MPmon v5.2
Release Notes

an *Application Monitoring*
Utility

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Introduction

MPmon performs comprehensive analysis of many operational aspects of high priority applications and notifies administrators when exceptions occur. Deploying MPmon to each server where the application resides can dramatically improve visibility into and the stability of your high priority applications. MPmon enables you to quickly identify and deal with many issues that can otherwise go unnoticed for hours or days before anyone is aware of them.

MPmon by Mobius Partners (formerly known as PVLmon by PerVigil) was originally developed to monitor OpenView Performance Insight (OVPI) from Hewlett-Packard (HP). However, MPmon is flexible and can be used to monitor any application running on a supported platform. The configuration examples provided in this document demonstrate how MPmon is used to monitor OBR (Operations Bridge Reporter) by Micro Focus. Sample configurations are provided for using MPmon with several versions of OBR. The provided configuration files can be modified as needed to create new configuration files for monitoring specific OBR configurations or other applications.

MPmon sends notification using one or more of the following methods:
- SNMP Trap
- OpenView Operations Messaging
- Trouble Ticket
- Email
- Pager
- Detailed Web-Based exception reports

MPmon can easily be customized to launch API calls to other management applications such as Trouble Ticket systems and other related applications.

MPmon operates as a standalone solution or can be used to add powerful capabilities to your existing application and system management tools. For administrators responsible for the operation and availability of applications, MPmon enhances problem identification and resolution by providing in-depth analysis of processes, connectivity, log files, data, and databases to identify issues quickly, so that they are addressed before end-users are impacted.

Many aspects of systems and applications can be monitored for exceptions using MPmon. The following items are typically monitored:
- Verify that required daemons and processes are running.
- Verify that process run time duration is not excessive (process possibly hung).
- Verify that applications are listening on and accepting connections on specified ports.
- Identify filesystems that are exceeding their capacity thresholds.
- Examine log files to verify successful process completion.
- Search log files for errors, warnings, return codes, and other conditions.
- Analyze database operation for the following:
  - Database processes are running.
  - Database is accepting user connections.
  - Database size is within the specified threshold.

MPmon is easily extended to perform other types of analysis based on MPmon's "EXEC" and EXEC_SQL command directives, which is used to execute a script, program, or SQL Statement and then captures the results.

Using the appropriate default MPmon configuration file for OBR, the following analysis is performed:

1. Verifies OBR rollup and data management processes have completed successfully and identifies any errors (aggregate, stage, loader, db_delete_data, …).
2. Examines the OBR Vertica Database log file to identify errors and warnings associated with the operation of the database. The databases of Oracle and Sybase are also supported including log parsing.
3. Verifies required OBR application processes are running:
   - OBR processes for Administration, Data Collections, Data Processing, and Data Maintenance
   - SAP Business Objects (BObj)
   - Database processes
4. Monitors OBR processes to verify process run time durations are not excessive (process possibly hung).
5. Verifies the Web Server is listening on and accepting connections on specified ports.
6. Verifies the database is listening on and accepting connections on specified ports.
7. Identifies OBR filesystems which have exceeded their capacity thresholds (typically 80%).
8. Examines the OBR database to verify:
   - Database processes are running.
   - Database is accepting user connections.
   - Remote Collectors are inserting data into the database.
   - Collected data is rolled to Delta level.
   - Data is summarized to hourly and daily levels.
   - Database size is within the specified threshold.
   - Track the size of OBR database tables and segments.

MPmon normally performs this analysis once per hour.   If exceptions are found, MPmon notifies application administrators using the method appropriate for your environment:
   - SNMP Trap
   - OpenView Operations Messaging
   - Trouble Ticket
   - Email
   - Pager

MPmon provides email and pager notification to application administrators and other recipients listed in the MPmon Email and Pager notification file (i.e. MPmon_Email_Pager.List).

Notifications can be sent via SNMP trap, which is configured via the Mobius Trap configuration file (i.e. MP_TrapGen.Config) and the MPmon configuration file (i.e. MPmon_Default.Config) using the new "T" (Trap) logging option. This feature enables integration with Network Node Manager (NNMi) or any other SNMP trap receptor.

Notifications can be sent to Operations Manager (OMi), if OMi is in use and an Ops Agent is installed on the server where MPmon is running.

When MPmon's OMi integration or SNMP trap notification features are used, the trap receptor's event handling and automatic action capabilities can be used. This enables more sophisticated handling of MPmon events and automatic actions such as the generation of trouble tickets based on the receivers interface to a Trouble Ticket system.

MPmon is also able to make API (Application Program Interface) calls to Trouble Ticket systems and other related applications. If this feature is enabled, an API call will be launched to generate a trouble ticket within the user's trouble ticket system when errors are detected. The resulting trouble ticket will be populated with the corresponding error from the application being monitored by MPmon.

MPmon also provides detailed status reports twice a day to administrators via email. These comprehensive status reports contain information about critical services, batch processes, data table size, and the latest timestamp in data tables. This complete operational health report provides OBR administrators comprehensive insight into the operational health of the OBR server. This enables the administrator to quickly assess the condition of OBR and to proactively address any issues that are identified. These status reports are normally sent at the conclusion of morning rollup processing and at the end of the day to provide a snapshot of the application health for the day.

1. MPmon Features and Functionality

See the **MPmon Users Guide** for more detailed information on MPmon features.

1.1. New Enhancements for Mobius Partners MPmon v5.x

1.1.1   MPmon v5.0

- Rebranded PerVigil PVLmon v4.3 to Mobius Partners MPmon v5.0.
- Added support for SHR v9.X using Sybase IQ.

1.1.2. MPmon v5.1

- Added support for OBR v10.0x using Vertica v7.1.
- Added support for OBR b10.2x using Vertica v8.1.

1.1.3. MPmon v5.2.0

- Updated MPmon to use Java 8 Update 172.
- Add security to encrypt passwords for database connections.
- Added an *EXEC_SQL* command directive to run SQLs on any supported databases.

1.1.4. MPmon v5.2.1

- Updated MPmon to use Java 8 Update 192.

- Updated all MPmon documentation to reflect the version change.

- The following files were updated:

    o MPmon-521-Install/MPToolkit/**Unix_psobr**

    Corrected a typo in viewing the NRT ETL process.

    o MPmon-521-Install/MPToolkit/**Unix_MPalias.sh**

    Corrected a couple of aliases and added a few more for OMi and NNMi.

    o MPmon-521-Install/MPToolkit/**HPE_PMDB_Platform_OBR-Part1**

    Reordered the Orchestration process to start after the Job Manager and Task Manager processes.

    o MPmon-521-Install/MPmon/etc/misc/**MPmon_Default.Config_Unix_OMi**

    Enhanced the OMi Config with more OMi processes and ports.

    o MPmon-521-Install/MPmon/etc/misc/**MPmon_Default.Config_Unix_NNMi**

    New Config for NNMi.

    o MPmon-521-Install/

    o MPmon-521-Install/.

1.1.5. MPmon v5.2.2

- Updated MPmon to use Java 8 Update 211

- Updated all MPmon documentation to reflect the version change.

- Resolved an install issue where no valid MPmon is available.

1.2. MPmon Released Platforms

Platform	MPmon Release	Availability
Window Server 2003-2016	MPmon v5.1 – v4.3	Now
Linux v4+	MPmon v5.2 – v4.3	Now
Solaris	MPmon v5.1 – v4.3	Now
HP-UX	MPmon v5.1 – v4.3	Now
AIX	MPmon v5.1 – v4.3	Now

1.3. Benefits of using Cygwin on any Windows Server with Micro Focus Software

Cygwin provides many benefits to administrators who are operating applications in the Windows environment:

1. Aliases for ease of use at the command prompt. Complex commands that are used frequently can be reduced to a few key strokes.

2. Ability to use the Unix *tail* command to continually view log file contents and see new information as it is added to the log file.

3. Cron utility to schedule processes anytime of minute, hour, day, week, month, etc. The existing scheduling program that is available for Windows is limited.

4. Cygwin enables Administrators and Technical Support personnel to remotely access a Windows Server via a secure connection (i.e. SSH) just like Unix without the need for high-priced GUI software.

5. Cygwin enables the use of simple or complex Unix shell-like scripts in order to automate processes without requiring the efforts of a programmer.

6. Cygwin is painless to install, even easier to use, and Cygwin is absolutely FREE.

2. MPmon Future Enhancements

2.1 Immediate next release MPmon Enhancements:

1. **Support for Postgres Databases** – Implement support for Postgres databases as used by OMi, NNMi, OBR, and other applications via the Command Directives of CHECK_DB and CHECK_TABLE.

2.2 Enhancements that are under consideration for future MPmon releases:

1. **De-duplication of CHECK_LOG** - Add enhancement to print out only one copy of a unique message with a count of how many duplicate messages occurred in total instead of listing 400+ lines of a common error (commonly found with polling). Case in point, trendcopy can produce thousands of messages when trying to copy duplicate records.

2. **CHECK_TABLE** - Add another argument to the CHECK_TABLE command that would also include a MIN(ta_period) value. This would help with problem determination of data aging issues with db_delete_data.

3. **Enhance PVL_DATABASE_INFO** – Enable MPmon to analyze and report on database connectivity across all OBR servers from any or all OBR servers in the environment.

4. **Multi-User Processing** - When opening the MP History tables for filesystem and database comparisons, open first in read-only mode, then if an update to the file is required, close the file, then re-open in write mode. This will allow better multi-user processing.

5. **CHECK_TABLE and CHECK_DB** - Capture I/O Exceptions returned when attempting to connect to the database and attempt to map exceptions to useful error messages such as:

   ***** WARNING: Wrong port number used to connect to the database.
   ***** WARNING: Network access to the database is not available.
   ***** WARNING: Database is down.
   ***** WARNING: Database is in single-user mode, skipping this check.

3. Issues with MPmon

If you encounter any issues not mentioned below, please contact Mobius Technical Support for assistance at MPmon_Support@MobiusPartners.com or (+1) 210-979-0380.

3.1. MPmon Known Issues

1. (**All Releases**) Mobius provides a utility called "psobr", which returns a list of OBR processes currently running. This is a very useful command line utility for OBR Administrators. This utility is a shell script and can be modified as needed.

    On Windows, Mobius's "psobr" command uses the Cygwin "ps" command to list OBR processes currently running. If the user executing Mobius's "psobr" command or the Cygwin "ps" command is a Domain user instead of a local user, the process list returned will be empty. This issue is under investigation.

    As a workaround, ensure that the user using "psobr" or "ps" at the command line is logged into the local system instead of the domain.

2. (**All Releases**) Occasionally when the Sybase database is very busy, MPmon can produce Sybase 1131 and 1142 errors in the Sybase log file. The presence of these errors in other situations could indicate a serious problem, but NOT when produced by MPmon. When checking the database tables and database size, a Sybase stored procedure is used to review "Reserved Pages". If a page changes while being reviewed, an error is generated.

3. (**All Releases**) Crontab for AIX does not source the default set of environment variables for the user "trendadm". The environment variables need to be sourced by adding the following to the beginning of any script being launched from Crontab:

    . ~/.profile   -for KSH and SH scripts
    source ~/.cshrc   -for CSH scripts

3.2. MPmon Caveats

The following caveats are caused by software other than MPmon. While there may be workarounds, there are no plans by Mobius to fix or enhance these issues other than upgrading to the next release of any 3rd party software when available.

1. If adding custom OBR data tables with Oracle, the CHECK_DB listing of the table may show 0 Kbytes. Ask the Oracle DBA to include the table when running Update Statistics.

```
CHECK_DB: Table Name                             Rows            Kbytes
CHECK_DB: ----------------------------       -------------    -----------
CHECK_DB: RSR_OVPA_CPU_WAREHOUSE_SAT6            675333                  0
```

2. The Sybase process of "RUN_{DSQUERY}" on HP-UX may terminate, but the primary Sybase process of "dataserver" is still running and operational. You may wish to simply comment out the CHECK_PROCESS line for RUN_{DSQUERY} from the MPmon configuration file of {MP_HOME}/etc/MPmon_Default.Config.

3. Cygwin for Windows uses a standard Unix "/" (forward slash) for directory delimiters, while DOS uses a "\" (back slash). All scripts and config files should use the forward slash.

4. Cygwin's Cron utility for Windows does not work across network mapped (mounted) drives. From the command line, checking a remote filesystem or specifying a Config file on a mapped drive, you should see no problems. However, processes initiated by Cron can not access remote drives. Cron works fine, but not with accessing Config files remotely with the "**MPmon –i <MPmon_config_file>**" option.

   Workaround: Create a symbolic link from the local disk to the remote disk and use the symbolic link as the full pathname to a Config file.

5. Cygwin for Windows is semi case sensitive with names because it uses standard Unix UPPER and lower file naming conventions. Unlike DOS which is case insensitive, Cygwin recognizes both conventions. I.e., you can "cd" to any directory using all lower/UPPER case, but file/directory parsing with <Tab> requires the correct case.

6. When using **vi** within Cygwin, text files may have a **^M** (Carriage Return) at the end of each line because of the difference between Unix and DOS. This is normal and does not cause a problem. These extra characters do not need to be removed. However, if you wish to remove these characters, use the Cygwin command of: **d2u** or **dos2unix** (i.e. *d2u <filename>*)

7. The MPmon output created by Cron has two (2) **^M**'s at the end of each line when editing with **vi**. This does not affect the output viewing or printing in any way.

4. Copyright Notice

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5. About Mobius Partners

Mobius delivers integrated and automated IT Service Management (ITSM) solutions that give our clients the insight and control they need to maximize service levels experienced by their end users. With a clear focus on ITSM solutions and client-focused excellence, Mobius has established a reputation for delivering cost-effective solutions that provide immediate value and long-term sustainability.

Using an approach encompassing people, process, and technology, Mobius guides clients through the specification and deployment of best-of-breed IT Service Management Solutions that address the client's specific objectives. By converting labor-intensive standalone tools into a fully integrated solution, blind spots can be eliminated and the benefits of effective IT Service Management can be realized.

By delivering solutions based on commercially available software products, Mobius minimizes deployment costs and enables the client to focus on core business activities. Most importantly, Return on Investment, the long-term supportability of the solution, and the client's operational effectiveness are all maximized.

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