Recommended hosting environments

Summary

This document outlines our recommended environment. These recommendations are made after considering our required software solutions, the software solutions widely deployed to host production environments, and our automated code quality and assurance test environments.
We will review these recommendations regularly, and update them to reflect changes

As a general recommendation, when running any of the software solutions noted below we recommend you keep them up-to-date with the latest stable versions where possible.

Minimum supported environment vs recommended hosting environment

Each major Totara release stipulates minimum supported environments. This information can be found directly within the INSTALL.txt file distributed with the source code, or at one of the following links:

- Totara 13
- Totara 12
- Totara 11
- Totara 10
- Totara 9

The minimum supported version indicates the minimum version of the software that Totara is designed to run, that is tested by us, and that we support. The versions given for a major Totara release are never changed except in exceptional circumstances (such as if a future release of the required software introduces a backwards incompatible issue that is otherwise impossible for us to work around).

All maintained and supported software improves over time. While the minimum supported environment does not change it is strongly recommended that required software is regularly and routinely upgraded as newer versions are made available. This will ensure that your web server is patched and secure.

The recommended hosting environment laid our in this document differs from the minimum supported environment in that it represents what we think is the best software to run Totara on at this point in time. We'll update this document as new software versions become available. We will still support your Totara site even if it isn't running on the recommended environment (as long as it meets the minimum supported environment).

Operating systems

We recommend using a Linux based operating system for hosting of web servers.
The following two distributions we strongly recommend, they are very widely used in production environments and heavily tested by our both our team and our automated tests.

- RHEL / CentOS
- Ubuntu LTS releases

PHP

Each new version of PHP comes with performance and stability improvements.
Where possible we recommend running the latest supported PHP version for the version of Totara that you are running.
The following table illustrates the recommended PHP versions for each major version of Totara. Versions highlighted in bold are recommended when possible.

Totara 14	**8.0.2+,** 7.4.15+, 7.3.27+
Totara 13	**7.4.15+**, 7.3.27+, 7.2.34
Totara 12	**7.3.27+**
Totara 11	**7.3.27+**
Totara 10	**7.3.27+**

Totara 9	**7.0.33**, 5.6.40

Information on minimum and maximum supported versions can be found within the INSTALL.txt provided with the source code.

In determining recommended versions we review Totara product system requirements, PHP Versions used on active production sites upgraded in the past 6 months, PHP release schedules for the past 6 months, known issues with PHP versions in targeted recommended PHP Versions.

Important notes:

- PHP 8.0.2. or later is recommended. It was released 4th Feb 2021. Using this release will ensure you have all available security fixes.
- PHP 7.4.15 or later is recommended. It was released 4th Feb 2021. Using this release will ensure you have all available security fixes.
- PHP 7.3.27 or later is recommended. It was released 7th Jan 2021. Using this release will ensure you have all available security fixes.
- *PHP 7.2 has reached end-of-life. PHP 7.2.34 is the final version. For sites unable to upgrade to a more modern version of PHP we strongly recommend you ensure you are running PHP 7.2.34*
- *PHP 7.1 has reached end-of-life. PHP 7.1.33 is the final version. For sites unable to upgrade to a more modern version of PHP we strongly recommend you ensure you are running PHP 7.1.33*
- *PHP 7.0 has reached end-of-life. PHP 7.0.33 is the final version. For sites unable to upgrade to a more modern version of PHP we strongly recommend you ensure you are running PHP 7.0.33*
- *PHP 5.6 has reached end-of-life. PHP 5.6.40 is the final version. For sites unable to upgrade to a more modern major version of PHP we strongly recommend they ensure they are running PHP 5.6.40*
- Some Linux distributions extend the life cycle of PHP by selectively back-porting fixes to significant issues such as security bugs. In these situations you should ensure you understand the backport policy of the distribution you choose to use to ensure the version of PHP you are using is secure and stable.

Database

We recommend one of the following databases:

- MariaDB
- MySQL
- PostgreSQL

The version of these systems that we recommend you run is dependent upon the Totara version that you are hosting.
The following table illustrates the recommended databases and versions for each major release of Totara from Totara 9 onwards. Versions highlighted in bold are recommended when possible.

	MariaDB	**MySQL**	**PostgreSQL**
Totara 14	**10.5.8+,** 10.4.13+, 10.3.23+, 10.2.32+	**8.0.17+,** 5.7.27+	**13.2,** 12.0, 11.4, 10.13+, 9.6.18+
Totara 13	**10.5.8+, 10.4.13+,** 10.3.23+, 10.2.32+		**13.2, 12.0, 11.4,** 10.13+, 9.6.18+
Totara 12			13.2, **12.0, 11.4,** 10.13+, 9.6.18+
Totara 11	10.5.8+, **10.4.13+,** 10.3.23+, 10.2.32+		
Totara 10			
Totara 9			

Information on minimum and maximum supported versions can be found within the INSTALL.txt provided with the source code.

Important notes:

- Some Linux distributions extend the life cycle of database engines by selectively back-porting fixes to significant issues such as security bugs. In these situations you should ensure you understand the backport policy of the distribution you choose to use to ensure the database you are using is secure and stable.
- MariaDB
  - MariaDB 10.5.8 or later is recommended. It was released 11th November 2020. It is the recommended version as it is the 10.5 version that we test on extensively.
  - MariaDB 10.4.13 or later is recommended. It was released 12th May 2020. It is the minimum as it is the oldest release that is less than 12 months old.
  - MariaDB 10.3.23 or later is recommended. It was released 12th May 2020. It is the minimum as it is the oldest release that is less than 12 months old.
  - MariaDB 10.2.32 or later is recommended. It was released 12th May 2020. It is the minimum as it is the oldest release that is less than 12 months old.
  - *MariaDB 10.1, 10.0, 5.5 and all older versions have reached its end-of-life and are not recommended*
- MySQL
  - We recommend MySQL 8 in all situations as the collations in this version are better than those available in 5.7

- MySQL 8.0.17 or later is recommended. It was released 22nd July 2019. It is the minimum as it is the oldest release that is less than 12 months old.
- MySQL 5.7.27 or later is recommended. It was released 22nd July 2019. It is the minimum as it is the oldest release that is less than 12 months old.
- *MySQL 5.6 and all older versions have reached its end-of-life and are not recommended*
- PostgreSQL
  - PostgreSQL 13.2 or later is recommended. It was released 11th Feb 2021 and contains security fixes.
  - PostgreSQL 12.0 or later is recommended. It was released 3rd October 2019
  - PostgreSQL 11.4 or later is recommended. It was released 20th June 2019. It is the minimum as it is the oldest release that is less than 12 months old.
  - PostgreSQL 10.9 or later is recommended. It was released 20th June 2019. It is the minimum as it is the oldest release that is less than 12 months old.
  - PostgreSQL 9.6.18 or later is recommended. It was released 14th May 2020. It is the minimum as it is the oldest release that is less than 12 months old.
  - *PostgreSQL 9.5 and all older versions have reached its end-of-life and are not recommended*

Web server

There are two web server solutions that we recommend:

- Apache HTTPD server version 2.4.x
- NGINX version 1.14+

Caching

Totara by default will use the site data directory as an application cache. While this works perfectly fine there are dedicated caching solutions that will delivery better performance. We recommend that production sites employ one or more dedicated caching solutions such as Memcached or Redis, both of which are supported by Totara.