

RDFox v7.7 Migration Guide

This guide describes functional changes in RDFox v7.7 that could prevent scripts, configuration, or code that work with RDFox v7.6, from being used directly with the newer version. Each change is described in its own section with clear actions to take as part of the upgrade. Users should read this guide in conjunction with the [release notes for v7.7](#).

RDFox v7.7 is persistence-compatible with version 7.4, 7.5 and 7.6, so it is not necessary to upgrade the server directory or transcribe the server content before restarting servers persisted by one of those versions with the new version.

Users upgrading from RDFox v7.4 should also read the migration guides for [RDFox v7.5](#) and [RDFox v7.6](#). Users upgrading from RDFox v7.5 should also read the migration guide for [RDFox v7.6](#).

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1. Changes affecting servers

1.1. JVM options can no longer be specified as a server parameter

The **jvm.options** server parameter has been removed as it controlled behavior specific to a given process rather than a specific server. JVM options must now be configured via the preexisting **RDFOX_JVM_OPTIONS** environment variable.

Required actions

- Review any code, script or configuration that starts an RDFox server to see if **jvm.options** server parameter is being set. If so, remove that parameter and instead ensure that the **RDFOX_JVM_OPTIONS** environment variable is set for the process in which RDFox will run.

2. Changes affecting tuple tables

2.1. Tuple table types have been renamed

With the introduction of vertically partitioned triple tables, existing table types have been renamed to make the distinction clear. The Many tuple table types have been renamed:

Old name	New name
<code>unary-table</code>	<code>unary-table-flat</code>
<code>binary-table</code>	<code>binary-table-flat</code>
<code>triple-table-fi</code>	<code>triple-table-flat-fi</code>
<code>triple-table-pi</code>	<code>triple-table-flat-pi</code>
<code>quad-table-lg-fi</code>	<code>quad-table-flat-lg-fi</code>
<code>quad-table-sg-fi</code>	<code>quad-table-flat-sg-fi</code>
<code>quad-table-lg-pi</code>	<code>quad-table-flat-lg-pi</code>
<code>quad-table-sg-pi</code>	<code>quad-table-flat-sg-pi</code>

The old tuple table names will continue to work with the current release for backwards compatibility but will be removed in a later release.

Required actions

- Search all RDFox-related configuration, scripts, or code for each of the names in the left-hand column of the table.
- Replace any occurrences with the corresponding value from the right-hand column.

3. Changes affecting the shell

3.1. The stats extract and stats merge shell commands no longer take a <name> argument; file format changed

The shell commands **stats extract** and **stats merge** no longer take a <name> argument.

- Old syntax:

```
stats extract <name> {! <statement_text> | <statement_file_name>}  
stats merge <name> <file>
```

- New syntax:

```
stats extract {! <statement_text> | <statement_file_name>}  
stats merge <file>
```

stats extract now emits every statistics module in the data store; **stats merge** updates all statistics that was extracted into the file.

The extract/merge file format has changed and is not backwards- or forwards-compatible with earlier RDFox releases.

Required actions

- Search scripts for **stats extract** or **stats merge** commands, and remove the <name> argument from those commands.
- Regenerate any archived extract files with the new RDFox binary before merging them.

4. Changes to Docker images

4.1. Docker tags matching RDFox version numbers are now mutable

Official Docker images for RDFox are published in the [oxfordsemantic/rdfox](#) and [oxfordsemantic/rdfox-init](#) repositories on Docker Hub.

Docker images include application code plus certain dependencies, dynamic libraries, and a base operating system. When vulnerabilities or defects are found in these underlying components, new images must be rebuilt and republished.

Prior to the release of RDFox v7.7:

- Each RDFox release had one docker image tagged with the RDFox version number (e.g. **7.5**, **7.6**, **7.6b**).
- Mutable tag **latest** was provided, which would always correspond to the newest RDFox release.

As of RDFox v7.7:

- Each RDFox release will correspond to a sequence of docker images. The initial image in this sequence will be tagged **7.7-docker0**. If follow-up images are needed, they will be published as **7.7-docker1**, **7.7-docker-2**, and so on. Tags in the **<RELEASE>-docker<X>** sequence are immutable once published.
- Version specific mutable tag **7.7** will reference the most recent image in the **7.7-docker<X>** sequence, i.e. it will initially match **7.7-docker0** and on publication of **7.7-docker1** it will be updated to reference that version.
- Mutable tag **latest** will reference the newest image in the newest release, i.e. it will initially match **7.7-docker0** and on publication of **7.7-docker1** it will be updated to reference that version. On publication of the next version of RDFox, it will be updated to the **-docker0** image for that release.

Required actions

Inspect and update any tooling using the published RDFox and RDFox-init docker images to:

- Use **<RELEASE>-docker<X>** (for example, **7.7-docker0**) for reproducible builds and immutable references.
- Use **<RELEASE>** (for example, **7.7**) to track the latest container refresh for a specific RDFox release.
- Use **latest** to track the most recently published RDFox release overall.