# PassMark® Software

# Management Console

## Quick Start Guide

**Release:** V2.2.1003
**Date:** 15 May 2024

# Table of Contents

# Overview

When testing large numbers of systems, the Management Console Web server application allows system information, test status and test result information to be managed centrally for BurnInTest and MemTest86 tests.

Via a browser the Management Console allows information about tests to be displayed. This includes the status of currently running tests, system information, current and previous test results, test reports and test statistics.

There are two available options: Subscription and On-Premises installation. A comparison of the two options below:

| | On-Premises | Subscription |
|---|---|---|
| **Management Level View of BurnInTest System Testing** | O | O |
| **Management Level View of MemTest86 System Testing** | O | O |
| **Live View of Current Tests** | O | O |
| **Centralized Test Reporting** | O | O |
| **Centralized Statistical Information** | O | O |
| **Centralized Historical Test Records** | O | O |
| **Responsible for Installation and Set Up** | You | PassMark |
| **Who supplies Database Server Hardware** | You | PassMark |
| **Upgrade and Patch Installation** | You | PassMark |
| **License Term** | Perpetual | 1 Month |
| **Support and Upgrades** | 12 Months | 1 Month |

# Cloud Subscription Setup

## PassMark Products Supported

Management Console supports the following products and versions:

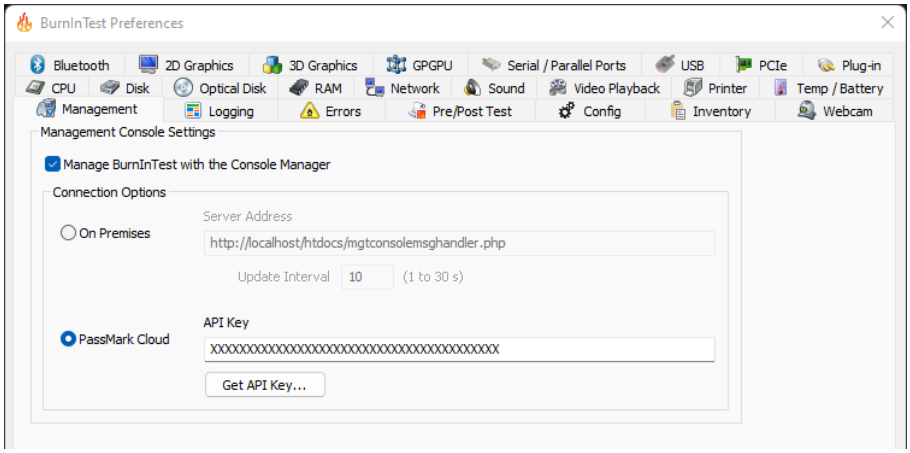
| | |
|---|---|
| **BurnInTest Windows** | 8.1.1000 or newer |
| **BurnInTest Linux** | 4.0.1000 or newer |
| **Memtest86** | 10.7 or newer |

## Requirements

- An Internet connection to access Management Console Cloud: https://cloud.passmark.com/managementconsole/dashboard.php
- (Memtest86) A motherboard with support for TCP/IP connections in UEFI

## BurnInTest – Management Console Cloud Setup

To manage BurnInTest with Management Console, the following must be selected and setup in BurnInTest: Configuration > Test Preferences > Management




Then enable 'Manage BurnInTest with the Console Manager', select 'PassMark Cloud', and enter your API Key (which can be obtained by clicking on the 'Get API Key…' button)

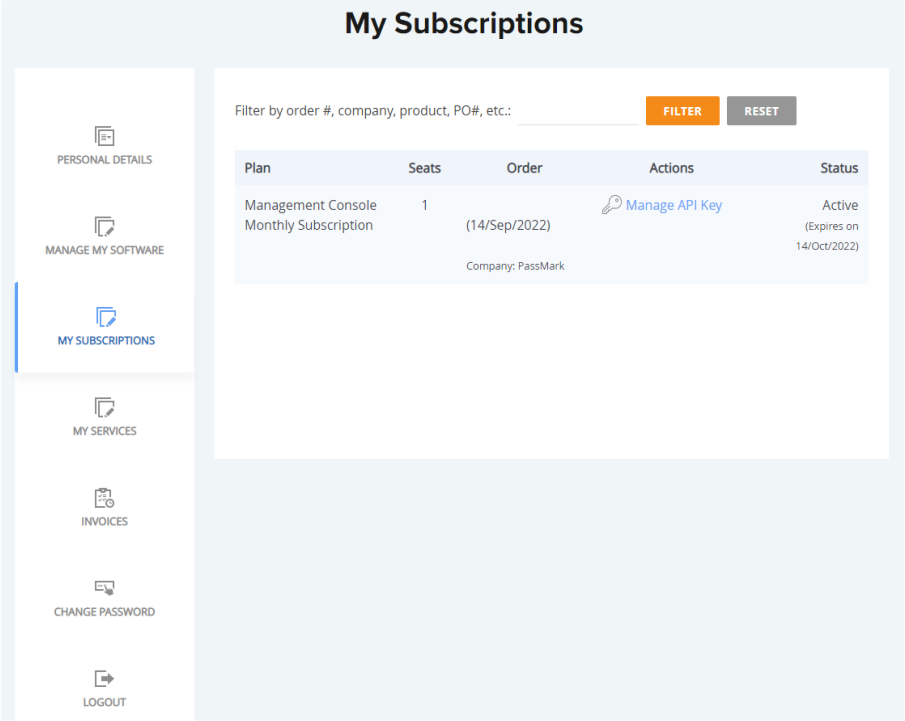
## Memtest86 – Management Console Cloud Setup

To configure Memtest86 to connect with the management console cloud instance, the URL location and API key must be entered into the TCPREQUESTLOCATION configuration parameter located in the EFI/BOOT directory of the Memtest86 installation. The value of this field should be set to cloud.passmark.com/managementconsole/mgtconsolemsghandler.php?ak=[API_KEY]

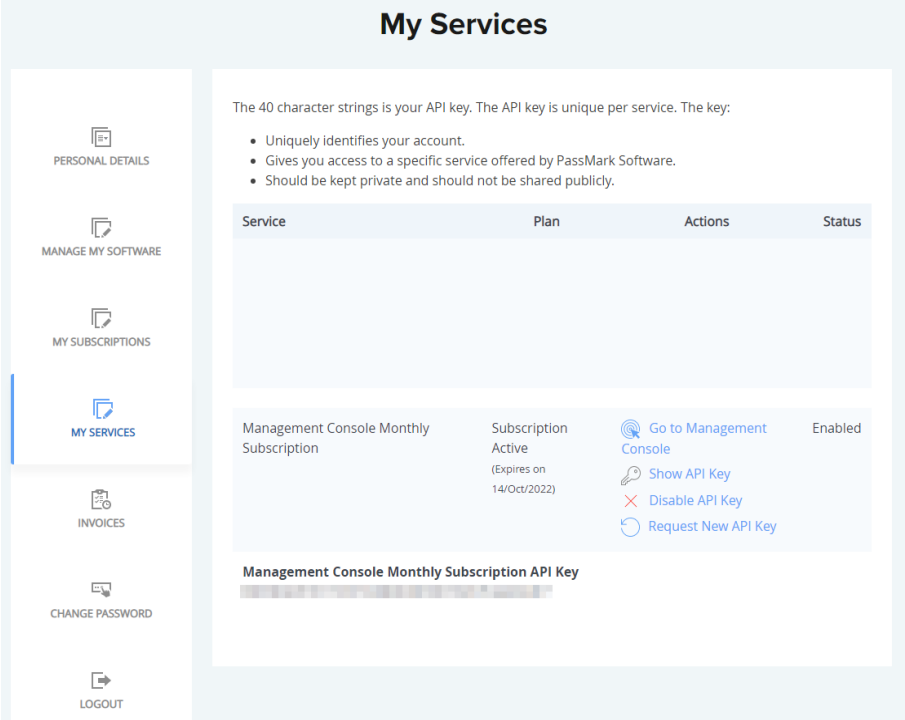
All other configurations options relevant to TCP connections are the same as for the local on-premises connection.

## Check Subscription Status

You can check your subscription status on our website (https://www.passmark.com/manage_subscriptions.php)




And manage your API key on the My Services page (https://www.passmark.com/manage_services.php)




## Troubleshooting

If you encounter any errors or require technical support, have questions or suggestions, please contact us with the email address listed on this page: https://www.passmark.com/support/index.php

# On-Premises Setup

## PassMark Products Supported

Management Console supports the following products and versions:

| | |
|---|---|
| **BurnInTest Windows** | 8.1.1000 or newer |
| **BurnInTest Linux** | 4.0.1000 or newer |
| **MemTest86** | 7.5 or newer |

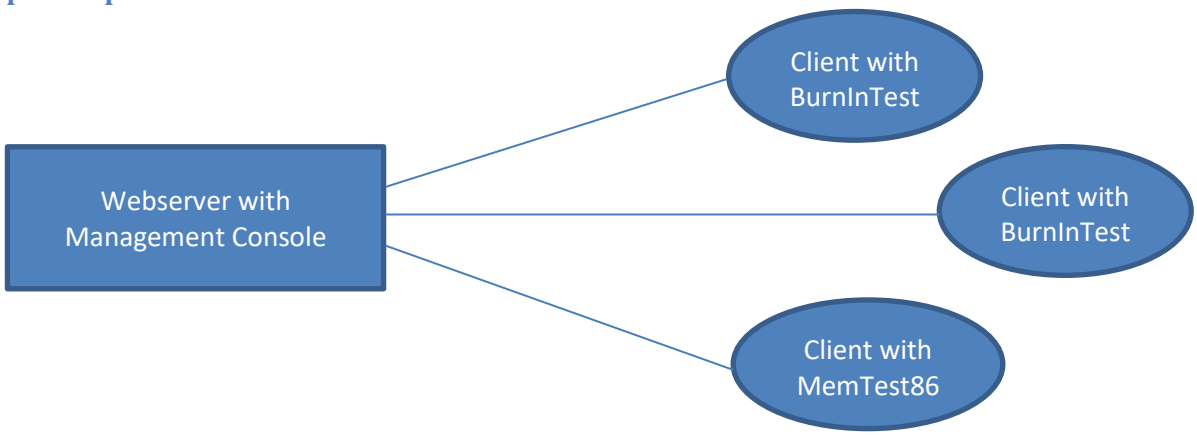
## Software Requirements

- A web server running PHP (5.3.2 or later) and MySQL (5.2.47 or later).
- If using MemTest86, Python scripting support (3.6.3 or later) and a PXE server setup to boot MemTest86 across the network is required. The systems running MemTest86 must be able to PXE boot to UEFI.

## Hardware Recommendations

- 4 core CPU
- 16GB RAM
- Fast SSD

## Setup Example




## Installation

If you are installing the Management Console on an existing Web server with PHP and MySQL, skip to step 6.

1. Install Apache 2.2.14 or later
2. Install PHP 5.3.2 or later
   Note 1: When installing PHP, select Web server setup “Apache 2.2.x module” (and install everything).
   Note 2: To install MySQL, you need to install PHP with extensions (to get ext\php_mysql.dll)
3. Install MySQL 5.2.47 or later
4. Configure Apache (httpd.conf):
   a. Create a symbolic link in the apache installation folder to ‘htdocs’, e.g.:

```
Alias /htdocs "C:\Passmark\Software\mgtconsole"

<Directory "C:\Passmark\Software \mgtconsole ">
   Options Indexes FollowSymLinks
   AllowOverride all
   Order allow,deny
   Allow from all
</Directory>
```

   b. Configure the PHP installation, e.g.:

```
LoadModule php5_module "C:/Program Files (x86)/PHP/php5apache2_2.dll"
AddType application/x-httpd-php .php
PHPIniDir "C:\Program Files (x86)\PHP"
```

5. Configure PHP (PHP.ini):
    a. Set the default Time zone in PHP, e.g.:

    ```
    [Date]
    ; Defines the default time zone used by the date functions
    ; http://php.net/date.timezone
    date.timezone =Australia/Sydney
    ```

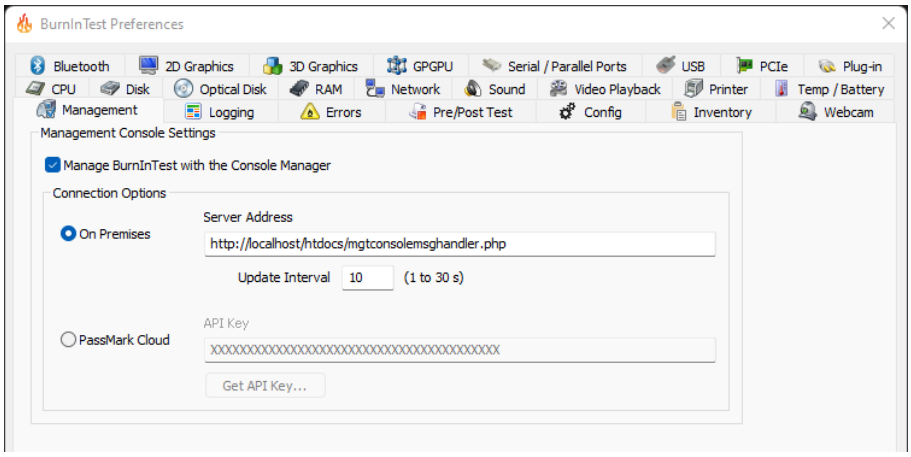
    b. Configure the MySQL extension: extension=php_mysql.dll
6. Create the Management Console database running the file named "database_creation_script.sql"
7. Copy the PassMark supplied Management Console files to the Web server, e.g., to htdocs. Set the error log file, ManagementConsole-errors.log, as writeable to all.
8. Setup the Management Console connection to MySQL:
    a. The PHP file, settings.php, contains the host name, port and MySQL password. Open the settings.php file in a text editor and change the $DATABASE_HOSTNAME, $DATABSE_USERNAME, $DATABASE_PASSWORD and $DATABASE_PORT values to suit your MySQL setup.
9. You should now be able to access the dashboard, e.g.: http://<server address>/dashboard.php

## Update existing database

Sometimes columns will be added to existing tables and require existing databases to be modified.
If you previously installed Management Console and are updating to a new build, then please see the database_update.sql script and the Readme.txt file to see if any changes have occurred and if the update script needs to be run.

## BurnInTest – Management Console On-Premises Setup

To manage BurnInTest with the Management Console, the following must be selected and setup in BurnInTest:
Configuration > Test Preferences > Management




### *Manage BurnInTest with the Console Manager*

When this option is selected, BurnInTest will send system information (on startup), test status (every 1-30 seconds) and test result information (at the completion of each test run) to the Management Console Web server application.

### *Server address*

Specifies the address of the Management Console Web server application. For example:

http://<server address>/htdocs/mgtconsolemsghandler.php

### *Notes*

- mgtconsolemsghandler.php is the Management Console web application that receives XML based connect, status and test result information from BurnInTest (via HTTP POST messages).

- Configuration->Report Information->Machine ID is used to uniquely identify the system in the Management Console. The MachineID is a unique identifier automatically generated and saved by BurnInTest for the system and must be between 8 and 15 characters. While it can be modified by a user, this is not recommended. If the MachineID is changed, then this system will appear as a different system in the Management Console.

## MemTest86 – Management Console On-Premises Setup

For MemTest86 to communicate with the Management Console it needs to have access to the network while running, currently to do this MemTest86 needs to boot over the network via PXE. It can then upload status messages via TFTP to a folder on the PXE server. This folder is watched by a Python script for changes, on detection of a new file it will then send the XML contents of the file to the Management Console via a HTTP POST request.

### *Setting up the PXE Server*

To configure PXE booting of MemTest86, a DHCP/PXE server must be present on the network to host the MemTest86 boot image for PXE boot-enabled client machines to acquire. Network booting of MemTest86 has been tested successfully with Serva PXE Server but other PXE servers should work as well. See the manual for your DHCP/PXE server for configuration instructions. The configuration instructions for Serva PXE Server are included in the following section.

Once the PXE server is configured, extract the files from the MemTest86 package to the appropriate directory for your PXE server configuration. For most cases, this is the TFTP root directory configured in the TFTP server. In the PXE/DHCP server settings, specify the boot image file to “BOOTX64.efi” for x86-64 client machines and “BOOTIA32.efi” for x86 client machines.

On the client machine, the UEFI BIOS must support booting from the network. In the BIOS setup, ensure that the “UEFI Network Stack” and “IPv4 PXE Support' features are enabled. If the PXE Server was successfully set up, the client machines should automatically boot MemTest86 on power-up.

### *Setting up and running the Python script*

The Python scripting environment must be installed on the system used for the PXE boot. A Python script (memtest_status_watcher.py) needs to be running to transfer messages from the TFTP upload folder (where Memtest86 uploads its status messages) to the Management Console PHP files.

It contains several user configurable options; they can be edited by opening the file in a text editor.

**MANAGEMENT_CONSOLE_URL**
This is the address of the Management Console server e.g., http://localhost/mgtconsole/mgtconsolemsghandler.php

**USER**
Username for web server authentication if required (leave empty if no authentication)

**PASSWD**
Password for web server authentication if required (leave empty if no authentication)

**WATCHDIR**
Directory to watch for files uploaded from MemTest86 (tftp server upload directory)

This script requires the “requests”, “watchdog” and “queues” Python libraries be installed, which can be done using the pip command e.g., “pip install requests” (on windows pip.exe is in the scripts directory of the Python install directory).

### *Configuring Serva for MemTest86 PXE Boot*

Serva is a lightweight but powerful Windows PXE server that bundles all required services (e.g., DHCP, TFTP) to support UEFI-based network booting. Serva does not require installation and can be set up in minutes.

Configuring Serva for Single-Image Boot is ideal for servers that require only a simple setup and do not need to distribute software images other than MemTest86. All necessary settings are configured within the Serva application and do not require any additional configuration files.

1. Open Serva and select 'Settings'
2. Click on the TFTP tab to setup the TFTP server
   a) Ensure that 'TFTP Server' is checked
   b) Specify the TFTP root directory. This should be the location where the files in MemTest86 are to be extracted.
   c) Set the TFTP Security to 'Standard' to allow MemTes86 report files to be uploaded to the server
3. Click on the DHCP tab to setup the DHCP server
   a) If your network already has a DHCP server, check 'proxyDHCP'. Otherwise, check 'DHCP Server'.
   b) If 'DHCP Server' is selected, specify the 'IP Pool 1st Addr', 'Pool size' and 'Subnet Mask' for the DHCP server.
   c) Specify the 'Boot File' to be retrieved by the client. For 64-bit clients (most systems), enter 'BOOTX64.efi' as the boot file. For 32-bit clients, enter 'BOOTIA32.efi'
4. Press OK to save the settings.
5. Extract all files in the MemTest86 package in the folder specified in Step 2b.
6. Close and restart Serva to apply the settings.

## Notes

1. Management Console errors are logged in the web server file: ManagementConsole-errors.log
2. All date/times stored in the database are UTC offsets from January 1, 1970. When viewing date/times on the Management Console the date/times are adjusted for the time zone of the web server. If the web server time zone is different to the time zone of the systems under test, then it should be remembered that the times are not the test system's local time, but the Web server's local time.

## Troubleshooting

### *General Debugging*

By adding the parameter "debugmode=1" to the dashboard address PHP errors and warnings will be enabled that may help troubleshoot any problems, e.g., http://localhost/mgtconsole/dashboard.php?debugmode=1

Errors can be logged to the ManagementConsole-errors.log file which can help debug database connection errors.

### *MySQL Database errors*

If you see an error like "Warning: mysqli::mysqli(): (HY000/1045): Access denied for user 'username'@'localhost' (using password: YES)" when you navigate to the dashboard.php page then you may not have not setup the required username and password for the MySQL database. Open the settings.php file in a text editor and change the $DATABASE_HOSTNAME, $DATABSE_USERNAME, $DATABASE_PASSWORD and $DATABASE_PORT values to suit your MySQL setup.

## Memtest86 – TCP/IP Connection

Some select motherboards may also have the option of connecting to the management console via TCP/IP connection. While support for this is currently limited, where available, it can be used to directly connect Memtest86 to the management console server without the use of PXE or TFTP.

### *Configurations*

Unlike the TFTP/PXE method, if using TCP/IP, no additional server is required outside of the management console, simplifying configuration significantly. All configuration is done via Memtest86s internal configuration.

The following configuration options are relevant when attempting to connect Memtest86 to a local management console instance. They can be edited in the mt86.cfg file located in the BOOT/EFI directory of the Memtest86 installation.

TCPSERVERIP
Defines the IP address of the machine that management console is running on.

TCPSERVERPORT
Defines the port that the server is listening on. This defaults to port 80 or HTTP.

TCPREQUESTLOCATION
Defines the route location of the mgtconsolemsghandler.php script on the server. Should be specified as a relative path from the server's root directory. For example, "/mgtconsole/mgtconsolemsghandler.php"

TCPCLIENTIP
The local IP address of the machine that Memtest86 is running on. This is only used if DHCP could not configure an address or if DHCP was disabled. It should be ensured that this address is unique across the same subnet to avoid IP collisions.

TCPGATEWAYIP
Defines the IP address of the default route that Memtest86 should use. When the address of TCPSERVERIP does not exist on the current subnet, traffic will be directed to this address in order to forward the request to an external network (such as over the internet or to another subnet).

TCPDISABLE
Disables any attempt to connect the management console over TCP/IP. Defaults to 1 which disables TCP communications. Set this value to 0 to attempt to connect over TCP.

DHCPDISABLE
When set to 0, the Memtest86 environment will attempt automatically obtain a local IP address from any DHCP server on the local network. When set to 1 Memtest86 will use the value in the TCPCLIENTIP as the local IP address.

### *Troubleshooting*

Since the motherboard manufacturer is responsible for implementing the TCP/IP stack for the UEFI environment, support for the use of TCP/IP can vary depending on the make, model, and vendor of the motherboard in use.

To confirm that your motherboard supports communication over TCP/IP, enable the configuration in the mt86.cfg configuration file and run the program. Memtest86 should automatically attempt to connect to the server with the supplied configuration. The resulting log file from the test should be in the EFI/BOOT directory and will be named Memtest86-[datetime].log. All logs' entries preceded with the [PMP] are related to the TCP connection and should give details on if TCP networking is possible on that computer.

# Management Console Usage

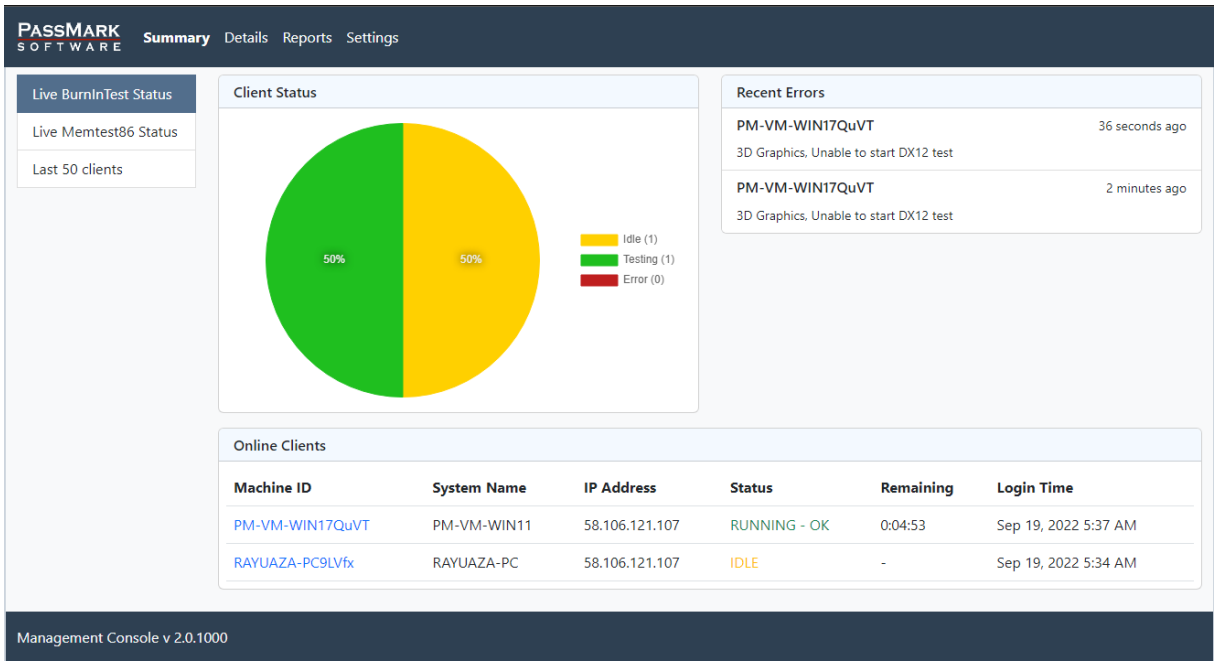
The Management Console user interface (dashboard.php) has 4 main sections: Summary, Details, Reporting and Configuration.

## Summary

The Summary section displays an overview of online BurnInTest and MemTest86 clients.

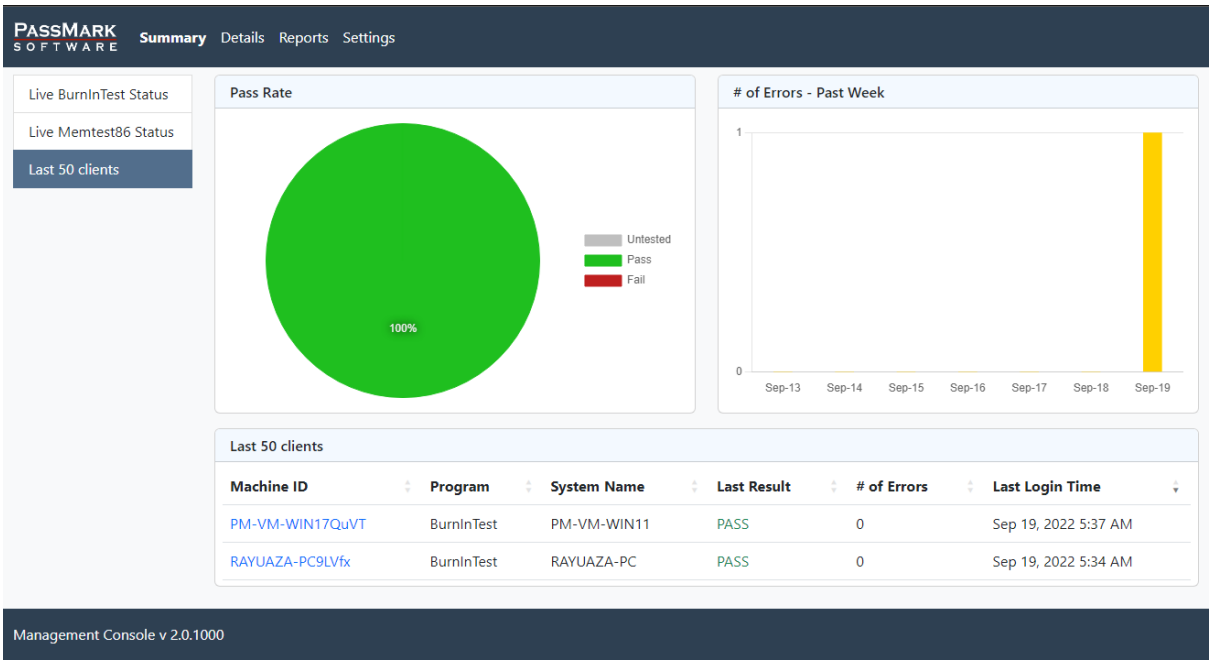
### *Live BurnInTest/Memtest86 Status*

Displays graph of status of connected clients, list of recent errors and a list of all connected clients.




### *Last 50 Clients*

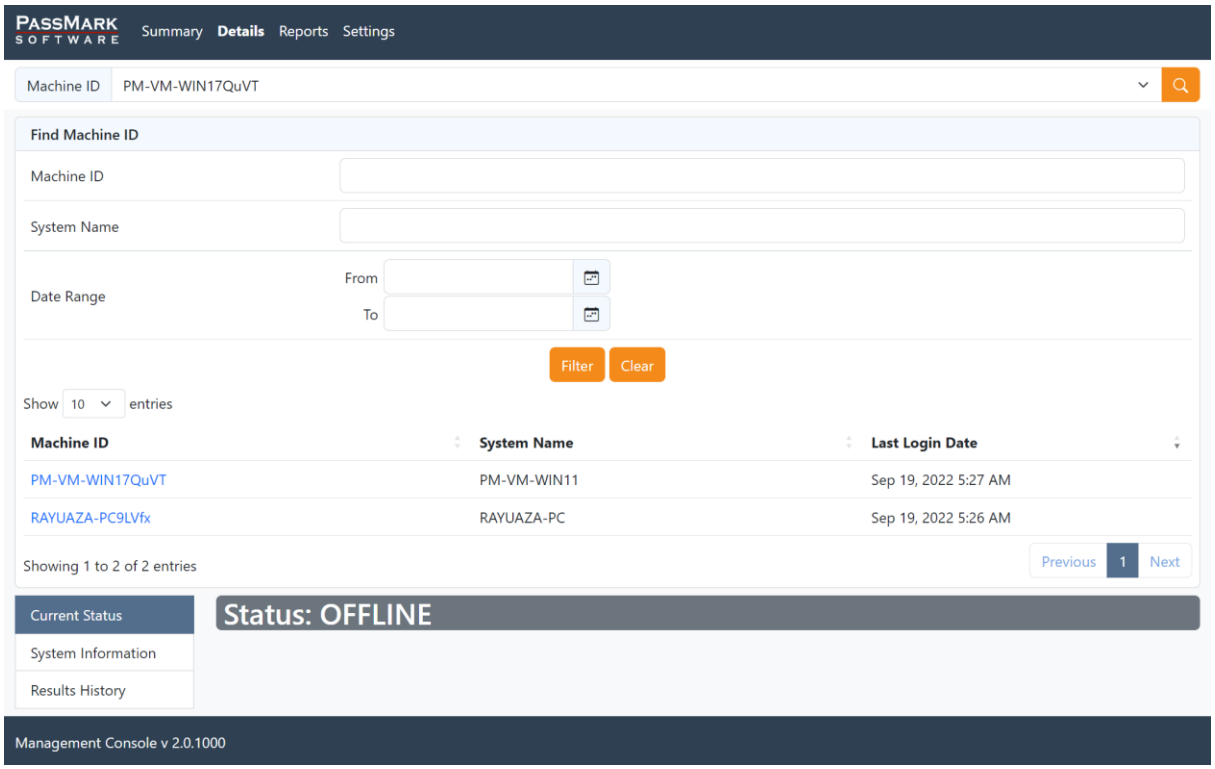
Displays information on the last 50 clients that connected to Management Console and the number of errors in the past week.



## Details

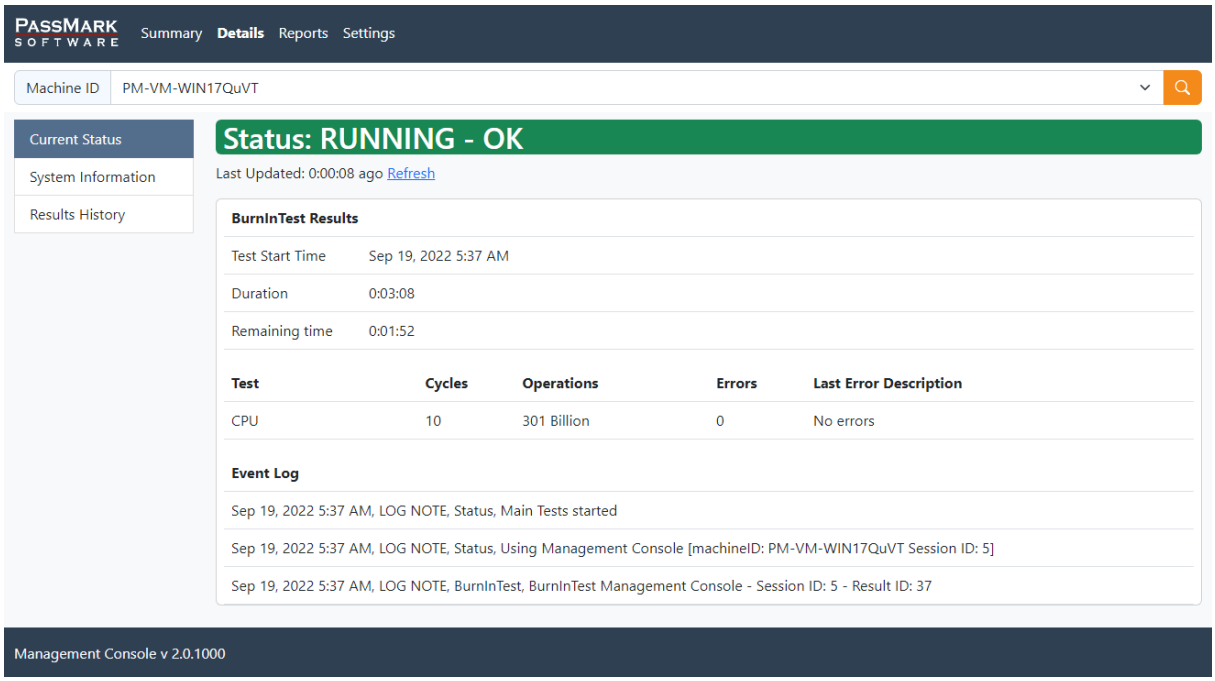
The Details section provides information for a selected test system, including the Current Status, System Information, Last Test Result, and a searchable results history and per test run deletion.

Clicking in the search icon on the top right opens a search box to allow searching for machines not in the dropdown.



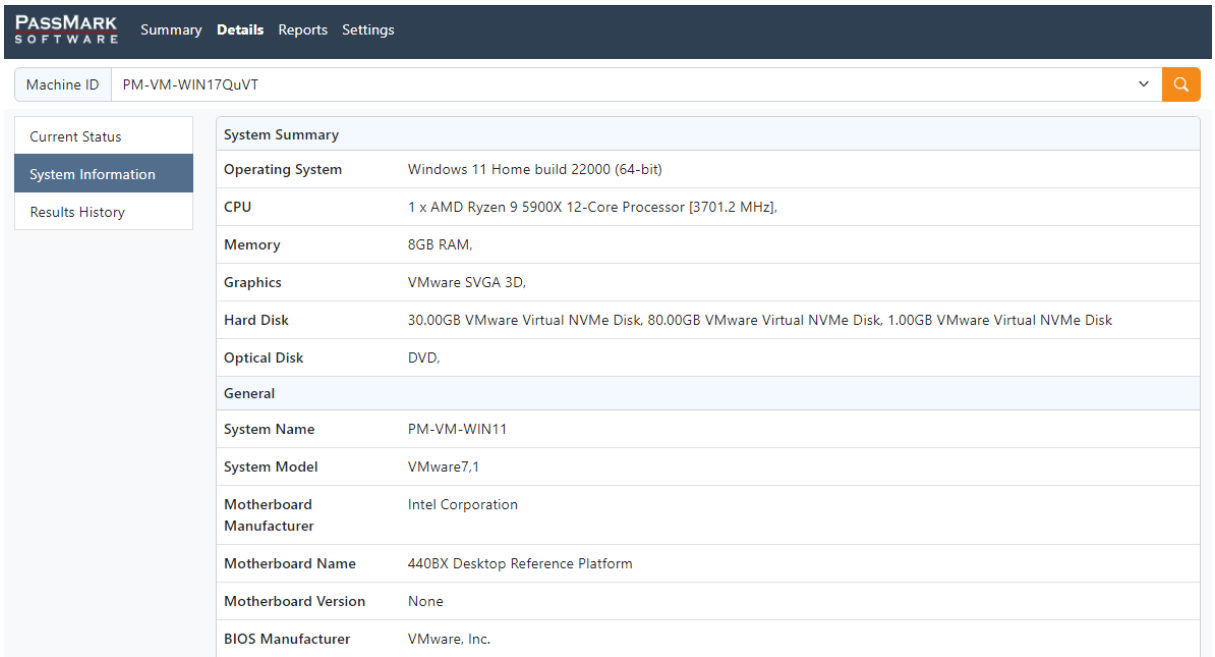

### *Current Status*

Displays status of the selected client, additional information is displayed when machine is running a test.



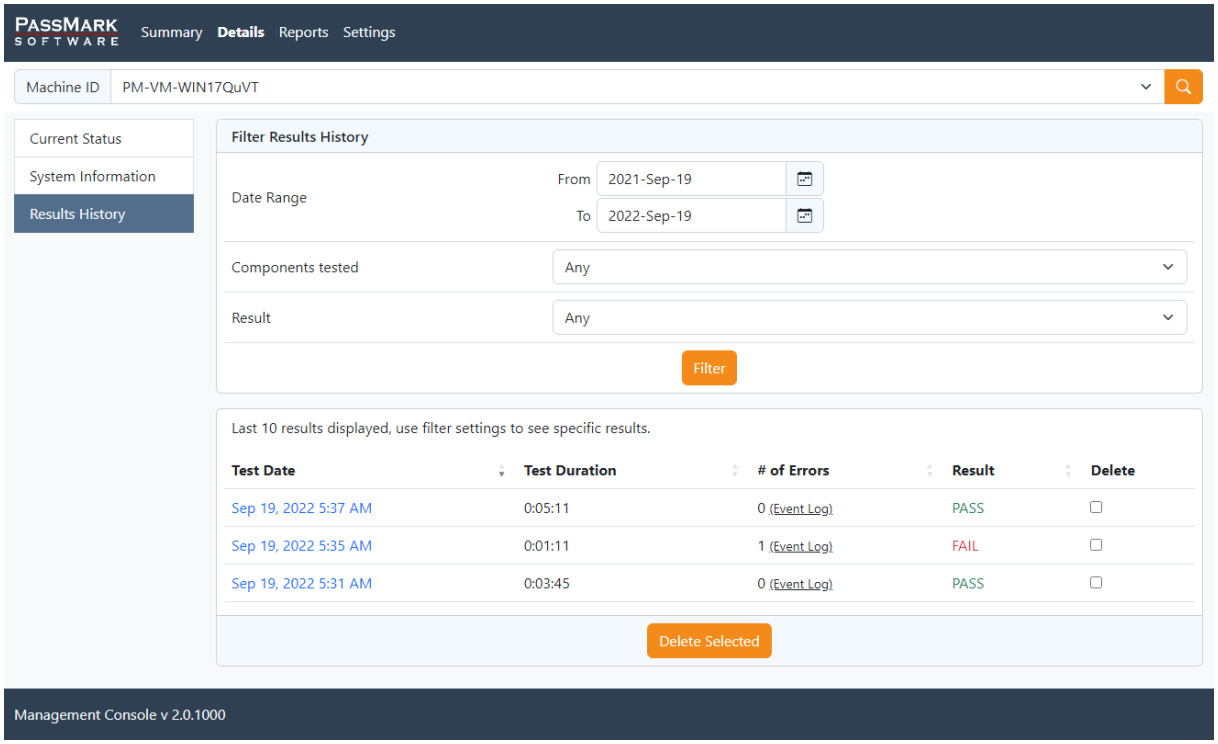
## *System Information*

The system information for the system is stored each time a system connected to the Management Console so hardware changes will be stored across test runs. This will display the system information from the most recent test session.




## *Results History*

Displays list of last 10 results, clicking on the test date or event log links would display further details of the test run in a new window. Results can be filtered by several means above the results list. Users can also delete individual results by clicking on the check box and then on the Delete Selected button.

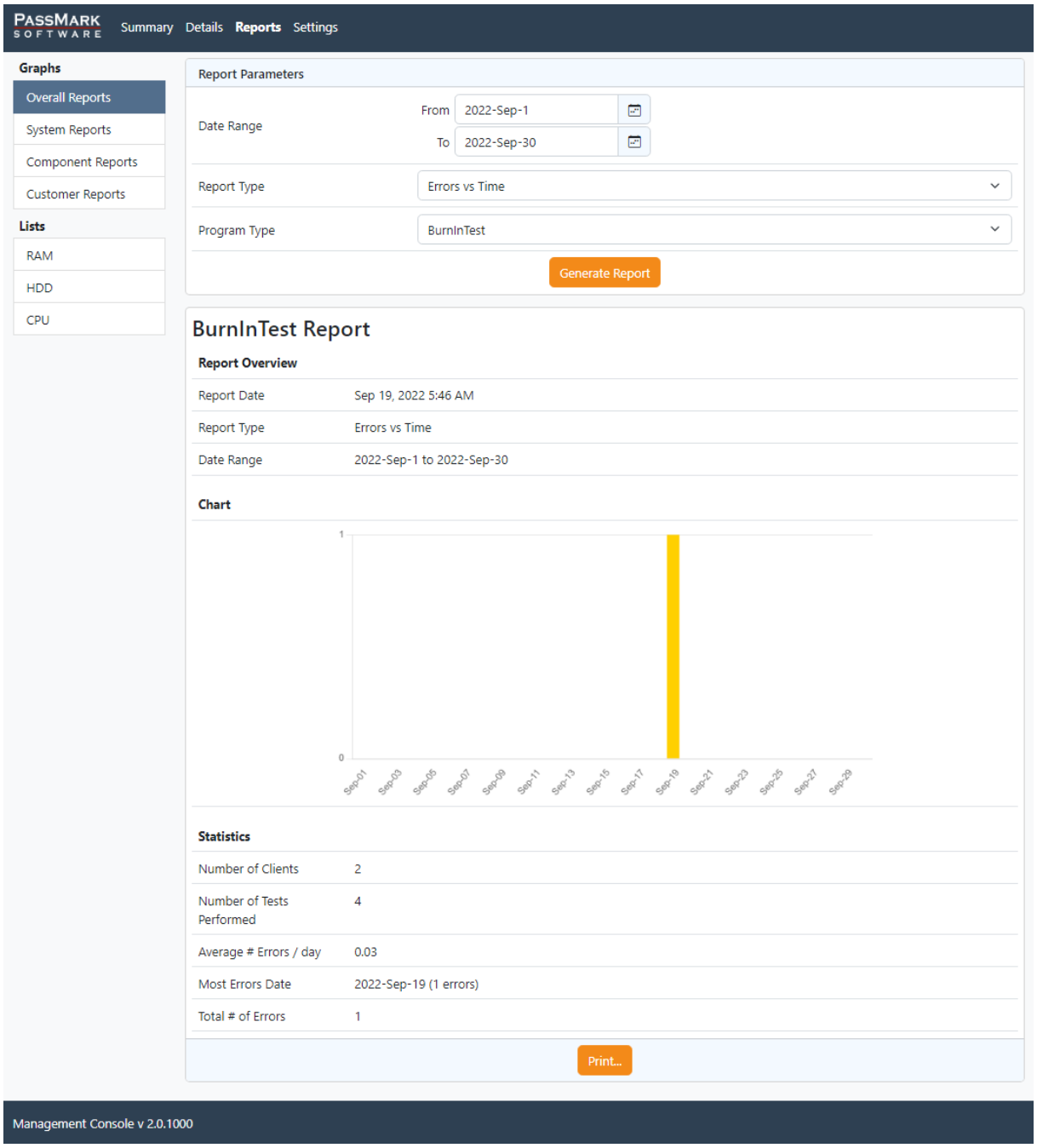


## Reports

The Reports section provides statistical reports across all tested systems, filtered by date, system, component type or customer.

### *Graphs*

Includes Errors vs. time, Failures vs. time, Tests performed vs. time and the Pass rate. Report parameters can be adjusted at the top. The print option at the bottom opens a separate window to facilitate printing the report.




### *Lists*

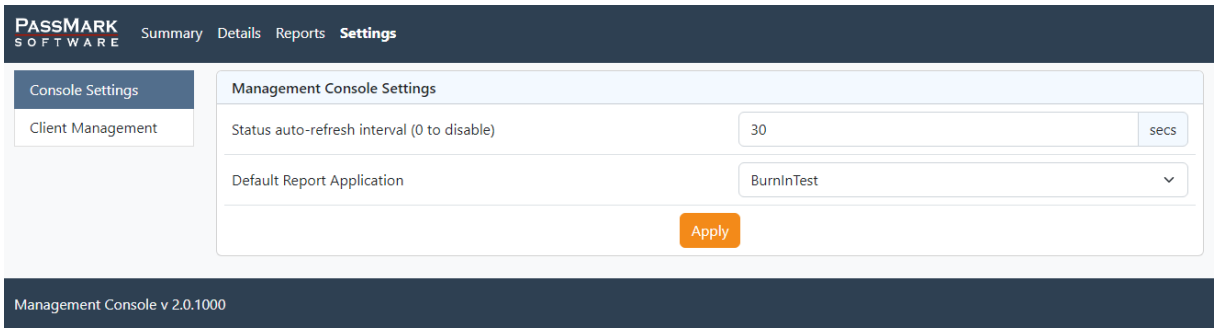
Displays a list of RAM, HDD or CPUs used for each test run with report parameters applied. Print option at the bottom opens a separate window to facilitate printing the report.

## Configuration

The Configuration section allows the auto refresh of the live Management Console status web pages to be set. It also allows systems to be deleted from the Management Console database.

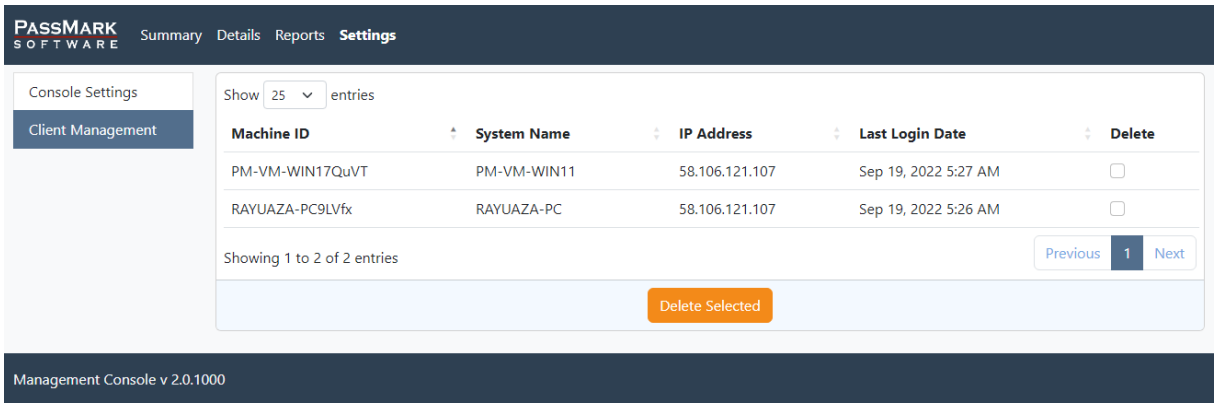
### *Console settings*

Allows user to adjust auto-refresh interval in the Summary and Details > Current Status sections of the dashboard. You can also set the default report application here which affects what appears by default in the Report > Report Parameters > Program Type dropdown (On-Premises only).




### *Client Management*

Allows user to delete any systems and associated test results from the Management Console database.




### *API Key (Cloud Subscription only)*

Allows user to view their API Key which can be entered into BurnInTest to connect to Management Console Cloud.

## Support

For technical support, questions, suggestions, please check our support page:
https://www.passmark.com/support/index.php

## Pricing

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