

# Tamino

## Migration Guide

Version 9.5 SP1

November 2013

This document applies to Tamino Version 9.5 SP1.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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## Preface

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Tamino XML Server 9.5 is the successor to Tamino XML Server 8.x. This document describes migration issues that you should be aware of when upgrading to version 9.5 from version 4.4.

If you wish to upgrade to Tamino 9.5 from a Tamino version earlier than 4.4, you must first upgrade to 4.4. If necessary, contact your software supplier or refer to the documentation set for Tamino 4.4, which is available at Software AG's web-based Product Support System, Empower (<https://empower.softwareag.com/>).

The intended audience for this document is system administrators, database administrators and application developers.

This document covers the following migration aspects:

<i>General</i>	Discusses migration of schemas and data, and also changes in the functionality of Tamino.
<i>Upgrading and Downgrading Using SET VERSION</i>	Deals with all aspects of version management, especially with upgrading, downgrading and coexistence.
<i>Changes from Previous Versions of Tamino Manager</i>	Hints on how to administrate old and new databases with one GUI.
<i>Migrating Applications</i>	Deals with migrating applications.

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# 1 General

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In general, migration of databases, schemas and data is not required when moving from Tamino 8.x to Tamino 9.5. It is only necessary to set the version of any existing version 8.x databases to version 9.5 by using the `SET VERSION` command on the database in the Tamino Manager.

## Related Documents

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If you need more information about migration, please refer to the following:

- **Release Notes**

For possible information on new, modified or removed features, refer to the *Release Notes*.

- **Last-minute information**

Check for important last-minute information relevant for migration in the *readme.txt* file.

## Definitions of Terms used

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The following definitions are used throughout this document:

### Migration

*Migration* means the transfer of a Tamino system from an older to a newer version, or from one machine to another. The target system may have the same architecture and operating system or different architecture and operating system. Migration includes both upgrading and also all other activities to accommodate changes in the structure and organization of Tamino schemas, data and applications so that the newer version of Tamino can be used as efficiently as possible.

### Upgrade

Upgrade means the process of transferring a Tamino database from an older to a newer version. This includes all activities necessary for making the database operational under the new version, but not optimization. Upgrading is done using the `SET VERSION` command (see the section [Upgrading and Downgrading Using SET VERSION](#)).

### Downgrade

Downgrade means the process of transferring a Tamino database from a newer to an older version. This could be used if, for example, you install the new Tamino version on a test basis but wish to return to the older version for production purposes. See the section [Upgrading and Downgrading Using SET VERSION](#) for more information.

## License File

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Tamino 9.5 requires its own license file which is delivered with the product. Tamino 9.5 does not work with a license file from any of the previous Tamino version.

## Migration of Tamino Databases from Linux 32-bit to 64-bit Platforms

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The following steps are necessary in order to migrate Tamino databases from Linux 32-bit Linux to 64-bit:

- Make backups of applicable databases in the 32-bit environment
- Install a 64-bit Tamino version on a 64-bit Linux machine
- Transfer the backup files (`<PRODUCT_DIR>/db/*.1B0`) to the 64-bit Linux machine
- Restore databases via `Create Database From Backup`.

For more information see section *Create a Database from a Backup*.

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## 2 Upgrading and Downgrading Using SET VERSION

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This chapter describes what you should know about the coexistence of different Tamino versions and upgrading and downgrading between them. In detail, the following topics are described:

## Coexistence of Tamino Version 9.5 and Previous Tamino Versions

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Tamino version 9.5 can coexist with previous versions on the same computer. After you have installed Tamino Version 9.5, you can use the `SET VERSION` operation, which is activated using the *Tamino Manager* **SET VERSION** button, to upgrade from version 8.0 or 8.2 to version 9.5.



**Note:** The authentication mode of the database needs to be set to "none" before a database can be upgraded via `Set Version`. For more information see section *Authentication Modes*.

## Upgrading from Previous Versions of Tamino to Tamino 9.5

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The `SET VERSION` operation converts a database from an older version to a newer version. This involves updating the database's internal structure level, which is necessary when there is version dependent data for the datastore or X-Machine layer.



**Caution:** Before you execute the `SET VERSION` operation, make a backup of the current state of your database.



**Caution:** Downgrading from version 9.5 to version 8.0 or 8.2 or any other version is not supported. (For more information, see the section [Downgrading](#).) As setting the Tamino version to 9.5 is an irreversible process, the only way to return to the old state of your original Tamino database is to restore a backup of that database into an installation of the correct Tamino version.

You can activate the `SET VERSION` operation using the Tamino Manager as follows:

### ▶ To activate the `SET VERSION` operation

- 1 Start the Tamino Manager.
- 2 In the list of databases under the **Databases** node, select the database that you want to upgrade.
- 3 In the context menu of the database, choose **SET VERSION**.

When upgrading from a previous version of Tamino to Tamino 8.2, note the following:

- Whilst an upgrade is in progress, the database cannot be accessed by applications.
- If, for any reason, the upgrade fails, it can be repeated and restarted at the point where it was interrupted.

- The upgrade from Tamino version 8.0 or 8.2 to Tamino version 9.5 is rejected if one or more of the following conditions is true:
  - The version of the database to be upgraded is not version 4.4, 8.0 or 8.2 .
  - The database to be updated is a replication database.

## Downgrading

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Downgrading a Tamino 9.5 installation to a prior version is not supported. Setting the version of a database to version 9.5 is irreversible.

However, it is possible to operate multiple Tamino installations with different versions in parallel on a single computer.

If you want to return to a former version of Tamino, you must restore a backup of your original database of that specific version (via `restore` with the option `Don't recover`, or via `recover until with a timestamp` before the `SET VERSION` was done, or via `create from backup`).

You can restore the database backup of a former Tamino version even if that version of Tamino is not installed. Check whether the relevant backup is still in the backup list of that database. If it is, you can simply restore that backup with the option “Don't Recover”. Afterwards you should do the `SET VERSION` immediately so that you can start the database again. If your backup is not present in the backup list, then you need a separate copy of the database backup. Use the function `Create Database from Backup`.

 **Important:** After you have restored your former installation using this backup, we recommend making a new backup. Use this backup instead of the original one if you later want to recover to the state after restoration of the former Tamino version.



# 3 Changes from Previous Versions of Tamino Manager

The current SMH 9.5 (System Management Hub) uses a different internal configuration store than the SMH used with Tamino 8.x. Databases created with Tamino 9.5 are recognized only by the new SMH and databases still running with Tamino 8.x are recognized only by the old SMH. However, you can use the SMH 9.5 GUI to add a Managed Host with the TCP/IP Port of CSLayer Server (default for old SMH is 49900). This enables managing Tamino 8.x and 9.5 databases in one browser window.

Example:

The screenshot shows the System Management Hub interface. On the left is a tree view of managed hosts. Two hosts are visible: 'exemplenode:10012' and 'exemplenode:49900'. The 'exemplenode:49900' host is selected and expanded, showing its sub-components: Administrators, System Management Hub, Tamino, Databases (v82db1, v82db2), Location Management, Job Monitor, Web Server Management, X-Tension Tools, and Versions.

On the right, the 'System Management View' for 'exemplenode:49900' is displayed, showing a table of installed products:

Product	Version	Installation Path	Installation Parameters
System Management Hub	8.1	/opt/rdpretest/softwareag/common/arg	default
Tamino	8.2	/opt/rdpretest/softwareag/Tamino/v82	default

More information about adding a Managed Host is available in the SMH documentation under:  
*Using System Management Hub / Web Interface.*

# 4 Migrating Applications

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If you have written applications that are based on Software AG's query language X-Query and wish to migrate these applications to the W3C query language XQuery, guidelines for doing this are provided in the *Release Notes* document of the documentation set for Tamino XML Server version 4.2. You can find the documentation archive for version 4.2 at Software AG's web-based Product Support System, Empower (<https://empower.softwareag.com/>).



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