Executive Summary

The PowerMTA™ Management Console (PMC), v1.0, is a newly released web based enterprise and a scalable software solution. PMC allows for the centralized configuration, monitoring, and reporting of multiple PowerMTA installations.

The interface features four main navigation tabs: Dashboard, Monitoring, Reputation, and Configuration. By configuring and distributing the workload across multiple instances of PowerMTA, and applying configuration settings from a single interface, you simplify operations to the entire node grouping concurrently. By distributing performance statistics, you can efficiently identify threats, dynamic blocks from ISPs, and enhance platform reliability. This type of enhanced management enables PowerMTA to instantly respond and throttle deliveries upon detection of ISP based policies, preserve reputation, and mitigate delivery issues.

It is important to note that the PMC is completely separate from PowerMTA, and requires PowerMTA v4.0 or later to operate. While extensive modifications have been made within PowerMTA to interact with the PMC, the PMC is not part of PowerMTA software, nor is it included within the PowerMTA builds. Additionally, the PMC software must be downloaded and installed separately, requiring a separate license activation key (LAK). Installing PowerMTA v4.0 alone will not grant access to the PowerMTA Management Console.

The PowerMTA Management Console has specialized accounting files from PowerMTA and pulls them into the database for pre-processing. During this time, many of the reports are pre-computed to allow for faster access from the web interface. The communication to and from PowerMTA is done over SSL using the configured PowerMTA web monitor port, which is outlined extensively in this guide. Depending on the amount of data each node is feeding into PowerMTA, and the hardware available to the PMC, approximately 10 nodes can be registered at any given time.
PowerMTA Management Console™ v1.0

The PowerMTA Management Console (PMC) (Figure 1) is an enterprise software solution that allows for centralized configuration, monitoring and reporting of one or more than one PowerMTA installation. The PMC is separate from PowerMTA, but which requires, and only works with, PowerMTA v4.0 and later. The PowerMTA Management Console is a sleek web based interface to one, or more than one, PowerMTA installations, that easily scales with your requirements.

FIGURE 1

Managing numerous instances of PowerMTA from a single, central web based interface becomes a very streamlined and efficient process. (Figure 2)

FIGURE 2
The Dashboard

The Dashboard (Figure 3) is the home page of the PMC, providing a centralized view of important top level information, including both real time monitoring and short term reporting data across selected instances of PowerMTA. When more than one node is being monitored, the counts are aggregated as expected. As the central window, the PowerMTA Management Console provides visibility into essential, real-time, top level delivery and bounce information, covering both monitoring and short-term reporting data across selected PowerMTA instances. The web based configuration simplifies operations, making all of the high-end features and options more accessible than ever.

FIGURE 3
Monitoring

The Monitoring (Figure 4) pages offer node summary information both in aggregate and on a per node basis (Figure 5) for easy comparison. Detailed monitoring and short term reporting information is also available on domains, virtualMTAs, domains within virtualMTAs, and for jobs/campaigns being handled by the PowerMTA nodes. Selecting more than one node has counts aggregated, while still offering key per node summary information within each page. A configuration tab streamlines configuration for the domain or domain/virtualMTA being monitored. “Integrated interactions” (Figure 6) allow for running various commands (pause, delete, etc.) directly against the domain, virtualMTA, domain/virtualMTA, or job/campaign being monitored, right from within the monitoring page. Detailed real-time monitoring and short-term reporting information is available on all key data points. Configuration tabs streamline configuration for the parameter being monitored, while an actions tab allows for running various commands (pause, delete, etc.) right from within the monitoring page.

FIGURE 4
FIGURE 5

FIGURE 6

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Reporting

The Reporting facility offers detailed, database driven historical reporting across key delivery data points, including, but not limited to, bounces, (Figure 7) deliveries, domains, virtualMTAs, and nodes. A variety of filters are available within each report for further customization and drill down. A csv export of report data is also available for those seeking to store report outputs separately.

FIGURE 7
FAQs

CAN POWERMTA RUN ON THE SAME MACHINE AS THE POWERMTA MANAGEMENT CONSOLE?

While this is technically possible, it is not a recommended setup. The sharing of resources on the machine may create an environment under load that could cause PowerMTA Management Console, PowerMTA, or both to become unresponsive.

CAN THE DATABASE BE QUERIED DIRECTLY?

Currently this is not supported. We may look to add this feature in the future, but for now if direct access to data is needed the accounting files may be used, as they have the same data.

WHAT VERSIONS OF POWERMTA ARE COMPATIBLE WITH POWERMTA MANAGEMENT CONSOLE?

PowerMTA 4.0 and later are the only versions of PowerMTA that support using PowerMTA Management Console. In addition, accounting file from previous versions of PowerMTA cannot be imported into PowerMTA Management Console. Manual import is not supported.

HOW MANY RECORDS CAN THE DATABASE HOLD?

Currently the limit is based more on the limits of a given server than any artificial limitations in the software. That being said, the database should scale on sufficient hardware to over 100 million records.

CAN POWERMTA MANAGEMENT CONSOLE RUN ON A VIRTUAL SERVER?

While this is technically possible, it is not a recommended setup unless the virtual server has adequate hardware and the virtual server software is configured correctly. The sharing of resources on a mis-configured virtual machine may create an environment under load that could cause PowerMTA Management Console, PowerMTA, or both to become unresponsive.
If PMC is going to be run on VMware®, please take the following steps to ensure that PMC gets the needed resources:

- Open your vSphere client
- Right click on the PMC server and select “Edit Settings”
- Select the “Resources” tab
- Change the shares value for CPU/Memory/Disk to the following values:
  
  CPU = 1000000  
  Memory = 1000000  
  Disk = 4000
- For CPU, Memory, and Disk also make sure the “Unlimited” checkbox is checked for each in the same section
- Restart the PMC server

These can be changed again later if needed, but we have found that this helps ensure PMC runs properly in a virtual environment.

**HOW MANY NODES CAN BE REGISTERED AT ONE TIME?**

This really depends on the amount of data each node is feeding PowerMTA and the hardware available to PowerMTA Management Console, but assuming each node is doing 1 million messages an hour, 10 nodes can registered at one time.

**WILL UPGRADING ERASE CURRENT DATA?**

Upgrading over an existing install will not erase data. There may be times, however, where an existing install may need to be completely removed due to database incompatibilities. At this time data in the database may be lost. If there is a requirement to save the data for archival purposes, the accounting files have the same data as in the database and can be archived during the use of the PowerMTA.

**HOW LONG IS DATA STORED IN THE DATABASE?**

Currently the data is stored based on HDD space available. As space is needed, older data will be automatically dropped from PowerMTA Management Console. The database will require enough disk space to store historical accounting data. The exact usage depends on a variety of factors, including the ratio of bounced vs. delivered emails, the number of PowerMTA nodes in the cluster, the number of emails processed per hour, and the length of time over which historical accounting data is kept.
Assuming 95% delivered and 5% bounced, the following disk requirements have been empirically observed:

- 1 node @ 1 million emails/hour requires 33GB per week of data kept
- 16 nodes @ 16 million emails/hour requires 730GB per week of data kept

**WHAT USER ROLES ARE AVAILABLE?**

Currently there are 2 user roles available, admin and user.

Admin - Allows for accessing all of the pages and features in PowerMTA Management Console, including the ability to add and remove other users. A user with a role of “Admin” can access the following:

- Dashboard
- Monitoring
- Reporting
- Configuration
- PowerMTA Management tool
- User Management tool
- Commands page
- Support page

User - Limits access to certain features and responsibilities in PowerMTA Management Console. A user with a role of “User” can only access the following:

- Dashboard
- Monitoring
- Reporting
- Support page

**WHAT HAPPENS WHEN MY POWERMTA/POWERMTA MANAGEMENT CONSOLE KEY EXPIRES?**

PowerMTA Management Console will continue to collect data from any registered nodes, but all administrative functionality will not be allowed until an updated key is added.
Recommended Hardware Specs

Given that the PMC is optimized for high performance, a dedicated quality machine for the PMC is highly recommended to ensure that the bundled database has enough resources to run properly.

- Minimum dual core CPU required for monitoring one low volume node. Add 2 cores for each additional node. For example, if you have 2 nodes, it is recommended to have a total of 4 cores. If you have 4 nodes, it is recommended to have 8 cores.

- 4GB (4096MB) RAM required for monitoring one low volume node. An Additional 4GB of RAM minimum for each additional node monitored is recommended. For example, with 4 nodes registered a minimum of 16GB of RAM should be used.

- 200GB HDD space required, 300GB or more recommended. (/var on linux and C:\pmtamc\ on Windows)

- 100MB/s read/write HDD setup highly recommended, 200MB/s read write or faster recommended.

- 500Kb/s in bandwidth per monitored PowerMTA server required.

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 125 Email Service Providers worldwide and many leading enterprise level clients such as MySpace, CareerBuilder, Forbes, Turner Broadcasting 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.