

6 - Upgrading NBIA to 7.0 GA

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This section describes upgrading from NBIA 6.4 to 7.0 GA. You can perform an upgrade to NBIA 7.0 GA using the command-line installation. A GUI upgrade is not an option for this release.

Upgrading NBIA from 6.5 to 7.0 GA

Before You Begin

- **Important!** Back up the existing database. You must create a reliable copy of your entire NBIA database---the DDL and DML.
- **Important!** Back up the `tomcat.home` directory. To do this, make a copy of the `NBIA.home` folder along with any artifacts from the initial installation, such as the property files, already mentioned.
- **Important!** You cannot upgrade from NBIA with MySQL to a new NBIA that uses Oracle. You must install a fresh NBIA with Oracle and migrate the data manually. This section assumes you are upgrading from MySQL (to NBIA 7.0 GA with MySQL). Contact [Application Support](#) if you require help with migration.

If you are performing a new installation, go directly to the [installation of version 7.0 GA](#).

Things to check before the upgrade

The directions in this section presume that you have a valid and functioning NBIA 6.4. Please see above section if you want to upgrade previous versions of NBIA. NBIA 7.0 GA.3.1 is running on an upgraded infrastructure, so please upgrade the infrastructure first. That includes the operating system for Linux system, Java SDK, Apache Ant, and the database as described at the beginning of in this document.

The upgrade to a given version of NBIA may add new constraints to the data model. This is typically done in order to stop erroneous submissions from happening. If such submissions have already occurred, there may already be duplicate or corrupt data in the database. The upgrade will fail in such a case, and the corrupt data needs to be cleaned out before the upgrade can be successful.

Things to check before the upgrade

If you are using an existing Tomcat installation make sure there are no files or directories in the `webapps` directory. NBIA should be installed with no other applications on a Tomcat server.

Overview of Properties Files

When you installed the previous version of NBIA, you configured `install.properties`. To complete the upgrade to the desired NBIA version, you may need to use values in the previous `install.properties` file to configure values in `install.properties` for the NBIA command-line installer.

Existing database?

To make the upgraded NBIA automatically connect with an existing database after the installation, the property `database.re-create` needs to be set to `false` for a MySQL database or the property `database.drop-schema` needs to be set to `false` for an Oracle database.

To perform an upgrade to NBIA 7.0 GA using the command line, follow these steps.

1. Download the installation zip file described in [Downloading NBIA 7.0 GA Files](#) to a directory of your choice. Unzip the files into a fresh directory. This documentation refers to this location as the `<installer_directory>`.
Example: `<installer_directory> = C:\NBIA_6_5_installer.`
2. Edit the default properties in the `<installer_directory>/install.properties` file. To do so, open both properties files, the one you configured originally, and the one at NBIA 7.0 GA `<installer_directory>`.

Duplicate attributes

Where there are duplicate attributes, the values must be the same in both files.

In the NBIA 7.0 GA `install.properties` file, make sure to set the exclude database to be "true", `exclude.database=true`. If the database type is MySQL, set `database.re-create=false`. The 7.0 GA installer configures the Tomcat application server and installs NBIA applications. For the database upgrade, it must be done in a separate process. See the [database upgrade tip](#) below for details.

- Copy each entry you modified in the NBIA 7.0 GA `install.properties` file and paste it in the corresponding location in the `install.properties` file for NBIA 7.0 GA, replacing the default text, as appropriate. There are new properties for 7.0 GA that did not exist in 6.4. Consult [NBIA 7.0 GA Properties](#) of this guide for more background on the meaning of the properties. Be sure to use the correct database properties.
- Record these property values.

✔ Default values

If you chose not to use the default ports on the Tomcat application server, make sure the ports in the `install.properties` file match what you chose to use in Tomcat. Be sure to verify that other applications are not using the ports in this file.

- From the command line, navigate to `< installer_directory > /` (Example: `cd C:\NBIA_6_5_installer`), and type **ant**. This initiates the upgrade process, which should take 7 to 15 minutes depending on your system's speed, power, and memory. The installer configures pre-installed Tomcat application server, installs the NBIA 7.0 GA portal, CTP server, and NBIA REST service for the NBIA application.
- Update the database schema.

✔ Database upgrade

The database upgrade needs to be performed after the NBIA installation completes. Once an initial installation of NBIA is complete each database upgrade must be made from the same directory due to the way Liquibase determines the uniqueness of each change element. This directory can be determined by inspecting `databasechangelog` in the database. In the below example all database upgrades should occur from the `C:\a\install\working\db\db-upgrade\db-upgrade.xml` directory

ID	AUTHOR	FILENAME
1	ssaksa	C:\a\install\working\db\db-upgrade\db-upgrade.xml
4.1	kascice	C:\a\install\working\db\db-upgrade\db-upgrade.xml
4.1.1.project.cleanup	lethai	C:\a\install\working\db\db-upgrade\db-upgrade.xml
4.1.transfer	lethai	C:\a\install\working\db\db-upgrade\db-upgrade.xml
4.2.databasket	kascice	C:\a\install\working\db\db-upgrade\db-upgrade.xml
4.2.mirc_doc_uri_cleanup	kascice	C:\a\install\working\db\db-upgrade\db-upgrade.xml
4.2.mirc_doc_uri_cleanup.part2	kascice	C:\a\install\working\db\db-upgrade\db-upgrade.xml

- In the `<installer_directory>/install.properties`, comment out `exclude.database=true`, that is, put `#` in front of **`exclude.database=true`**.
- From the command line, navigate to `<installer_directory>` (Example: `cd C:\NBIA_6_5_installer`), and type **ant build:db:update**. The installer upgrades your existing NBIA database on your MySQL server.

- To verify that NBIA upgraded successfully, start up the Tomcat server and open your web browser to [<http://tomcat.server.hostname:<tomcat.server.port>/ncia>] (example: [<http://hostname.com:8080/ncia>]) and enter `nciadevtest` as the user and `changeme` as the password.

Upgrading the Solr Index

For this release the Solr Index needs to be upgraded to enable the Fielded Search feature, during the process the text search feature will no be available.

To upgrade the index on a single instance:

- Shut server down.
- Delete the existing Solr index directory in `SOLR_HOME`.
- Start server.
Indexing will begin immediately. Don't shut sever down in the meantime.
- The progress can be monitored in `catalina.out`.
The log will give the progress, i.e. "Updated patient-1.3.6.1.4.1.9328.50.12.0128 Solr Update request made, this is the 4057 patient updated out of 6067."
- When indexing is finished, restart Tomcat to refresh the caches.

To upgrade the index with minimal impact to current operations:

- Create a new instance of NBIA on a separate machine that shares the same database and image file storage as with the production instance of NBIA.
- Make sure that the new instance **does not** share the same `SOLR_HOME` as the production instance and is a new installation.
- Start server.
Indexing will begin immediately. Don't shut sever down in the meantime.

4. The progress can be monitored in `catalina.out`.
The log will give the progress, i.e. "Updated patient-1.3.6.1.4.1.9328.50.12.0128 Solr Update request made, this is the 4057 patient updated out of 6067."
5. Shut down the server.
6. Shut down the production server.
7. Copy the index from the new servers `SOLR_HOME` to the production server's `SOLR_HOME`.
8. Start the production server.