
  - Cable

AT&T's global presence and range of access options provide you with the flexibility to meet a variety of needs, from a small business with only a few employees to a large corporation with hundreds of sites.

### AT&T IP VPN Portfolio - Security Options

Insuring the security of your network is critical. The AT&T IP VPN Portfolio offers a number of security services that protect your network. There is an array of options designed to give you maximum flexibility in securing your IP VPN, whether you implement an Premises Based, Network Based, or an Integrated IP VPN solution.

### IP VPN Security

You can create a highly secure IP VPN network by choosing a Network Based IP VPN over the AT&T global network. Security is built into AT&T's network through private Layer 2 access and MPLS-based SDNs within the backbone, and is directly managed by AT&T for high levels of security and QoS.

For Premises Based IP VPNs, options for tunneling, encryption, access control and authentication are provided on your premises.

### Firewall Security

AT&T provides managed firewall services to secure your access to the Internet. Firewall functionality can be deployed within the AT&T network, or in customer Premises Based devices on the edge of the IP VPN. More importantly, you decide on your security policies and AT&T will manage them.

### Intrusion Detection Services

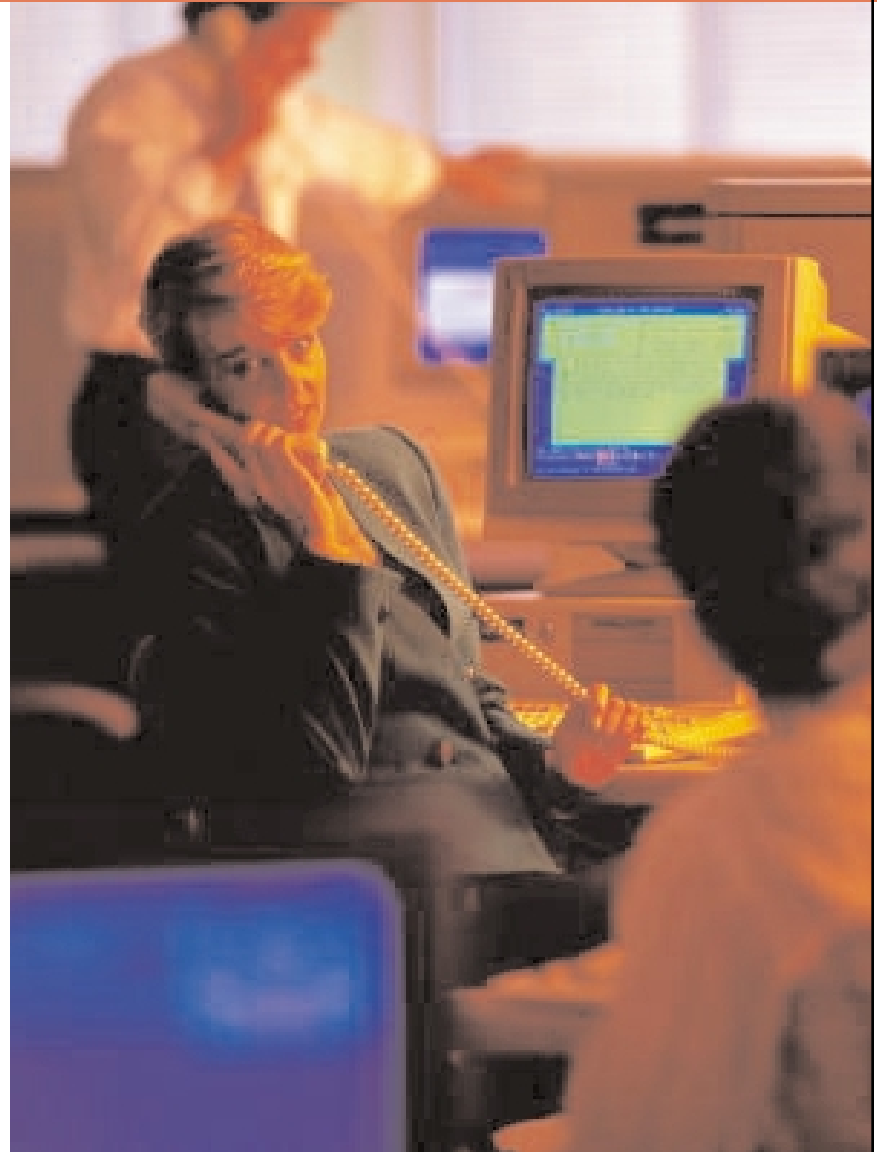
AT&T has the ability to extend managed security services beyond the firewall. With our managed intrusion detection services, AT&T provides you with a 24-hours-per-day, 7-days-per-week network watchdog for comprehensive monitoring, attack recognition and response completely based on your pre-defined security policy.

### Network Scanning

Through an automated, Web-based scanning tool that probes Internet-facing devices for vulnerabilities, AT&T provides real-time network scanning for potential entry points open to malicious attack. Customers who subscribe to the service may have a lower risk of security breaches that can compromise network security - potentially leading to significant financial losses.

### Professional Services and Security Consulting

AT&T offers a suite of security consulting services designed to safeguard your network, including security policy and security plan development. Security consulting services can help protect your information assets from a wide range of real world threats.



## AT&T IP VPN Portfolio - Management, Monitoring and SLAs

IP VPNs are an intricate and thorough solution, and AT&T has the expertise and knowledge to help navigate through the complexity of managing your network. The AT&T IP VPN Portfolio is supported by a robust continuum of management capabilities that provide a wide array of network control – from selective out-tasking to complete outsourcing.

AT&T offers network design and consultation, installation and implementation support, and network management with 24-hours-per-day, 7-days-per-week network monitoring and customer care support.

AT&T has expertise in sales, customer care, network engineering and management, with operation centers worldwide offering in-country help desk support to take the complexity out of your day-to-day networking.





## AT&T IP VPN Portfolio - Complementary Service Options

Augment your IP VPN by leveraging AT&T's Hosting Portfolio. Designed to deliver a secure, robust, high performance hosting environment, the AT&T Hosting Portfolio offers a variety of hosting and management capabilities that provide end-to-end support for your diverse business applications.

AT&T Professional Networking Services can help optimize your networking strategy. AT&T can assist you in evaluating your networking, security, access and management requirements, and recommend a customized network implementation plan based on your investment considerations.

### Putting It All Together

The AT&T IP VPN Portfolio delivers fully integrated and interoperable global IP VPN solutions designed to meet your unique business requirements, and provide meaningful returns on your communications investment while exemplifying our commitment to offer best in class industry technology for performance, reliability, and feature functionality.

Through our expertise and resources, we can design solutions that fit each application. The AT&T strategic advantage is the AT&T Global Network, which spans frame relay and ATM networks, private IP networks, and the public IP network to provide the access diversity, interoperability, and reach required to support all communications needs.

AT&T, with over a century of communications experience and expertise on our side, as your IP VPN Service Provider, opens up a world of extraordinary networking and management possibilities.

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