EXECUTIVE SUMMARY

This Whitepaper will attempt to address some frequently asked questions about the core differences between open source Mail Transfer Agents (MTAs) and commercial MTAs. The target audience consists of deliverability professionals, mainly senders who consider digital messaging a mission critical component of their company’s overall communication requirements. It will discuss the main differences between open source and commercial mailing platforms, and provide particular detailed insight to those entities considering the upgrade to a commercial MTA product. This paper will also explain why making the switch may qualify as long term cost-effective investment and where pain-points might currently exist in a company’s particular sending environment.

Other topics covered include overall throughput performance comparisons, streamlining account management, optimized delivery settings, management concerns, support infrastructure, the increasing prevalence of issues with the knowledge transfer dynamic, and pitfalls which exist among disparate technical user groups maintaining the MTA. Senders who are currently under contract at an ESP, as well as those starting the 2015 provider evaluation process, would be wise to investigate the components making up a potential vendor’s delivery infrastructure before deciding which service provider to use. The most notable component to consider is the message transfer agent (MTA).

OPEN SOURCE VS. COMMERCIAL MTA

Mature ESPs have greater influence than ever before in providing essential data to marketers. As marketers begin to deepen their knowledge regarding core vendor relationships with the ESP, it will become more important to accentuate and articulate granular deliverability statistics (such as overall delivery rate), a series of metrics that once upon a time was insulated from marketers. Some insiders might feel there is no need to dive into the details of how these results are actually achieved. Given this fact, you might be asking yourself, “So why does an MTA matter?” An MTA is the backbone of any ESP’s email delivery platform. It is responsible for most of the heavy lifting, in terms of not only accepting and parsing large message amounts, but also, concurrently, managing the intricate communication between disparate remote email gateways. Having said this, not all MTAs are equal.
For instance, there are providers who have implemented various forms of “open source” MTAs. These go by various names, including postfix, sendmail, qmail, exim, et al. Many of them have been in existence for many, many years. However, a majority of ESPs have moved away from open source MTAs and invested in the commercially-supported route by installing software like Port25’s PowerMTA. PowerMTA has been on the market since 1999 and is used by well over 140 of the leading ESPs on the market today.

“Is there a substantial difference between open source and commercial MTA technology?” Well, as proponents of a commercial MTA, we at Port25 feel that there are several differences and potential ramifications to consider when trying to decide between the two options. Four of these considerations are summarized below:

**SENDING SPEED**

Originally, open source MTAs were never designed to be high-performance delivery workhorses. Rather, they were created to perform more traditional tasks such as email account management. Thus, ESPs and enterprises that still use this somewhat dated architecture have likely needed to build elaborate, proprietary, and complex server cluster farms to achieve tolerable performance parameters for today’s hypercompetitive delivery market. While today’s sending environments may require delivery rates of millions per hour, the most that a sender is typically able to generate from a single Postfix instance is about 250,000/hour.

Therefore, with an open source MTA, in order to achieve capable scaling, the site needs to build a highly complicated cluster of instances or nodes. This issue helps to illustrate why the essence of our performance value proposition is much higher throughput on fewer servers. The new wave of commercial solutions has been designed to scale “out of the box”, such that a single server instance can reliably deliver many millions of messages an hour if needed. These servers can effortlessly be expanded linearly so that the ESP or Enterprise can deliver several orders of magnitude more email in a condensed time frame.

**MANAGEMENT STANDARDS**

Deliverability managers at Enterprises and ESPs view “time” as either an asset or a huge liability. The amount of time and level of effort required to complete normal management tasks (spawning new instances [as ESPs bring on new clients], making sure new IP addresses are properly warmed, maintaining per stream delivery settings, etc.) quickly adds up when working with customized code. The potential investment of man hours in this case can be cost prohibitive and ultimately a liability. To combat this problem, commercially supported products such as PowerMTA™ provide highly efficient access to optimized configuration settings, so that new senders can be mobilized on
demand, or the settings of existing customers can be modified promptly. The sheer flexibility and support infrastructure offered by commercial MTA products becomes irreplaceable when you begin to evaluate the importance of scaling against the need to use human work time efficiently. Technology standards prove their worth as more processes are automated.

**ONGOING MAINTENANCE/IMPROVEMENT**

As a marketer, when selecting a particular ESP, you must evaluate its ability to provide advanced technology and services that will grow with your program goals. However, technology advancements also factor into whether or not a certain ESP is a good fit for your company. With a highly proprietary sending infrastructure, open source MTA code must be continually tweaked by programmers each time a functionality update is required. This constraint makes keeping pace with changes happening within the dynamic delivery ecosystem more challenging. For instance, what if an ISP in Germany is suddenly returning a new policy-based delivery error? How gracefully can a global fix be applied? Commercial MTAs, on the other hand, allow you to simply apply updates from the MTA vendor. Commercial MTAs are able to create custom logic in a couple of clicks to handle the aforementioned example. ESPs also benefit from the insights that their MTA vendor can bring to the software. Additionally, regular updates from the commercial MTA vendor keep ESPs alert to the frequently changing requirements of ISPs.

**KNOWLEDGE TRANSFER CONSIDERATIONS**

At times, there seems to be a forgotten aspect of infrastructure maintenance; namely, how extensively has the proprietary knowledge transfer spread throughout the ESP's technical group? Here are a few questions you should ask as you consider this situation at your own company:

- Is there only a single all-knowing “guru” who, if he or she suddenly left our company, would also take all the firm’s proprietary delivery architecture secrets with him/her?

- What if this knowledge were to leave the company via job-hopping or a layoff, or a breach of some kind?

- Have all the proprietary aspects of the infrastructure been properly documented, to the extent that new employees could access and understand the information?
Through our experience, we have found that a surprising number of companies struggle with the “guru” dynamic, especially smaller providers. Today’s commercial MTA solutions ship with highly comprehensive configuration/monitoring/reporting GUIs that are quite easy for existing and new staff to learn. Therefore, with commercial MTAs, an ESP’s risk of losing architectural secrets is mitigated substantially, even if unforeseen staff changes occur. Given that unanticipated changes are fairly prevalent, knowledge transfer should be a distinct part of any management success plan.

SUPPORT FEATURES

In addition to the four major considerations outlined above, commercial MTAs also boast numerous features which offer an unparalleled level of support and troubleshooting. Below is a brief summary of four of PowerMTA’s features—features that the vast majority of open source MTAs can’t match.

CLUSTER SUPPORT

Commercial MTAs usually have some form of built-in support for centralized management of a cluster of servers. This support can be as basic as shared configuration data, or as complex as full control of every machine in the cluster from a centralized management console, shared information between instances of current connection counts to recipient domains, and cluster-wide monitoring. Cluster support is one of the benefits of the new PowerMTA Management Console introduced this past year by Port25.

MONITORING

Most commercial MTAs have built-in monitoring support. To monitor open source MTAs, it is often necessary to install some external monitoring tool (such as Nagios), and then rely on whatever support is built into that tool for monitoring your mail server. Alternatively, you may end up writing your own monitoring software, or plugins for your monitoring software of choice. This becomes particularly problematic when you have multiple servers, and need to be able to monitor as an aggregate as well as “drill down” into individual servers.

BOUNCE HANDLING

Modern commercial MTAs use sophisticated algorithms for handling bounces, which have evolved over years of experience. Because the SMTP RFCs often give unclear reasons why a mail may have bounced, commercial MTAs have created techniques for understanding responses from different types of recipient MTAs. These techniques provide the administrator of the commercial MTA with the tools to deal with bounces in an appropriate manner.
PER RECIPIENT DOMAIN SETTINGS

While some open source MTAs have some level of per-domain settings for outbound email, these settings are often rather complex to code—or sometimes don’t exist at all. Commercial MTAs largely arose from the need for large senders; thus, with a commercial MTA, flexible configuration on a per-recipient domain basis is a basic requirement, and a readily available feature in the PowerMTA product.

To conclude this comparison between open source and commercial MTAs, it is important to acknowledge that Email Service Providers based on open source MTA infrastructure, like Constant Contact in North America or Edatis in Europe, actually do a stellar job of managing these highly complex systems. However, we on the commercial MTA side of the fence simply feel that senders who consider email delivery to be a critical component of their business require and deserve a solution that is better equipped to navigate the changing dynamics that currently face the industry as a whole.

ABOUT PORT25 SOLUTIONS, INC.

Port25 Solutions Inc provides specialized email infrastructure software products that address the increased unique demands of client communications and email marketing applications. PowerMTA™, Port25's flagship product, has a global footprint that is recognized in over 50 countries, with over 4000 installations. It provides senders with superior performance and advanced features to proactively manage their sender reputations. PowerMTA is utilized by over 140 Email Service Providers worldwide and many leading enterprise level clients such as Living Social, CareerBuilder, Forbes, Turner, Live Nation, and the New York Times. Port25 is a member of the Email Sender and Provider Coalition (ESPC) and MAAWG. Founded in 1999, Port25’s mission is to help realize the potential of email as a platform for legitimate and effective customer communications. Visit Port25 for a fully featured product evaluation.