



## **Upgrading to P-Synch 6.2**

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## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>New features and changed setup</b>	<b>1</b>
2.1	New features . . . . .	1
2.2	Software organization . . . . .	1
<b>3</b>	<b>Upgrading to P-Synch 6.2</b>	<b>4</b>
3.1	Overview . . . . .	4
3.2	Checking the psadmin service account . . . . .	5
3.3	Upgrading to P-Synch 6.2 on the existing server . . . . .	6
3.4	Reviewing customizations . . . . .	6
3.5	Converting batch, user, and script files . . . . .	6
3.6	Running the conversion utility . . . . .	7
3.7	Starting the web service . . . . .	8
3.8	Updating slave servers . . . . .	8
3.9	Executing the psupdate command . . . . .	9
3.10	Re-enabling nightly automation and services . . . . .	9
<b>4</b>	<b>Testing the new installation</b>	<b>10</b>
4.1	Administrator access . . . . .	10
4.2	Users and accounts . . . . .	10
4.3	Password functionality . . . . .	10
4.4	Self-service modules . . . . .	10
<b>5</b>	<b>Completing the transition</b>	<b>12</b>
5.1	Services . . . . .	12
5.2	Interceptor DLL . . . . .	12
5.3	Unix agent . . . . .	13
5.4	Automation . . . . .	13
<b>6</b>	<b>Upgrading proxies</b>	<b>14</b>
<b>7</b>	<b>Troubleshooting</b>	<b>15</b>
7.1	Adding components after an upgrade . . . . .	15

# 1 Introduction

This document outlines the new features in P-Synch 6.2, and describes the process of upgrading from version 4.x, 5.x, and 6.x of the software.

The remainder of the document is organized as follows:

- **New features and changed setup** (Section “[New features and changed setup](#)” on Page 1):  
A summary of the new features introduced in P-Synch 6.2, and how the latest version differs from previous ones.
- **Upgrading to P-Synch 6.2** (Section “[Upgrading to P-Synch 6.2](#)” on Page 4):  
A description of the steps a software installer must take to upgrade an existing P-Synch server from a 4.x, 5.x, or 6.x software release to the 6.2 release.
- **Testing the upgrade** (Section “[Testing the new installation](#)” on Page 10):  
A checklist of testing procedures to verify that the newly installed server is functioning correctly.
- **Completing the transition** (Section “[Completing the transition](#)” on Page 12):  
A sequence of steps to finalize the transition to P-Synch 6.2, after testing has been completed.

## 2 New features and changed setup

### 2.1 New features

See the release notes for information about new features and fixes.

### 2.2 Software organization

- Directories:  
P-Synch 6.2 uses a new directory structure, where every file and directory is managed under a single, master installation directory. New directories do not interfere with old ones.  
Following are some major changes to the directory structure (the *install-path* is C:\Program Files\P-Synch\):

Item	P-Synch 4.x	P-Synch 5.x, 6.x
Staging directory	c:\psconfig	<i>install-path</i> \psconfig
Working directory	c:\inetpub\scripts\psynch	<i>install-path</i> \cgi-bin
Web document root	c:\inetpub\wwwroot	<i>install-path</i> \wwwdocs

With P-Synch 6.2, all non-CGI programs have been moved out of the `cgi-bin` directory, and into the `bin` directory. Only the CGI programs, databases, and skins remain in the `cgi-bin` directory. Customer-created files, such as custom scripts for agents, interfaces, and so on, will be untouched.

- URLs:

1. Static documents in P-Synch 5.x and 6.x were accessed at:

`http://server/psynch-docs/file.html`

For P-Synch 6.2.3, these documents are accessed at:

`http://server/psynch/docs/file.html`

2. The location of the CGI programs changed as well. In P-Synch 4.x they were located at:

`http://server/scripts/psynch/nph-program.exe`

CGI programs in P-Synch 5.x and 6.x are now at:

`http://server/psynch/nph-program.exe`

The old URLs will continue to work for 4.x files and CGI programs after the upgrade.

You can uninstall the 4.x installation after testing of the 6.x software is complete.

- Registry:

4.x versions of P-Synch stored information in the registry in the following key:

`HKEY_LOCAL_MACHINE\SOFTWARE\P-Synch`

In 5.x and 6.x, registry entries were rearranged and moved to:

`HKEY_LOCAL_MACHINE\SOFTWARE\M-Tech\P-Synch`

In 6.2.3, registry entries have been moved to:

`HKEY_LOCAL_MACHINE\SOFTWARE\M-Tech\P-Synch`

and for alternate instances:

`HKEY_LOCAL_MACHINE\SOFTWARE\M-Tech\P-Synch_InstanceName`

The conversion upgrade program (`CONV4TO6` or `CONV5TO6`) copies entries as required.

- Nightly automation:

4.x versions produced a monolithic batch file called `psupdate.cmd` to perform all nightly automation tasks.

5.x and 6.x break this file into multiple segments, for easier customization and manual execution. The master file is still called `psupdate.cmd`, but it automatically invokes many subsidiary files, which are also automatically generated.

New exit points, labelled `pre_filename.cmd` and `post_filename.cmd` provide additional points in which local, custom batch file extensions can be inserted.

The new `psupdate.cmd` file is now found in the main software installation directory, in the `psconfig` subdirectory. It is automatically regenerated whenever a relevant change is made to the web configuration.

- Database files:

Old (v4.x) database files cannot be used directly in 5.x or 6.x installations, and must be converted using `conv4to6` first.

Version 6.2 introduces several new database files as well as new content, in the form of new columns. While some 5.x and 6.x databases can be simply copied over, the recommended method is to convert them all using `conv5to6`.

- Lock files:

Lock file directories are preserved. If a lock file directory is not specified for an instance, the upgrade program displays a message:

```
This instance did not have a global lock directory specified. It is
important to have a global lock directory shared amongst all instances
to ensure that locking is performed correctly. Setup has set the global
lock directory for this instance to "C:\Program Files\P-Synch\Locks."
```

**Caution:** If a lock file directory is defined in other instances with a different name, ensure that you use the P-Synch administration module (`nph-psa.exe`) to define the same directory for the instance you are upgrading.

## 3 Upgrading to P-Synch 6.2

### 3.1 Overview

Carry out an upgrade from P-Synch 4.x, 5.x, and earlier versions of 6.x, to 6.2 in the following sequence:

1. Stop all P-Synch services.
2. Make a backup of the P-Synch server.
3. Ensure that the psadmin service account has the correct password in both the old and new version. See Subsection “[Checking the psadmin service account](#)” on Page 5 for details.

**Note:** In P-Synch 4.x the administrative account was called IUSR\_PSYNCH

4. If you made customizations to the P-Synch GUI, you must include the M4.EXE file in the Windows PATH on the P-Synch server before you run the setup program.
5. Install P-Synch 6.2 on the existing server. See Subsection “[Upgrading to P-Synch 6.2 on the existing server](#)” on Page 6 for details.
6. Review customizations. See Subsection “[Reviewing customizations](#)” on Page 6 for details.
7. Review and convert batch, user, and script files.
  - If you are upgrading from P-Synch 4.x:
    - (a) Copy Telnet, SQL, DOSKEY and help desk integration scripts from the old installation to the new one.
    - (b) Copy batch, manual user, and custom script files from the old staging directory to the new one.
  - If you are upgrading from P-Synch 5.x or 6.x, you must move Telnet, SQL, DOSKEY and help desk integration scripts, as well as existing batch, manual user, and custom script files, from the `cgi-bin` directory to the `bin` directory.

See Subsection “[Converting batch, user, and script files](#)” on Page 6 for details.

8. Run the CONV4TO6 or CONV5TO6 utility to copy registry entries, database file contents and system variables from the old to the new program instance. See Subsection “[Running the conversion utility](#)” on Page 7 for details.
9. If you are upgrading from P-Synch 5.x or 6.x, run the CONV5TO6 utility a second time using the `-sesslog` flag (if your existing SESSLOG database is extremely large this may take a long time.)

- Restart and check your web service.

**Note:** You may have to clear the web page cache on your browser before the pages can be properly displayed.

See Subsection “[Starting the web service](#)” on Page 8 for details.

- Test the administrative module and verify that all existing features are intact. Make adjustments as necessary. For example, the syntax of some target systems’ host addresses and/or admin credentials have changed. Update the configuration using the administration module by clicking **Manage P-Synch** -> **Update config**.
- Update the PSSLAVE service manually on each slave server. See Subsection “[Updating slave servers](#)” on Page 8 for details.
- Execute the PSUPDATE command. See Subsection “[Executing the psupdate command](#)” on Page 9 for details.
- Ensure that the front-end authentication module (nph-psf.exe) is enabled.
- Test the functionality of the new installation on the master server, and on each slave server:
  - Verify that password verify, change and reset work on each target system.
  - Test that users can be authenticated, and can access each self-service facility.
  - Test any meta directory and help desk interfaces.
  - Ensure that all customized scripts function as expected.

See Section “[Testing the new installation](#)” on Page 10 for details.

- Enable and verify nightly automation and all services in the new instance. See Subsection “[Testing the new installation](#)” on Page 10 for details.
- Complete the transition to the new installation of P-Synch. See Section “[Completing the transition](#)” on Page 12 for details.

The rest of this section provides more detailed information about some of the steps listed above.

### 3.2 Checking the psadmin service account

P-Synch v6.x will keep the existing psadmin user on the P-Synch server that was defined during a 5.x or 6.x install. You will be required to provide a password for this user. This user controls anonymous logins and runs P-Synch services.

If you do not know the password for user psadmin, set a new password for the original user, all services, and the anonymous user specified in the IIS setup. To do this:

1. Enter the correct (new) password for the default web site's directory security / anonymous access user that used psadmin before. Ensure that the password is propagated to the child nodes (`psynch` and `psynch-docs`).
2. Use the administration module `nph-psa.exe` interface to enter the new psadmin password for every P-Synch service that uses psadmin (For example, the `PUSHPASS` and `EXPDAEMON` services).

**Note:** In P-Synch 4.x the administrative account was called `IUSR_PSYNCH`

### 3.3 Upgrading to P-Synch 6.2 on the existing server

**Note:** Ensure that you have stopped all P-Synch services and made a backup of the P-Synch server before proceeding.

To install P-Synch 6.2 on the existing server.

- Unzip the zip file containing files for the upgrade to your `C:\temp` directory.
- Inside the `C:\temp` directory, there will be a `psynch` directory. In that, run `setup.exe`, select the instance, and select **Upgrade** or **Patch**.

### 3.4 Reviewing customizations

Customizations you have made to the `*.z` or `*.M4` files may have to be recreated with the new `*.z` and `*.M4` files. P-Synch has many changes to how these files are referenced by the `nph-program.exe` cgi's. See the *Customizing the user interface* chapter of the *P-Synch Technical Documentation* manual for details.

### 3.5 Converting batch, user, and script files

If you are upgrading from P-Synch 4.x:

1. Copy Telnet, SQL, DOSKEY and help desk integration scripts from the old installation to the new one.
2. Copy batch, manual user, and custom script files from the old staging directory to the new one.

If you are upgrading from 5.x or 6.x, the upgrade process will not overwrite your existing batch files and scripts. However, you must move any scripts from the `cgi-bin` directory to the new `bin` directory manually.

Carry out the following reviews:

- There may be changes in how some of the commands within the scripts are used. Examine the custom script files in the staging directory (`psconfig`) and the working directory (`bin`) to ensure that execution paths are correct, and that the usage of those commands has not changed. Many of the commands run from the P-Synch 4.x installations were run directly from the `psconfig` directory. The associated P-Synch 5.x and 6.x commands will be run from `utils` folder.
- The syntax, or admin credentials, of some of the target system host addresses may have changed. If you are targeting one of those system types you may have to alter your host address to reflect the changes.
- File formats or syntax may have changed. Ensure the utilities are using the correct command line arguments and that items such as the `baduserids.lst` file used by the `remove.exe` utility is updated to use regular expressions instead of wild cards.
- Examine the usage of any of the utilities by typing the utility name followed by a `-h` flag. For example, type:

```
cd "\Program Files\P-Synch\utils"  
conv5to6 -h
```

### 3.6 Running the conversion utility

The conversion utility will copy users, accounts, target (host) systems, administrators, system variables and registry entries from the old installation to the 6.2 installation:

```
cd "\Program Files\P-Synch\utils"  
conv5to6 -all
```

**Note:** If you use the `-dst` and `-src` options to `conv5to6`, you cannot use UNC paths. The path must be local or mapped to a drive letter.

If you are converting from 5.x or 6.x, run the `conv5to6` command again with the `-sesslog` flag. For example, type:

```
cd "\Program Files\P-Synch\utils"  
conv5to6 -sesslog -src path-to-backup-folder
```

The `-src` option tells CONV5TO6 the location of the original SESSLOG database. The value of the `path-to-backup` folder parameter should be the location where you chose to backup the original SESSLOG database.

For example, if you have a backup of the original SESSLOG database in the folder `c:\PsynchTemp`, then type:

```
conv5to6 -sesslog -src "c:\PsynchTemp"
```

If your SESSLOG database is very large this command may take a long time to complete. Alternatively, you can erase, then recreate the SESSLOG database using the CREATEDB utility.

### 3.7 Starting the web service

The setup utility stops your web service so that it can properly copy files to the web server directories. After running the conversion utility, you must restart your web service.

If you are using the Microsoft Internet Information Server, run the following command:

```
net start w3svc
```

If you are using the Apache web server, run the following command:

```
net start apache
```

**Note:** You may have to clear the web page cache on your browser before the pages can be properly displayed.

### 3.8 Updating slave servers

To update the slave service on a slave server:

1. Run SETUP.EXE on the slave server.

2. Click **Manage** for the appropriate instance and click **Upgrade** or **Patch**.

**Note:** You do not need to do this if you are upgrading from P-Synch 6.2.X to P-Synch 6.2.3. Nightly replication done by PSUPDATE will automatically upgrade the slave

### 3.9 Executing the psupdate command

To execute the PSUPDATE command:

- Using the administration module (nph-psa.exe), click **Manage P-Synch** -> **psupdate**, or
- Open a command prompt in the staging directory and execute:

```
cd "\Program Files\P-Synch\psconfig"  
psupdate
```

**Note:** You will not be able to make any changes to configuration or databases while the PSUPDATE service is running.

### 3.10 Re-enabling nightly automation and services

The conversion program clears all previously scheduled nightly automation jobs. To reactivate nightly automation:

- Login to the administrative module (nph-psa).
- Click **Server Monitor** -> **Services**.
- Click **Manage** next to **psscheduler**.
- Re-enable the service and reschedule jobs as required.

## **4 Testing the new installation**

### **4.1 Administrator access**

Verify that all support users defined in the old server, can now log into the new application at:

`http://server/psynch/nph-psa.exe`

with their old login IDs and passwords.

### **4.2 Users and accounts**

Use `nph-psa.exe` to verify that all users and accounts were copied over from the old system to the new one. This can be with either the reporting feature or using `Help a user`.

### **4.3 Password functionality**

Verify that you can reset passwords for a test user on each target system, using `nph-psa.exe`.

Verify that you can change passwords for a test user on each target system, using `nph-pss.exe`.

### **4.4 Self-service modules**

Verify that each of the following modules works as expected:

Function	URL
Main menu	<a href="http://server/">http://server/</a>
Front-end authentication	<a href="http://server/psynch/nph-psf.exe">http://server/psynch/nph-psf.exe</a>
Self-service password reset using Q&A authentication	<a href="http://server/psynch/nph-pss.exe&amp;qa_ext=response.pss">http://server/psynch/nph-pss.exe &amp;qa_ext=response.pss</a> (one line)
Self-service password reset using password authentication	<a href="http://server/psynch/nph-pss.exe&amp;qa_ext=password.pss">http://server/psynch/nph-pss.exe &amp;qa_ext=password.pss</a> (one line)
Q&A profile builder	<a href="http://server/psynch/nph-psq.exe">http://server/psynch/nph-psq.exe</a>
Alternate login ID profile builder	<a href="http://server/psynch/nph-psl.exe">http://server/psynch/nph-psl.exe</a>
SecurID token management	<a href="http://server/psynch/nph-ppsp.exe">http://server/psynch/nph-ppsp.exe</a>
Active web registration	<a href="http://server/psynch/nph-psr.exe">http://server/psynch/nph-psr.exe</a>

## 5 Completing the transition

Take the following steps after testing to complete your transition from 4.x, 5.x, or 6.x to the new 6.2 software:

### 5.1 Services

Once all of the above functionality has been tested, stop and restart the services via the administrative web interface. This will ensure that the services can be started and stopped by the nightly automation process.

`http://server/psynch/nph-psa.exe`

The relevant services may include (depending on the functionality deployed at your site):

- PUSHPASS (transparent synchronization service).
- EXPDAEMON (password expiry early detection).
- PSLOGSERVICE (logging service).
- PSSLAVE (slave service, also used for proxies).
- PSGOSSIP (server replication service).
- PSACE (RSA SecurID ACE 3.x or 4.x administration service).
- PSSCHEDULER (P-Synch scheduler service).
- PSPPMON (pushpass health monitoring service).

### 5.2 Interceptor DLL

If you have configured transparent synchronization triggered by Windows NT compatible or Active Directory domain password changes, you should take the following steps to upgrade the `psintcpt.dll`:

1. Use the `instdll.exe` utility program to install the interceptor DLL on any Windows NT compatible computer, local or remote.
2. Configure *password interceptor DLL* using the encryption key (MASTERKEY), host name, port number, and target identifier for this domain configured on the new P-Synch server / pushpass service.
3. Restart the server or domain controller.

### 5.3 Unix agent

If you have configured the P-Synch Unix server, you must replace 4.x binaries with 5.x, 6.x binaries. Binaries may be found in the `psunix.tar` file in the software distribution.

In addition, you must edit `/etc/psynch.conf` and equivalent files on the Unix server, to include four new sections if you are upgrading from 4.x to 6.x:

- `[key]:`
- `[list]:`
- `[host]:`
- `[targetid]:`

See the *P-Synch Technical Documentation* for information about these new entries in `/etc/psynch.conf`.

Alternately, you may remove the existing 4.x Unix agent and run `install.sh` from the unpacked `psunix.tar` file.

### 5.4 Automation

Once you have installed new services, run the `PSUPDATE` nightly update script. Once it is finished, verify that you can find users in the P-Synch database – using either the report feature or the *Help a user* menu option in the administration module `nph-psa.exe`.

## 6 Upgrading proxies

P-Synch 6.2.2 and higher no longer support the PSPROXY service to run proxies. Proxies can now be configured using the master P-Synch administration module. See the main P-Synch installation guide for more information.

As of P-Synch 6.2.2, the PSUPDATE service automatically copies updated configuration files and agent scripts to any proxies.

When you upgrade a master P-Synch server, the SETUP.EXE program will remove the PSPROXY service. To upgrade a P-Synch proxy server:

1. Copy agent scripts that exist only on the proxy server to the master P-Synch server.
2. Uninstall P-Synch from the proxy server.
3. Run SETUP.EXE on the proxy server, and follow the prompts for installing P-Synch on a proxy. See the main P-Synch installation guide for more information.

## 7 Troubleshooting

### 7.1 Adding components after an upgrade

You cannot mix-and-match P-Synch components upgraded from a pre-6.2.2 version of P-Synch with fresh installs. This is due to the different instance configuration.

For example, if you have upgraded your P-Synch master server from a pre-6.2.2 install, new slave and proxy servers (post-6.2.2) will not be able to communicate with the master server.

If you require a component to be added to your network, that did not exist before upgrading from a pre-6.2.2 installation, please contact M-Tech support for assistance.