The Cisco Distributed R&D Solution for Manufacturing

The Value of Distributed R&D to the Manufacturer

At-A-Glance

For today's manufacturers, increasing the rate of innovation has become a top priority, driven by:

- Increasing customer demand for new and specialized products
- High growth in emerging markets requiring localized products
- The need to compete effectively against global firms

By expanding their global R&D footprint, manufacturers can accelerate product development and time-to-market. However, to make global production workflows effective, companies must be able to synchronize product development worldwide, and managing innovation processes on a global basis requires consistent access to applications and management of data.

The Cisco® Distributed R&D solution with PTC offers an integrated technology that combines Cisco's industry-leading application Networking Services (ANS) with PTC's Product Lifecycle Management (PLM) solutions to ensure design activities are in synch, engineering processes remain consistent, and design and production teams are always working from the latest information. The PTC product development system (PDS) includes Windchill for content and process management and Pro/ENGINEER, PTC's integrated CAD/CAM/CAE software.

The Challenges of the PLM Process

Well-designed PLM applications offer a significant advantage to manufacturers needing to manage change, oversee CAD information, and ensure consistent processes across distributed product development teams. The success of global PLM deployments can be challenging, however. Manufacturers are increasingly choosing distributed product development centers while centralizing data and applications—enabling significant savings, improved security, and more flexible deployments—but also creating problems such as:

- Higher bandwidth utilization in remote sites due to limited WAN links and inefficient Internet standard protocols
- Less access to centralized applications because of slower networks and architectures
- Greater business risk due to security breaches of extended network architectures
- Lower productivity from engineering teams and lower adoption of the application
- Higher cost of ownership for the application infrastructure

The Cisco Distributed R&D Solution with PTC

The Cisco Distributed R&D solution with PTC solves these problems by utilizing the power of ANS to optimize performance and infrastructure for the PTC product development system. As it simplifies data center and remote design center infrastructures, this solution improves application performance, availability, and multi-layer security. It accomplished these goals based on ANS solutions, combining Cisco's Wide Area Application Services (WAAS) technologies, and the Cisco Application Control Engine (ACE) appliance and module, to support the PTC PDS to provide fully integrated performance, availability, and security. The solution has a number of capabilities, including:

- Optimized web based application performance and file transfer across a WAN for both SSL encrypted and unencrypted data using Cisco WAAS technology for both design centers and remote workers
- Improved application availability via effective failover capability, monitoring, and server load balancing
- Cross-network server access controls and application level protocol inspection to assure traffic and server security
- Server optimization through offloading services to the network infrastructure, virtualized network services to support multiple applications, and integration with existing network infrastructure

Benefits of the Cisco Distributed R&D Solution with PTC

Manufacturers gain a wide range of critical innovation benefits from implementing the Cisco Distributed R&D solution with PTC. This powerful technology provides:

- Improved management and visibility of the product development process through consistent, reliable/highly available, global PLM capabilities
- Improved productivity for engineers at global design centers and remote locations through improved application performance and faster data transfer.
- Efficient deployment and operation through data center infrastructure and WAN bandwidth optimization
- Comprehensive security to protect the confidentiality of critical design data, applications, and infrastructure

Why Cisco?

Responding to rapidly changing customer demands and capturing new revenue growth opportunities requires manufacturing companies to continuously innovate. Managing innovation processes on a global basis in turn requires consistent access to applications and data used during the development process. Cisco and PTC help manufacturers address the business and technical challenges associated with globally Distributed product development deployments, by providing validated architectures that optimize application performance and reduce the cost and complexity of PLM and CAD data management. This allows manufacturing companies to focus their time and resources on developing new products and growing their business.

To learn more about Distributed Research and Development, along with all Cisco Connected Manufacturing solutions, visit: www.cisco.com/go/manufacturing

C45_516837-01 06/09