Pyramid Software Upgrade Guide

Best practices for upgrading the Pyramid software

Contents

Overview

Pyramid software is an enterprise BI & Analytics platform.

The Pyramid software is available in 2 server versions; Standard and Enterprise. The Standard edition allows customers to install the Pyramid software in a single Production environment, on a single machine. The Enterprise edition allows customers to install the Pyramid as a cluster on multiple machines. Separately, 2 extra sets of licenses can be obtained for enterprise deployments, for separate test and development environments.

Based on market and customer demands the Pyramid software development cycle produces 2-3 major software releases per year, plus interim hot fix releases. We recommend customers to run the latest software release, however, we recognize that customer internal procedures for implementing new software releases will mean there is a lag between the Pyramid software release date and when the latest version is installed in a Production environment. Pyramid will provide support on each major release for a period of 12 months from the release date.

This document provides a best practice guide for upgrading the Pyramid software running in your Production environment.

Upgrade Planning

The Pyramid software installation includes an upgrade process to update an existing installation of the Pyramid software. The Pyramid software installation provide guidelines for running the software upgrade for single and multi-server deployments.

Pyramid software upgrade considerations;

- Plan the software upgrade to minimize business disruption and downtime. In the ideal scenario the software upgrade should be performed outside of normal business hours, especially if you are running a single Pyramid environment.
- Create a test plan of what Pyramid content you will test to ensure the upgrade has been successful.
- Define the procedures of what is required to roll-back to the previous Pyramid software version, if required.
- **Backup your database repository before performing an upgrade. In the event of upgrade failure, the system can ONLY be restored using the backup**.
- Ensure you have copies of the Pyramid software versions, the current installed software and the new version.
- Read the Pyramid Installation Guide (see online Help), including upgrade steps, to understand the software upgrade process.

Single Environment

Customers running Pyramid software in a single Production environment should perform the follows upgrade steps;

1. Backup the Pyramid database repository
2. Backup published content and In-memory databases if these features have been used. See Appendix for details.
3. Download the latest Pyramid software from the customer portal. Ensure you have a copy of the current version running in the Production environment.
4. Document the Pyramid upgrade test plan including the Pyramid content you will test following the upgrade
5. Run the Pyramid software installation and follow the upgrade instructions.
6. Perform the upgrade tests, if successful continue using the new version. If the upgrade is not successful use the following steps to roll back to the previous software version.

Multiple Environments

Customers running Pyramid software in multiple environments should perform the following upgrade steps;

Test/Development Environment

1. Ensure the Test environment is running the same Pyramid software version as the Production environment.
2. Ensure the Test environment contains sample content from the Production environment you want to test.
   a. This can be achieved by using the Pyramid content export / import options to move content between Pyramid instances or copying the entire Pyramid database repository (see guidelines below).
3. Download the latest Pyramid software from the customer portal.
   a. Ensure you have a copy of the current version running in the Production environment.
4. Run the Pyramid software installation and follow the upgrade instructions.
5. Perform the planned Pyramid content tests, if successful move to the Production environment upgrade.

Production Environment

1. Backup the Pyramid database repository
2. Backup published content and In-memory databases if these features have been used. See Appendix for details.
3. Run the Pyramid software installation and follow the upgrade instructions.
4. Perform the upgrade tests, if successful continue using the new version. If the upgrade is not successful roll back to the previous version.

Rollback to previous version

The following steps describe the process to roll back to a previous Pyramid software version

1. Restore the Pyramid database repository
2. In the database repository, remove all the objects from the table Server.Instances (otherwise there will be duplications of instances and you will not be able to log in). See the appendix for scripts.
3. Uninstall / remove the Pyramid software installation completely
4. Install the previous version of Pyramid that matches the backed-up database repository.
5. On the installation process, when it asked where to deploy the repository choose the existing database repository.

Restoring External Files

If the in-memory database files were lost or corrupted, you should restore content backed up as described in the appendix. Restore the \IMDATA folder on the Pyramid server (typically C:\Program Files\Pyramid 2018\repository\imdata). This contains the data related to the Pyramid IMDB.

NOTE: The Pyramid uninstall option on a single server will prompt you to back up the folder. This is not offered in multi-server installations.

If published content was lost, you should restore the published content previously backed up. Restore the \General folder on the Pyramid server (typically C:\Program Files\Pyramid 2018\general). This contains published publications. In a multi-server deployment this folder should be included in the back up process on all servers

Reuse Pre-existing Repository

Select "Reuse" from the Repository Setup window if it's the first installation using an existing repository from a previous installation.

This option restores Pyramid from the database backup and restores all content saved to the CMS and all items configured in the Admin consol. Files (such as files exported to print) will not be restored.

In a multi-server environment, the "Reuse" option only needs to be chosen for installation on the first server; all other servers should be added to the cluster (choose the "Current Repository" option).

Duplicating the Environments

Overview

The following procedure is available for Enterprise customers wanting to duplicate a Pyramid database repository between different test, development and production environments. The following instructions apply to all supported database repository types.

Two techniques are available:

- **Technique 1**: Full duplication, with peripheral files. More complicated and involved.
- **Technique 2**: Duplication without peripheral files. Less complicated and faster.

CARE SHOULD BE TAKEN DURING THIS PROCEDURE WITH ALL REPOSITORIES BACKED UP BEFORE APPLICATION.

Prerequisites

- The license used on the installation needs to be '**Enterprise'** and **specially tagged[1] by Pyramid** to enable this functionality.
- This functionality will only operate fully, without issue, from version 2018.05 onwards.

Technique 1

This technique involves duplicating the entire environment – with the on-disk files used or produced by the system (publications, printings, uploaded files for data flows etc.)

Single server

To copy the Pyramid database repository from one environment (will be referenced in this document as srv1) to another environment (will be referenced in this document as srv2) the following steps need to be done:

- Stop all services running on srv2
- Backup srv1 DB
- Delete srv2 DB
- Restore srv1 DB backup to srv2 DB
- Config.ini changes
    - Go the srv2 {installDir[2]}/config.ini and override the machineKey[3] value with the machineKey value from srv1 {installDir}/config.ini.
    - Override srv1 {installDir}/repository/general directory with srv2 {installDir}/repository/general directory
    - Override srv1 {installDir}/repository/ imdata directory with srv2 {installDir}/repository/ imdata directory
    - Override srv1 {installDir}/repository/ upload directory with srv2 {installDir}/repository/ upload directory
- If some admin settings were configured on srv1 and the customer wishes to keep them on srv2 as well (this is relevant only for specific settings which are saved in the server instances specific settings) then go to server instances table and update all server_address values for all records to srv2 host name and delete all SPN values from all records. Otherwise just delete all records in server instances
- Start all services on srv2.
    - There is no mandatory order to restarting services, though starting the router last is best practice.

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[1] Contact Pyramid sales to get your license tagged if and when required
[2] This is the installation directory of Pyramid
[3] This is NOT the licensing machine Key. Instead, it's the machine ID key used to mark a specific server.

Multi server

To copy the Pyramid repository from one environment (env1(a,b,c)) to another environment (env2(a,b,c)) the following steps need to be done:

- Stop all services running on env2(a,b,c)
- Backup env1 DB
- Delete env2 DB
- Restore env1 DB backup to env2 DB
- Config.ini changes
  - Go the env2(a) {installDir}/config.ini and override the machineKey value with the machineKey value from env1(a) {installDir}/config.ini
    - Repeat the previous step for each pair of machines, env1(b) to env2(b), c to c and so on
  - Override env1(a) {installDir}/repository/general directory with env2(a) {installDir}/repository/general directory
    - Repeat the previous step for each pair of machines
  - Override env1(a) {installDir}/repository/ imdata directory with env2(a) {installDir}/repository/ imdata directory
    - Repeat the previous step for each pair of machines, some might not have imdata if this is the case, don't copy
  - Override env1(a) {installDir}/repository/ upload directory with env2(a) {installDir}/repository/ upload directory
    - Repeat the previous step for each pair of machines, some might not have imdata if this is the case, don't copy
- If some admin settings were configured on env1 and the customer wishes to keep them on env2 as well (this is relevant only for specific settings which are saved in the server instances specific settings) then go to server instances table and update all server_address values for all records to env2 host name and delete all SPN values from all records (see appendix 2). Otherwise just delete all records in server instances.
  start all services on env2

Technique 2

This technique involves duplicating the environment – but WITHOUT the on-disk files used or produced by the system (publications, printings, uploaded files for data flows etc.).

Single server

To copy the Pyramid 2018 database repository from one environment (will be referenced in this document as srv1) to another environment (will be referenced in this document as srv2) the following steps need to be done:

- Stop all services running on srv2
- Backup srv1 DB
- Delete srv2 DB
- Restore srv1 DB backup to srv2 DB
- Clear the server_instances table in the srv2 DB repository. See appendix 1.
- start all services on srv2
  - There is no mandatory order to restarting services, though starting the router last is best practice.

Multi server

To copy the Pyramid 2018 repository from one environment (env1(a,b,c)) to another environment (env2(a,b,c)) the following steps need to be done:

- Stop all services running on env2(a,b,c)
- Backup env1 DB
- Delete env2 DB
- Restore env1 DB backup to env2 DB
- Clear the server_instances table in the env2 DB repository. See appendix 1.
- Start all services on env2
    - o There is no mandatory order to restarting services, though starting the router last is best practice.

Other Items

- All data sources will remain configured and pointed at the same machines in srv1/env1. To swap these out to alternatives, change addresses for the data sources in the admin console of env2.
- Any Pulse servers deployed on srv1/env1 it will not be available in srv2/env2 and must be re-added and/or reconfigured again.

Appendix

Clearing the Instances table

Run this SQL script:

```
DELETE FROM server_instances
```

Clearing SPNs from the instance table

Run this SQL script:

```
UPDATE server_instances SET spn=NULL
```

Backing up External Files and Content

In-memory

If the in-memory database has been used we recommend that you backup the \IMDATA folder on the Pyramid server (typically C:\Program Files\Pyramid 2018\repository\imdata). This contains the data related to the Pyramid IMDB. In case you need to re-install software this will enable you to restore any IMDB data models.

Publications

If you have created and generated publications that you wish to keep. backup the \General folder on the Pyramid server (typically C:\Program Files\Pyramid 2018\general). This contains published publications. In a multi-server deployment this folder should be included in the back up process on all servers

Machine ID Key

The CONFIG.INI file, found in the root of the installation, contains the machine ID key information for the server. Although not critical, it is good practice to document the machine ID for the Pyramid server – which will make the process of restoration easier.

NOTE: This is NOT the machine key used for licensing of Pyramid.