

Secure Networks: Distribution Layer Security Solution

Secure Networks Business Benefits

- **Preserves investments by working with existing, multivendor infrastructures** at the core, distribution, or edge of the network
- **Enables an incremental, cost-effective investment** to implement a Secure Network
- **Provides secure/reliable access for internal and external users** based on their role within the organization
- **Reduces complexity and risk** by embedding active, automated security into the network fabric
- **Improves visibility** into the network as a single entity for **faster trouble resolution**
- **Maps business policy to network implementation**
- **Delivers automated and system-level control** to lower the cost of administration, implementation and troubleshooting
- **Enables application growth** and expansion
- **Increases productivity** through improved access to data/applications
- **Deployable today** across the Enterasys product portfolio

Securing Enterprise Networks at the Distribution Layer

With increased threats and attacks across the enterprise, the importance of deploying a Secure Networks infrastructure is becoming more and more critical. New and innovative security technologies are being integrated into network infrastructure devices and special-purpose security appliances are being deployed that complement existing infrastructure products. However, it is becoming increasingly important for enterprises to enhance and secure their existing networks cost-effectively with minimal disruption and change.

The Secure Networks Distribution Layer Security solution provides a new and exciting way for enterprises to provide advanced policy-based security through the strategic placement of advanced policy-enabled distribution layer switches while preserving their investment in legacy access switches and wireless access points. The result is a dramatic increase in overall network security via a phased approach that results in a more intelligent and highly secure infrastructure.

The key benefits of the Secure Networks Distribution Layer Security solution include:

- Provides a low-cost, policy-based security solution at the distribution layer of the network that preserves investment in existing edge switches and wireless access points

- Provides access control for users attempting to access the enterprise network in environments where the LAN access equipment layer does not support any authentication technologies
- Protects the enterprise network from undesirable application traffic and protocols through strategic placement of distribution layer switches that connect to legacy access switches and wireless access points

Delivering Advanced Policy-Based Security Today

The best model currently for deploying a granular and highly secure policy environment involves the use of a LAN access infrastructure comprised of Enterasys switches and/or wireless access points at the edge of the network. Using the NetSight® Policy Manager application, policy profiles can be distributed statically to individual ports at this layer of the network. Policy is then enforced on any traffic from any user who connects to one of these access ports. In addition, policy may be dynamically allocated through the use of one or more of the three authentication methods that are supported in Enterasys switching products.

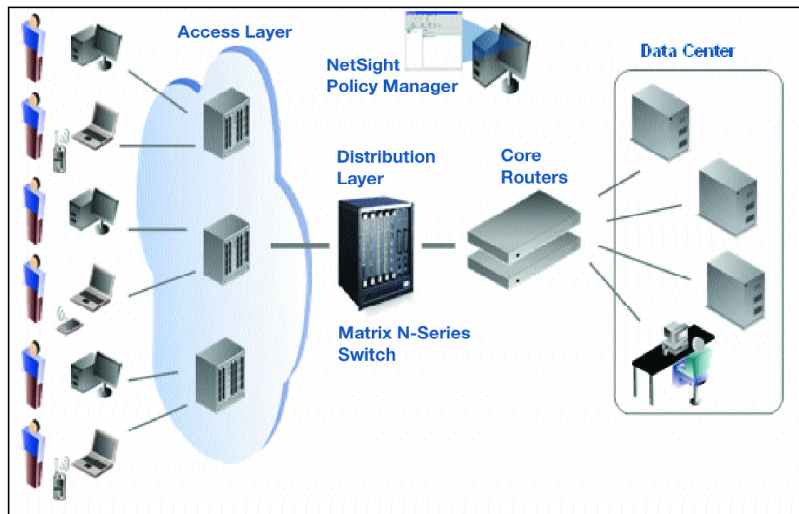
To implement policy at the edge of a network, a user or device passes authentication credentials using IEEE 802.1X, MAC-based or web-based technologies. The LAN



access device provides basic access control and a policy profile can then be assigned to the access port. This method relies on the capability of the LAN access devices to support Enterasys policy capabilities and, optionally, an access control technology.

In contrast, distribution layer security provides several new options for network administrators who want to enforce access control and apply policy but have limited feature capabilities or non-Enterasys switches at the LAN access or edge of their network. With the Distribution Layer Security solution, an Enterasys Secure Network architecture can be implemented in mixed vendor environments where non-intelligent network equipment is located at the edge.

Secure Networks Distribution Layer Security Solution Architecture



The Secure Networks Distribution Layer Security solution provides a robust set of capabilities that allow network administrators to deploy a low-cost Secure Networks infrastructure that seamlessly integrates into an existing network architecture.

The ability to authenticate multiple users on a single port on a Matrix™ N-Series with Platinum Distributed Forwarding Engines (DFEs) at the distribution layer allows for granular access control even in environments where non-intelligent or

non-secure access equipment is deployed. Using Enterasys' MAC and web-based authentication technologies, as well as industry-standard IEEE 802.1X, network administrators have even greater flexibility and options for authenticating users. These are key foundations for deploying a Secure Networks infrastructure at the distribution layer of the network.

Additionally, Enterasys' NetSight Policy Manager application may be used to configure an enterprise policy profile consisting of several different organizational roles, each having specific policy rules. The entire policy profile can then be dynamically distributed to any number of the distribution layer Enterasys switches.

The recent standard approach defined in RFC 3580 allows for the dynamic assignment of a VLAN for a specific user's traffic based on an IEEE 802.1X authentication process. By deploying a distribution layer security architecture, group-specific enforcement can take place in environments where VLAN assignment is possible, but where policies cannot be configured at the point of network access. Although this in itself is not a network policy architecture, user groups can be isolated from one another and policy parameters can be applied to the router interfaces that interconnect the VLANs.

In addition to the basic access control and VLAN containment aspects of the RFC 3580 methodology, enhanced policy characteristics can be implemented using Enterasys Matrix N-Series distribution layer security switches. By pre-configuring a VLAN ID to policy mapping table and distributing it to the distribution layer switches, granular policy settings can be applied to individual user traffic. This solution allows for non-intelligent LAN access products supporting the RFC 3580 standard to be integrated with Enterasys distribution layer switches resulting in access control and VLAN containment at the edge with policy allocation at the distribution layer of the network.

Finally, as wireless access to enterprise networks becomes more ubiquitous, next-generation commodity wireless access points with fewer enhanced features and intelligence will be deployed across the network. These wireless access devices will have minimal policy enforcement capabilities and, in order to ensure a complete and effective policy framework, a distribution layer security architecture can be deployed to allow the allocation of policy for end users accessing the network via these wireless connections.

Summary

Enterasys' Distribution Layer Security solution provides a comprehensive level of network security for individual user and application traffic without replacing the existing edge switching infrastructure. Through the use of multi-user policy enforcement and multi-user authentication technologies, granular security policies no

longer have to be applied at the access layer of the network but can be enforced statically or dynamically for each individual user's traffic at the aggregation of the distribution layer. This policy architecture enhancement provides an enterprise with a low risk and high return option for deploying security policy enforcement without wholesale replacement of the existing non-intelligent switched or wireless infrastructure at the access layer of a network and can result in a significant increase in a company's overall security posture.

To Learn More

To find out how Enterasys' Secure Networks and the Distribution Layer Security solution can help you ensure the security, accessibility, and control of your enterprise network, call your Enterasys sales representative or an authorized Enterasys partner, or visit [**enterasys.com/secure-networks**](http://enterasys.com/secure-networks)

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