



Message Partners White Paper

MPP - An alternative to AmavisD

Overview

Open source email tools have been a major contributor in the meteoric growth of email from a specialized tool for university geeks to an essential communication system of modern society. Every distribution of a Unix based operating system includes an open source email server that is scalable, reliable and, if used within certain specific parameters, highly functional. There are literally millions of email servers worldwide running open source email servers like Sendmail and Postfix.

A complete email system – of which an email server, or Mail Transfer Agent (MTA), is only one component – has multiple components including email clients, local delivery agents, user directories, security tools, and more. While the open source community provides many component technologies for an email system, it is the job of the system administrator to coordinate them into a cohesive application. Because this can be time consuming and complicated, system administrators are often forced to rely on integration tools to try to make all the open source components work together.

When it comes to the critical task of virus and spam filtering for open source email servers, many administrators turn to open source integration tools such as AmavisD, among others. These tools integrate open source components - email servers, virus scanners (generally ClamAV), spam scanners (generally SpamAssassin), databases and directories – into complete email filtering solutions. Admins use AmavisD for virus and spam filtering because it is free, not terribly difficult to integrate for small applications, has a moderate amount of functionality, and in some cases, it comes pre-installed on the operating system.

While AmavisD is cheap and effective for some environments, it is not a one-size-fits-all solution. For complex applications it has serious scaling limitations, requires extensive system administrator expertise, and lacks significant functionality. Also, AmavisD is dependent on SpamAssassin and ClamAV for virus and spam filtering and ultimately suffers from the performance pitfalls that are endemic to SpamAssassin. Furthermore, there are no direct support channels for AmavisD, and a casual scan of mailing list traffic will find that it is a source of major frustration for many sys admins.



Fortunately, there is an alternative to AmavisD that is scalable, well supported, and has the flexibility to solve a wide range of email problems beyond virus and spam filtering. This solution is MPP, by Message Partners.

MPP Overview

MPP provides a complete solution for email security and compliance applications with a unique modular approach that combines the best of both commercial and open source technologies.

Policy – The Heart of MPP

At the heart of MPP is the policy engine that enables differentiated service profiles for different users, different domains, or different groups of users for both inbound and outbound mail. Every feature available with MPP can be configured on a per-policy basis including choice of scanners, spam settings, quarantine settings, archival settings, content filtering settings, email access policy, attachment policies, and much more. Within each policy group MPP supports per-user configurations of spam white and black lists that may be stored in a standard MySQL database. And best of all, every one of the MPP configuration options is independent of scanner choice.

MPP's policy engine employs unique technology so that multi-recipient email is always handled accurately for each policy-group, regardless of choice of services. This is not the case with AmavisD or other open source solutions that rely primarily on SpamAssassin's per-user capabilities and offer little policy value beyond this.

Also of note, MPP's policy engine easily integrates with standard LDAP user directories (such as OpenLDAP or Active Directory) to dynamically assign the correct service level to each email message. And MPP directory integration scales require only 3 attributes in a directory – Email address, inbound policy name, and outbound policy name.

Modular Architecture

The mppd (MPP scanning daemon) provides all of the core functionality of MPP and is upgradeable with open source and commercial scanning plug-ins, including SpamAssassin, ClamAV, Cloudmark, Mailshell, F-PROT, Sophos, Kaspersky and Nod32.

All customizations of MPP email filtering applications are scanner independent, which makes it easy to migrate scanners. So if your primary spam content scanner is SpamAssassin, and a new spam invasion forces you to implement other scanning options, MPP allows you to apply other spam scanners, such as Cloudmark, without having to totally recreate users white/black lists (saving untold hours and effort). In essence, with MPP you do not have to constantly reinvent the



wheel by repopulating user settings and retraining users on every new filtering system with every new wave of spam attacks.

Quarantine and Archive Review

MPP offers comprehensive web based spam quarantine review and archive retrieval applications (Qreview) that are full-featured and scalable. Qreview offers a complete spam review solution with multi-level domain administration, end-user and domain level white/black lists, comprehensive statistics, and more. Qreview is built on a robust content management system that facilitates localization and translation. While AmavisD uses sql quarantine and other methods to integrate with local delivery agents, it offers no integrated quarantine review applications – instead depending on other open source tools that the administrator must then download and configure.

More Than Virus And Spam Filtering – Archival, Content Filtering

Unlike AmavisD, your investment in MPP affords much more than just virus and spam scanning. MPP employs embedded technology to support compliance grade email archival, access-control lists, content filtering, attachment filtering, email routing, message stamping, and much more. While it may be possible, with open source, to solve some of these problems using different combinations of MTA features, MPP provides you with a crucial single point of configuration, which allows complete command and control over these essential applications.

This makes it easy to tackle complex filtering tasks with a unified MPP interface. To use an example taken from a popular open source mailing list that aptly demonstrates the advantages of MPP – what if an admin is required to limit incoming email for certain domains to only known senders, limit attachment size for other users, limit outbound email for others, save to archive still others, and still apply across the board per-user spam settings.

To attempt a purely open source solution utilizing Postfix, AmavisD and SpamAssassin, the admin must individually configure Postfix access controls, bcc: maps, SpamAssassin with spamc, and this will still fall far short. Once a single email arrives destined for 2 policy groups, the system will be completely overwhelmed – one will have the policy upheld, the other will not. Of course you can run multiple Postfix daemons, or turn to Google and spend countless hours querying public mailing lists searching for solutions that will still leave you far short of optimal efficiency.

This is not the way with MPP. MPP has a comprehensive menu of highly efficient features which include email archival, content filtering, virus and spam scanning, compliance, access control lists, and attachment filtering – and all that's required to activate each feature is to simply add the



user to the policy group. What MPP offers you is a feature rich platform with a single command and control point to create complex, multi-service email scanning applications.

Scalability

Mppd is a high performance, multi-threaded compiled binary application, as opposed to AmavisD, which is built on Perl and has limited scalability. Because many of the scanning engines that mppd supports are system libraries, the scanning can be performed completely in memory. In the case of engines like SpamAssassin that require a daemon interface, mppd allows the daemon scanners to be run on remote processing hosts, offering significant scaling advantages. Since mppd is multi-threaded, it will maintain multiple connections to scanners and email servers for parallel processing of messages. Assuming SCSI raid, multiple processors, and adequate RAM, mppd can easily scan over 80 messages per second with the Cloudmark and ClamAV scanners.

Support

MPP is fully supported by a knowledgeable and dedicated team of email experts and a growing global network of distributors and VAR's. Message Partners provides total system support for your application and gives you a single contact number for all of your support needs. This is in stark contrast to AmavisD and other open source products that have unreliable and unaccountable support channels. Even so MPP maintains the benefit of community-based support with traditional lists for component technologies through our own mailing list, mpp@messagepartners.com

Performance

MPP is a high-performance, multi-threaded daemon capable of scanning hundreds of messages per-second on a single server. MPP scanning threads may be increased to match smtp-concurrency settings, enqueueer processes, or other controls that increase parallel processing by MTA's.

While total system throughput of MPP applications depends on your choice of scanners, MPP does provide spam content scanning choices not available with AmavisD. And both Cloudmark and Mailshell use a fraction of the system resources of SpamAssassin, greatly enhancing the scalability of your current infrastructure. MPP has real-world examples of server load decreasing from over 8 to less than 1 just by changing from SpamAssassin to the MPP Cloudmark plug-in. This is because mppd utilizes library interfaces for most scanning plug-ins, so most MPP scanning is done in memory, instead of the slower command line virus scanners or daemon scanners that tend to monopolize system resources.



Conclusion

MPP offers an alternative to AmavisD that offers more scalability, higher functionality and is fully supported by Message Partners and our worldwide network of partners and resellers. MPP offers a rich feature-set that makes MPP ideal for solving the most complex email security and compliance applications. Like AmavisD, MPP supports open source content scanning engines, however, our policy engine and high performance processing core help scale SpamAssassin and ClamAV for larger applications. MPP offers a broad array of features not found in AmavisD that have extremely high scalability and a dynamic policy engine that gives MPP the flexibility to solve the most complex email applications.

To learn more about MPP and Message Partners please visit <http://messagepartners.com>.