

Setting up High Availability

Overview

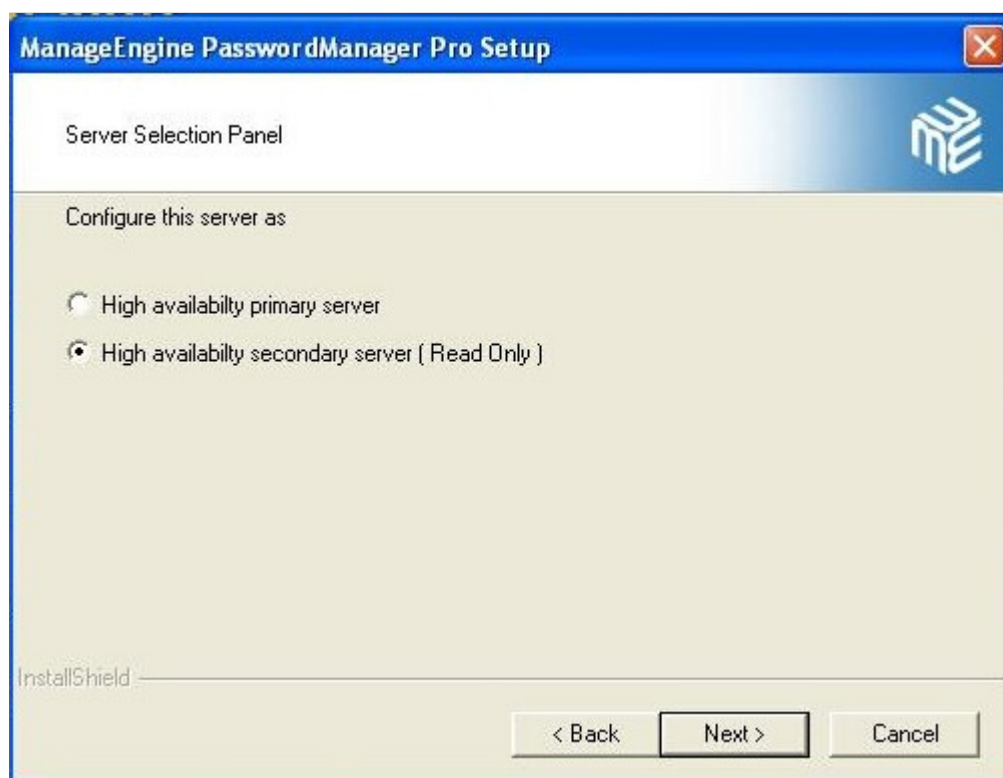
Setting up high availability in PMP consists of the following four steps:

1. Installing Primary & Secondary
2. Configurations to be done in Primary Installation
3. Configurations to be done in Secondary Installation
4. Enabling database replication

Step 1 - Primary & Secondary Server Instances


Before trying High Availability, you should have both Primary and Standby installations of PMP in place. **After installation, the PMP Primary server should have been started and stopped at least once.**

You can use your current PMP installation as primary server. You can install another instance of PMP as secondary server in a separate workstation. To install PMP as secondary, during installation, you need to choose the option "**Configure this server as High availability secondary server (Read Only)**" (refer to the screenshot below).



Step 2 - Changes to be made in Primary Server Installation

1. **Stop PMP Primary server, if already running.**
2. Open a command prompt and navigate to `<PMP_Installation_Folder>/bin` directory and run the script **replicationPack.bat** (Windows)/**replicationPack.sh** (Linux)



```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\PMP5000\PMP\bin>replicationPack.bat
```

3. This will create a new directory named '**replication**' under `<PMP_Installation_Folder>` and a replication package named '**Replication.zip**' under `<PMP_Home>/replication` folder. This zip contains the database package for standby
4. Go to `<PMP_Installation_Folder>/mysql/bin` directory. You will find a file named **HAPrimary.conf**, rename that file as **HASecondary.conf**
 - Edit the **HASecondary.conf** and enter the name of the host where the secondary server is running.

`master_host=<hostname of Secondary>`

For example, 'test_workstation' is the machine where the secondary PMP server is running, you need to enter the information as below:

`master_host=test_workstation`

5. Open a command prompt and navigate to `<PMP_Installation_Folder>/bin` and run the script `startDB.bat <MySQL Port>` (Windows) /`startDB.sh <MySQL Port>` (Linux). You need to provide the MySQL port of PMP while executing the above script as shown below. By default, the MySQL port in PMP is 2345.

`startDB.bat <MySQL Port>` **(For Windows)**
`startDB.sh <MySQL Port>` **(For Linux)**



```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\PMP5000\PMP\bin>startDB.bat 2345
```

For example, with the default the MySQL port 2345, you need to execute this as:

`startDB.bat 2345` **(For Windows)**
`startDB.sh 2345` **(For Linux)**

This will start the Primary Database (Default MySQL port is 2345)

6. Copy the **Replication.zip** file present under `<PMP_Installation_Folder>/replication directory`. This has to be put in the PMP Secondary installation machine as detailed in Step 3 below.

Step 3 - Changes to be made in PMP Secondary Installation

1. Put the **Replication.zip** file copied from the **PRIMARY Installation** (as detailed in the previous step) in to the `<PMP_Installation_Folder>` of **Secondary** and unzip it
2. Copy the `<PMP_Installation_Folder>/mysql/bin/database_params.conf` file of secondary installation and put it over `<PMP_Installation_Folder>/conf` directory of secondary installation
3. Go to `<PMP_Installation_Folder>/bin` of secondary installation and execute `startDB.bat <MySQL Port>` (Windows) /`startDB.sh <MySQL Port>` (Linux) to start Secondary database (Default MySQL port is 2345)

For example, with the default the MySQL port 2345, you need to execute this as:

`startDB.bat 2345` (**For Windows**)
`startDB.sh 2345` (**For Linux**)

This will start the Secondary Database (Default MySQL port is 2345)

Step 4 - Enabling Database Replication

1. Run **enableReplication.bat** (Windows) /**enableReplication.sh** (Linux) present in `<PMP_Installation_Folder>/mysql/bin` of **both Primary and Secondary installations**

Step 5 - Start Primary and Secondary

1. Start Primary and Secondary Servers
2. High Availability setup is now ready

Step 6 - Verify High Availability setup

After carrying out the above steps, you can verify if the High Availability setup is working properly by looking at the message in "Admin >> General >> High Availability" page of **Primary server**. If the setup is proper, you will see the following:

Connection Status: Alive and High Availability Live is in progress now

Secondary server is running in host: <Host Name>

Troubleshooting Tips

Issue

If you get error code 1201 upon executing enableReplication.bat / enableReplication.sh as shown in the screenshot below:

```
E:\PMP\mysql\bin>enableReplication.bat
HAPrimary.conf
ERROR 1201 (HY000) at line 1: Could not initialize master info structure; more error messages can be
found in the MySQL error log
ERROR 1201 (HY000) at line 1: Could not initialize master info structure; more error messages can be
found in the MySQL error log
Successfully enabled replication
E:\PMP\mysql\bin>
```

Solution

Go to the PMP Primary and Secondary installation folders and carry out the following:

- Navigate to <PMP_Installation_Folder>/mysql/data folder
- The following file & folders are important: ibdata1, mysql, passtrix, test
- Retain the above file and folders
- Delete all other files
- Start High Availability steps again (from Step 1)

Issue

Replication.zip is not getting created even after executing replicationPack.bat / replicationPack.sh

Solution

One of the pre-requisites for PMP High Availability setup is that after installation, the PMP Primary server should have been started and stopped at least once. If this had not been done, you will face the above issue.



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