

# **Array SP Vs Citrix MetaFrame**

# 1 General

## 1.1 Overview

The purpose of this document is to offer a comparison between Array SP based access solutions and Citrix MetaFrame based access solutions. It is important to note that in many cases the Array SP does not pose as a direct competition to Citrix MetaFrame; rather it provides the required layer of security. Citrix MetaFrame provides a very specific method of accessing applications that overlaps a subset of the Array SP functionality. The Array SP can be used to secure Citrix MetaFrame based solutions, or in certain cases can be used to replace it completely.

Array SP belongs to a class of products called SSL VPNs, which provide Secure Access for remote users and internal users. It replaces IPsec VPNs with respect to the remote access functionality it provides. Citrix Metaframe provides a run-time environment for applications to be hosted on an internal server, and accessed over a keyboard-windows-mouse emulation environment. Array SP offers access to any applications, servers or devices and provides a uniform access control using a hardware accelerated SSL reverse proxy appliance. Citrix Metaframe being an application needs additional protection of another device in front. Array SP can protect Citrix Metaframe servers at the same time as protecting other non-Citrix applications – say, Windows Terminal Services or VNC – both of which are cheaper alternatives to Citrix. Array can provide access to a network segment, specific client server applications, file shares or web resources regardless of server platform – Unix, Windows, mainframe or something else – eliminating the need for Citrix Metaframe in many instances.

## 1.2 Related Documents

- Published Applications Manager, Administrator Guide (v 1.6)

# 2 Advantages

## 2.1 Security

As oppose to the Citrix MetaFrame solution that provides access to applications, files and web content utilizing a single access method, publishing “fat client” applications. The Array SP offers a variety of access methods, specifically customized for the type of access required. These methods include:

- Web Resource Mapping – Support for any web application natively through a browser without the need for any client side component (ActiveX, Java Applets or any other componenets).

- File Sharing – Provides for native access to both CIFS and NFS shared directories without the need for any client side component (ActiveX, Java Applets or any other components).
- Tunneling Services – Provides a variety of network access solutions utilizing both Java and/or ActiveX based components. No installation is required and functionality is available on demand.

These methods allow the Array SP to provide significant security related advantages:

- **Less network exposure** – By utilizing the different access methods, the Array SP minimizing the exposure of network resources and reducing the risks of security compromises.
- **Better control granularity** – Administrator are allowed better granularity of control, to the URL level, shared directory level, application level (as well as the network resources available for these applications which is equally important).
- **Better auditing information** – As a direct result of the better control granularity the Array SP also offers better auditing information. Covering all users transactions from login to logout, and information such as, directories browsed through, URL accessed, applications launched, etc'...

In addition the Array SP provides the following functionalities that are not supported by Citrix MetaFrame:

- Virtualization - Support multiple independent, unrelated user groups with their own virtual portals, AAA infrastructure, management and a network layer separation that gives each virtual portal user as well as administrator the same benefits as if they are operating on a dedicated system.
- Client Side Security – Allowing administrators to establish a set of policies to be enforced regarding the security of the client being used to access the network. Taking in consideration such information as installed Anti-Virus (and the age of its virus definition file), personal firewalls, applications, registry values, etc'... Client Side Security offers administrators with three dimensional authorization policies rather than the traditional two dimension policies. Allowing administrators to distinguish not just between different users but also between the different location from which the same user can login (and compromise the network).
- ArrayOS© – The Array SP is an appliance based solution using a proprietary hardened operating system.

## **2.2 Performance and Scalability**

- **Superior Performance** –The Scalable Permission Control rules engine enables the Array SP to support thousands of access control lists with virtually no performance degradation. Array's hardware accelerated SSL support allows users to use applications without waiting for time-consuming cryptographic math. Offloading the heavy math associated with RSA key exchanges as well as the

lighter math associated with bulk data encryption means that the raw SSL throughput of the Array appliance is over 700 Mbps.

- **Unparalleled Scalability** – With the ability to support up to 64,000 concurrent users on a single unit and the ability to cluster up to 32 units together the Array SP provides a much more scalable solution.

### 2.3 APAM

The Array Published Applications Manager (APAM) offers a way to replace some Citrix MF functionality utilizing Microsoft Terminal Services only without the need for the additional Citrix software and licenses.

APAM allows administrators an intuitive way of publishing applications hosted of MS Terminal Servers. The published applications can be viewed and launched as part of the Array SP portal page. APAM offers single-sign-on, using the Array SP login credentials as well as the ability to load balance multiple MS Terminal Servers.

APAM offers a more cost effective approach towards application publishing:

- APAM initial cost, as an Array SP additional feature, is significantly lower than Citrix Metaframe.
- APAM relies on the Array SP licenses which are acquired for a one time fee (no annual renewal).

## 3 Summary

When compared with the Citrix MetaFrame, through its variety of features and robust architecture, the Array SP provides better security, better performances and all for less cost.

#### Additional Benefits:

- Simple, secure and controlled access for partners, suppliers, employees and customers via standard Web browser
- Enables compliance with HIPAA and Gramm-Leach-Bliley Act
- Makes Intranet applications instantly accessible through Web Resource Mapping
- Delivers secure, end-to-end data transfers through SSL
- Unifies the authentication process through centralized point of administration
- Ensures trouble-free user experience through browser-based access and top SSL performance
- Dramatic cost and time savings through fast and simple product installation
- User-friendly GUI and no client-side software ensure easy maintenance and reduced IT support
- Provides secure and controlled access to a corporate network for suppliers, customers and partners (CRM and B2B applications, etc.)
- Low-cost deployment of Web-enabled applications and services

Array SSL VPN solutions are the highest performing, most feature rich and the best ROI products available for the large enterprise. These can be used to provide compliance assurance with HIPAA, GLBA, Sarbanes-Oxley or other governmental regulations. These can be used to support multiple user bases with differing needs simultaneously. These can be used to support different types of applications with differing requirements on security and access control. These can also be used to serve employees, customers and many partners using the same box. These can also be used to host multiple customers and their employees, partners etc. enabling service providers to add a new revenue stream. Overall, this makes for one of the most versatile products in the market.

The market category addressed by the Array SP can be characterized as SSL VPN acceleration hardware products. The market is expected to expand dramatically as SSL-based secure access products augment and/or replace traditional VPNs. The increasing popularity of SSL as an alternative to traditional VPNs is expected to dramatically increase the size of the SSL acceleration market. A strong belief on the part of Array management is that these SSL VPN devices will evolve to be a stronger solution than either the IPsec VPNs or SSL VPNs by themselves. We see the world evolving in to a stronger combination of Firewall / SSL VPNs which have the Application awareness by looking at content and being able to protect based on deep levels of packet inspection. We also see these becoming central points of defense in the network and integrating with industry standard virus scanning devices, content filtering devices and other kind of security management tools using standardized API mechanisms.