

# Upgrading Registry to v5.0.0

- [Approaches to Upgrading](#)
  - [Performing Data Migration](#)
- [What Changed](#)
  - [Database Tables](#)
  - [Enrollment Flow Identifier Collection](#)
  - [Extended Attributes No Longer Supported](#)
  - [External Identities \(formerly Organizational Identities\) Require Affiliations](#)
  - [Login Identifiers Move to Person](#)
  - [Organizational Identity Pooling No Longer Supported](#)
  - [Parallel Job Runners](#)
  - [REST API](#)
  - [REST API Users](#)
  - [URL Formats](#)
  - [Plugins](#)

Registry v5.0.0 is a significant rewrite due to the retirement of the older version of the underlying framework ([CakePHP v2](#)). The project leveraged this opportunity to clean up a number of long standing issues, some dating back to v0.1. As a result, upgrading may be fairly disruptive.

## Approaches to Upgrading

Existing Registry installations cannot be upgraded in place. Data must be migrated to a new v5.0.0 based installation. As such, the recommended approach is to first stand up a new Registry v5 test instance, and then perform a test migration.

## Performing Data Migration

Registry v5 uses a process called *Transmogrification* to migrate data from a v4 instance. More information is available [here](#).

## What Changed

### Database Tables

The Registry database should ordinarily be treated as a "black box", and code or interfaces should not be designed around direct table access. Registry v5.0.0 changes the name of all tables (mostly to drop the `cm_` prefix) and restructures various tables. For full details, review the [documentation](#) for tables of interest.

### Enrollment Flow Identifier Collection

As part of the transition to Registry v5.0.0, support for legacy configurations for collecting external identifiers is being removed. See [Migrating to EnvSource](#) to for more information.

### Extended Attributes No Longer Supported

[Extended Attributes](#) were deprecated in Registry v3.3.0, and are removed entirely as of Registry v5.0.0. [Transmogrification](#) will convert Extended Attributes to Ad Hoc Attributes using the Extended Attribute `name` field as the Ad Hoc Attribute `tag`. The Extended Attribute `display_name` field is discarded.

### External Identities (formerly Organizational Identities) Require Affiliations

In Registry v4.x and earlier, `affiliation` was not a required field for OrgIdentities. However, in Registry v5, `affiliation` for ExternalIdentityRole is required. Prior to Trnsmogrification, affiliations should be assigned to any OrgIdentities that don't have them, or the OrgIdentity will not transmogrify.

### Login Identifiers Move to Person

Login to Registry v4.x and earlier was controlled by Identifiers attached to the Org Identity associated with the CO Person. In Registry v5.0.0 and later, login is controlled by Identifiers directly attached to the Person. [Transmogrification](#) can migrate existing data, but ongoing enrollment and data loading processes (including via External Identity Sources and the API) may need to be reviewed.

### Organizational Identity Pooling No Longer Supported

[Organizational Identity Pooling](#) was deprecated in Registry v3.1.0, and since then certain functions were not available to pooled deployments. The capability is entirely removed as of Registry v5.0.0. Deployments still using Org Identity Pooling should "unpool" their identities prior to Transmogrification. There is no tooling available for unpooling at the moment. Deployments using a pooled configuration should contact the developers for assistance.

## Parallel Job Runners

[Registry Job Command](#) now supports running in parallel, and from multiple nodes. The command syntax has changed slightly, and [cron jobs](#) may need to be updated.

## REST API

Registry v5 introduces [API v2](#). Although similar, it is not the same as the previous [v1](#), and so existing code may not work without modification. Of note:

- Responses now include metadata.
- Support for pagination has been added.
- Multiple records can be provided in a single add request.
- XML payloads are no longer supported.
- The [VOOT API](#) is no longer supported.
- "Translated" enumerations are no longer supported. Where v1 used (eg) the string `Active`, v2 simply uses `A`.

## REST API Users

API Users created in Registry v5 use [API Keys](#) that are randomly generated, and hashed using a different method than earlier versions. API Keys (formerly called "passwords") will continue to work, and they will be rehashed automatically when the API User authenticates. However, it may be desirable to generate new API Keys for existing API Users after upgrading, since the newer hashing mechanism is stronger.

## URL Formats

CakePHP has changed its URL format, so pretty much all bookmarks will need to be changed. In general, controller names now use hyphens instead of underscores, and named parameters now use standard query args. So, for example

[https://my.server/registry/co\\_enrollment\\_flows/start/coef:10](https://my.server/registry/co_enrollment_flows/start/coef:10)

becomes

<https://my.server/registry/co-enrollment-flows/start?coef=10>

It's possible to set up Apache rewrite rules to accept the old format and translate it to the new format, however Registry v5 does not include this sort of configuration out of the box.

## Plugins

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