

# Array Secure Mail Solution

## Array Networks SSL VPN Solution Brief for Service Providers



### What is Array Secure Mail Solution?

- The Array Secure Mail Solution (SMS) is based on Array SSL VPN technology and helps Internet Service Providers (ISPs) offer scalable secure email services to their business customers
- The Array SMS offloads SSL encryptions from backend email servers and can scale to 100,000 concurrent SSL email sessions on a single system

### Why Use the Array Secure Mail Solution?

- 90% CapEx and OpEx savings
- Unmatched flexibility
- Simplified architecture

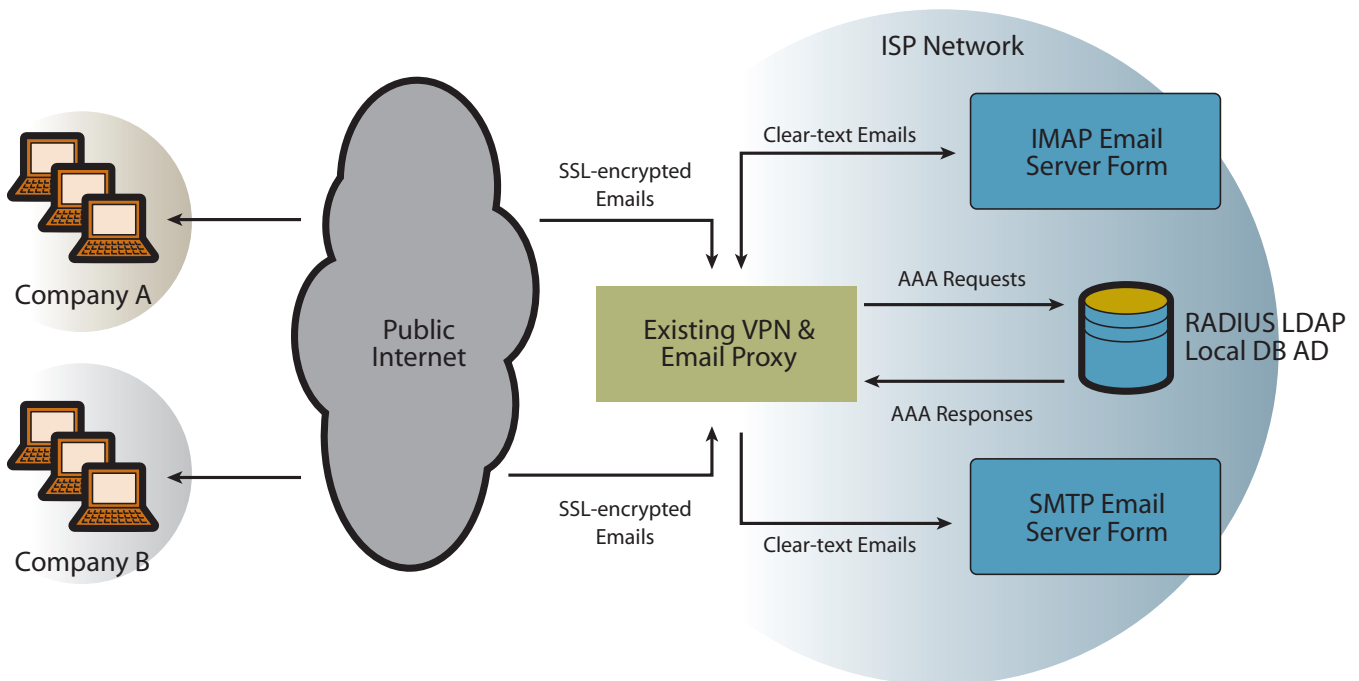
## Introduction

The market demand for managed email services has grown rapidly in recent years. Email is critically important to any corporations these days, but it is not the core activity of their business. With the rapid pace of technology change and constant increases in usage, email is becoming more and more difficult to manage. In-house email solutions are costly and labor-intensive, and very often, corporations don't have the resources or the expertise to stay current with the latest technology developments. Managed email services can dramatically reduce corporations' operating expenses and boost their efficiency. Through economies of scale, email service providers offer cutting-edge emails at a fraction of what it costs to maintain mail servers in-house.

To offer highly differentiated, fast, secure and cost-effective email services to small and medium corporations, the ISP is in the process of architecting its large secure email delivery infrastructure.

## The Challenge

The following diagram illustrates the ISP's current infrastructure. Corporations' emails are encrypted through email client software on end user computers, travel through the public Internet securely, and then terminated on a VPN concentrator in the ISP network. The VPN concentrator generates AAA requests to the AAA infrastructure for negotiating credentials. After AAA responses are generated by the RADIUS/LDAP/LocalDB/AD infrastructure, clear-text emails are exchanged between backend email server farms and the VPN, which then encrypts emails and sends them across the public Internet to end users.



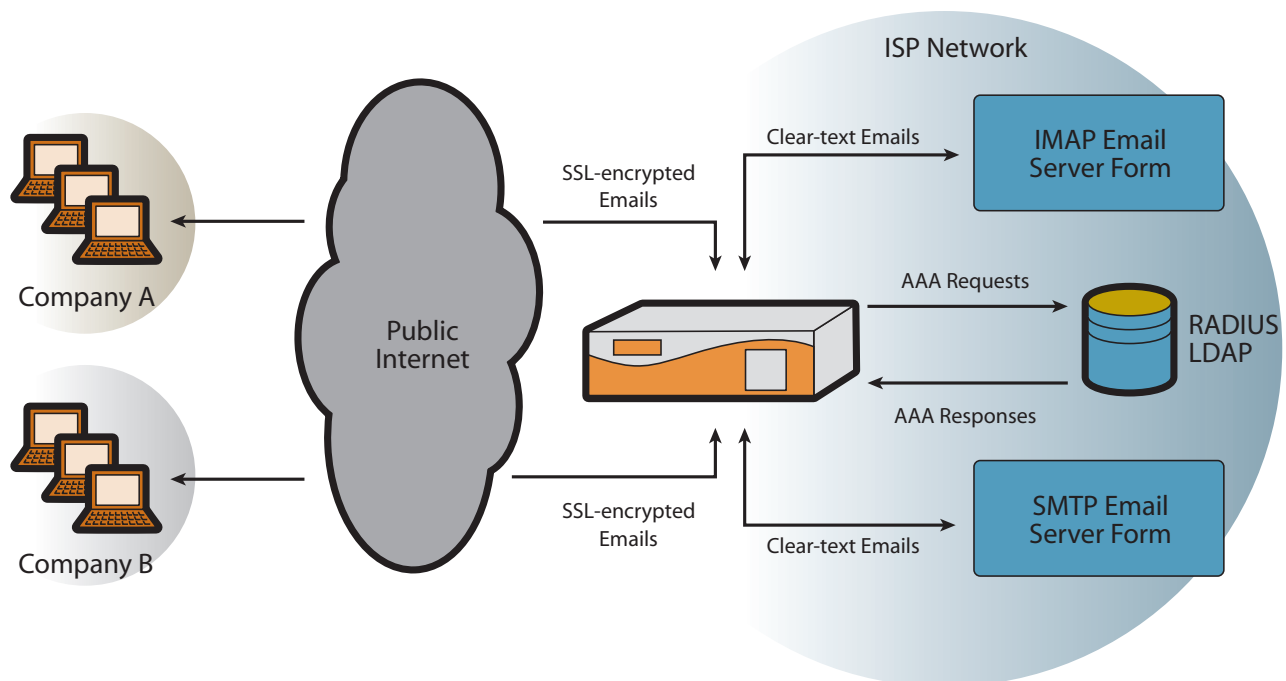
There are several business challenges with the existing infrastructure:

| Business Challenges   | Root Cause   |
|---|--|
| <b>High cost per user for delivering SSL-encrypted emails</b> | The existing VPN concentrator cluster cannot scale without large number of nodes, switches, power supplies and significant real estate.  |
| <b>Strong Encryption Browser based</b>                        | Email speed and throughput are slow even when the VPN is not supporting large number of users  |
| <b>High support cost for each corporation</b>                 | Whenever there is a need to change email server IP addresses and ports some corporations, the ISP's IT staff need to get on the phone and inform these corporations of the change. These corporations then need to ask each end user to change their email client settings. This is a frequent, manual and cumbersome process for both parties |
| <b>High risks of email service disruption</b>                 | If some email servers need to be taken offline for maintenance purposes, then the above manual policy setting change can be often error prone and result in email services outage for some customers.  |

Solving these business problems can greatly lower the ISP's cost structure, improve its competitive offering, and increase its profit margin. Clearly, the ISP needs a better solution.

## Array Secure Mail Solution

After a long and extensive evaluation, the ISP decided to deploy Array's Secure Mail Solution (SMS), enabled by Array's SSL VPN platform.



The new SMS cluster significantly lowers the cost/user to deliver secure emails, and practically eliminates the need to call corporations from time to time to inform email server changes. How is this accomplished without significant change to the existing AAA and email server infrastructure? The answer lies in the details.

| Root Cause  | Array SMS Solution   | Benefits  |
|---|--|---|
| <p><b>The existing VPN concentrator cluster cannot scale without large number of nodes, switches, power supplies and significant real estate.</b></p>   | <p>Unmatched Scalability: A single unit can scale to 100,000 concurrent SSL email sessions, 100 times higher than the existing VPN solution.</p>   | <p>90% CapEx and OpEx savings</p>   |
| <p><b>Average email service quality per user</b></p>  | <p>Unmatched Speed &amp; Throughput: Even at high load, the Array SMS introduces only single digit ms latency into the system, 18 times faster than the existing VPN solution.</p>   | <p>Superior email service quality compared with other email service providers</p>   |
| <p><b>Whenever there is a need to change email server IP addresses and ports for some corporations, the ISP's IT staff need to get on the phone and inform these corporations of the change. This is a frequent, manual and cumbersome process.</b></p> <p><b>If some email servers need to be taken offline for maintenance purposes, then the above manual policy setting change can be often error prone and result in email services outage for some customers.</b></p> | <p>Dynamic Email Traffic Re-route: Simply by changing email server IPs and ports in RADIUS attributes sent to Array SMS, the ISP's IT staff can instantly re-route email traffic around those email servers that need to be taken offline.</p> | <p>There is no more manual, cumbersome and support process to go through.</p> <p>There are no more email service disruption,</p> <p>Corporations do not need to inform their end users to change their email client settings to point to the new email servers.</p> |
|   |  |   |

## Summary & ROI Analysis

Surprisingly, the ROI are very easily to quantify. Let's assume three deployment scenarios: Small (2,500 users), Medium (5,000 users), and Large (10,000 users).

Small Deployment: As seen below, majority of the savings comes from OpEx reduction. This is achieved by doing real-time dynamic email re-routes at any time without having to call corporations and end users.

| Small Deployment ROI                                 | Existing VPN | Array SSL VPN w/ SED |
|--|--------------|----------------------|
| <b>Assumptions</b>                                   |              |                      |
| Number of Users                                      | 2,500        | 2,500                |
| Number of Years                                      | 3            | 3                    |
| VPN Capacity   | 1,000        | 100,000              |
| Number of VPN units needed                           | 3            | 1                    |
| VPN Active-Active List Price                         | \$45,000     | \$125,210            |
| <b>CapEx</b>   |              |                      |
| VPN Gateway cost                                     | \$112,500    | \$125,210            |
| <b>OpEx</b>  |              |                      |
| VPN Gateway Annual Maintenance @ 20%                 | \$22,500     | \$25,042             |
| Support cost/user/year for re-routing email traffics | \$300        | \$10                 |
| Total Cost (3 year)                                  | \$2,430,000  | \$275,335            |
| Cost per user (3 year)                               | \$972        | \$110                |
| Saving in absolute dollar terms                      | \$2,154,665  |                      |
| Saving in Percentage                                 | 89%          |                      |

**Medium Deployment:** As seen below, savings come from both CapEx and OpEx reductions. The CapEx reduction is driven by Array SMS's unmatched scalability and performance.

| Medium Deployment ROI                                | Existing VPN | Array SSL VPN w/ SED |
|--|--------------|----------------------|
| <b>Assumptions</b>                                   |              |                      |
| Number of Users                                      | 5,000        | 5,000                |
| Number of Years                                      | 3            | 3                    |
| VPN Capacity   | 1,000        | 100,000              |
| Number of VPN units needed                           | 5            | 1                    |
| VPN Active-Active List Price                         | \$45,000     | \$125,210            |
| <b>CapEx</b>   |              |                      |
| VPN Gateway cost                                     | \$225,000    | \$125,210            |
| <b>OpEx</b>  |              |                      |
| VPN Gateway Annual Maintenance @ 20%                 | \$45,000     | \$25,042             |
| Support cost/user/year for re-routing email traffics | \$300        | \$10                 |
| Total Cost (3 year)                                  | \$4,860,000  | \$350,335            |
| Cost per user (3 year)                               | \$972        | \$70                 |
| Saving in absolute dollar terms                      | 4,509,665    |                      |
| Saving in Percentage                                 | 93%          |                      |

**Large Deployment:** Again, both CapEx and OpEx reductions can be achieved for more than 90% over a 3-year period. 10,000-user deployment is only 10-20% of Array SMS's capacity. The ISP still has plenty of headroom to grow in the future without having to replace hardware and change its architecture.

| Medium Deployment ROI                                | Existing VPN | Array SSL VPN w/ SED |
|--|--------------|----------------------|
| <b>Assumptions</b>                                   |              |                      |
| Number of Users                                      | 10,000       | 10,000               |
| Number of Years                                      | 3            | 3                    |
| VPN Capacity   | 1,000        | 100,000              |
| Number of VPN units needed                           | 10           | 1                    |
| VPN Active-Active List Price                         | \$45,000     | \$125,210            |
| <b>CapEx</b>   |              |                      |
| VPN Gateway cost                                     | \$450,000    | \$125,210            |
| <b>OpEx</b>  |              |                      |
| VPN Gateway Annual Maintenance @ 20%                 | \$90,000     | \$25,042             |
| Support cost/user/year for re-routing email traffics | \$300        | \$10                 |
| Total Cost (3 year)                                  | \$9,720,000  | \$500,335            |
| Cost per user (3 year)                               | \$972        | \$50                 |
| Saving in absolute dollar terms                      | \$9,219,665  |                      |
| Saving in Percentage                                 | 95%          |                      |



## About Array Networks

Founded in 2000, Array Networks is a leading provider of high-performance, secure universal access solutions. Array delivers product lines that address the rapidly growing SSL VPN market as well as the application acceleration market. More than 500 customers including enterprises, service providers, government and vertical organizations in healthcare, finance and education rely on Array to provide anytime, anywhere secure and optimized access. Array provides the world's fastest and most scalable SSL VPN products on the market today. Array's technology performs 8 times faster and scales 12 times higher than its nearest competitor. As a result, no other company can deliver high-performance SSL VPN solutions at a comparable cost. Array has been recognized by industry leaders including Deloitte, Red Herring, and Synergy as a market and technology leader.

Array is headquartered in Milpitas, California with sales offices around the world. The company has approximately 60 resellers and VARs worldwide.

For more information, please visit [www.arraynetworks.net](http://www.arraynetworks.net) or call **1-866-MY-ARRAY**.