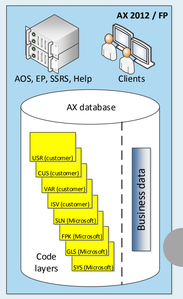
Microsoft Dynamics AX 2012 R2: How to upgrade from an earlier release of AX 2012

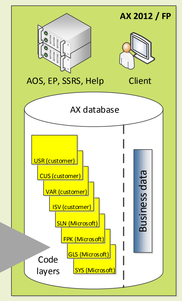
1 Copy the existing production system...



Duplicate your existing production system to create the test system. You can accomplish this by copying a virtual machine image, or, alternatively, you can build a new system by using Setup from your legacy AX version (taking care to apply all the same hotfixes), and then copying over the production database.

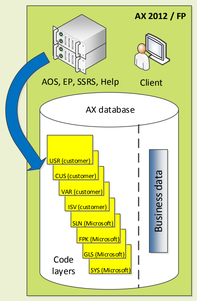
Production environment

2 ...to create test system



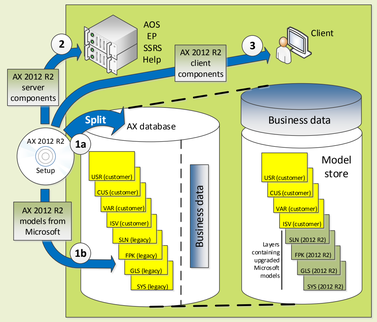
When the test system is ready for upgrade, it contains legacy AX 2012 or AX 2012 Feature Pack models and also any customer models.

3 Save reports & Web Parts



If you are using customized reports or customized EP Web Parts, import them into the AOT before running Setup.exe. These components will need to be redeployed on the upgraded system.

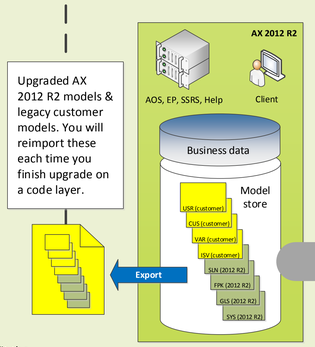
4 Install Microsoft Dynamics AX 2012 R2



Run Setup *three times* on the test system as follows: (1a) split the database and (1b) install the new Microsoft models; (2) upgrade the AOS and other server components; and (3) upgrade the client, the debugger, and management utilities. *This installation order must be strictly observed.* The database on the left is the original single AX database; the ones on the right are the result of the separation of the model store from the business data.

5 Back up the model store

Upgraded AX 2012 R2 models & legacy customer models. You will reimport these each time you finish upgrade on a code layer.

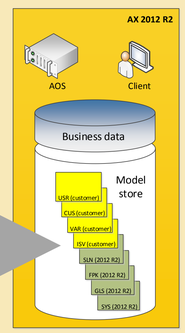


Create a file backup of the model store. This backup is used during code upgrade of the models in the customer layers.

Test environment

Important: To insure a successful upgrade, you must install the AX 2012 components in a specific order and on a specific topology. For information, see "How to: Perform in-place upgrade to Microsoft Dynamics AX 2012 R2" on TechNet.

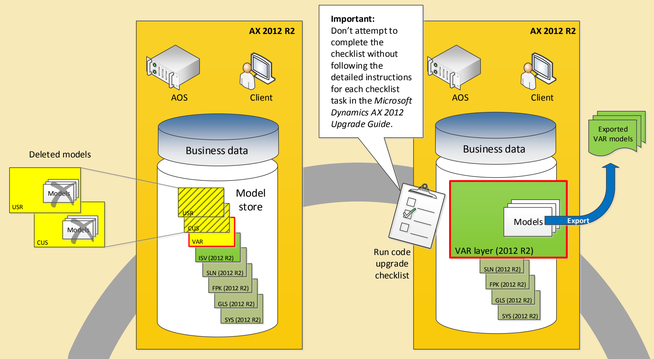
6 For code upgrade, create the development system



Duplicate your existing test system to create the development system. You can accomplish this by copying a virtual machine image or by building a new system with AX R2 Setup and then importing the test system model store. This can be a simplified system consisting of only the AOS, databases, and a client.

7 Upgrade customized code

To preserve the element IDs in your customized code, upgrade the models in each code layer separately, starting at the lowest layer and working up. Repeat until all models in all layers are upgraded.



A. Assign the working layer (VAR in this illustration)
And delete the models in higher layers.

B. Complete the tasks on the **Code upgrade checklist for in-place upgrade**, then export the upgraded models.

C. Import the model store backup from the test system.

D. Import the newly upgraded customer models into their layers. Repeat steps **A** through **D** until all models have been upgraded.

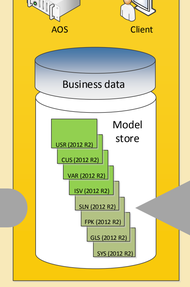
Before completing the development steps, you must export any changed models on the production system and merge their changes into the upgraded model store. This requires that you run an additional code upgrade cycle for each affected layer.

Upgraded VAR model files

Upgraded ISV model files

Upgraded AX 2012 R2 models & legacy customer models

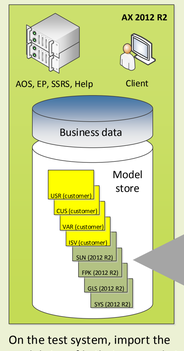
8 Export the upgraded model store



Export the fully upgraded model store that you have created on the development system to a file. This file acts as the source of the upgraded customer models that are used to prepare for data upgrade first on the test system and later on the production system.

Development environment

9 Import upgraded model store

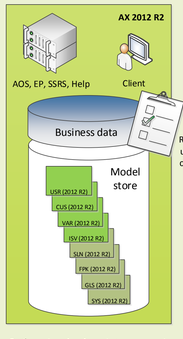


On the test system, import the model store file that you made in the previous step. Afterward, create a backup of both AX database.. If you experience an error during the data upgrade procedure, you can revert to this earlier state, resolve the underlying issue, and try the data upgrade again.

Upgraded AX 2012 R2 model store file

You will also load this same file when you upgrade the production system.

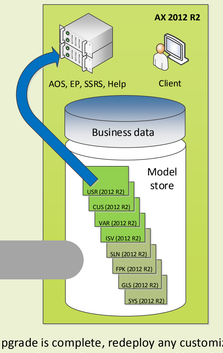
10 Test data upgrade



Before beginning data upgrade, set the SQL Server logging model to Simple, and confirm that the AOS is set up as a batch server and that it can process the DataUpgrade batch group. Then start the client and open the **Data upgrade checklist for in-place upgrade**. Complete the tasks in the checklist.

Important: Don't attempt to complete the checklist without following the detailed instructions for each checklist task in the *Microsoft Dynamics AX 2012 Upgrade Guide*.

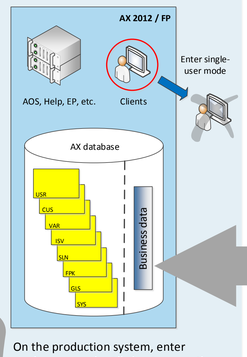
11 Redeploy reports & Web Parts



After data upgrade is complete, redeploy any customized reports and EP Web Parts that were imported into the AOT in step 3. When deployment is complete, validate that these components are working correctly. The test system is now ready to serve as a platform for user acceptance testing (UAT) before the production system is upgraded.

Test environment

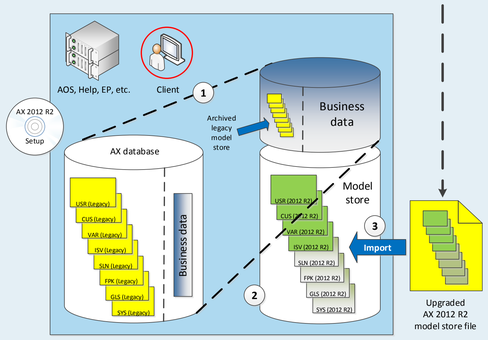
12 Enter single-user mode



On the production system, enter single-user mode. All client users other than the administrator will be disconnected from the AX system at this point. This action starts the downtime window during which new business transactions cannot be processed.

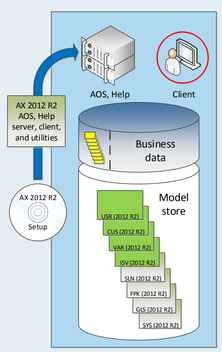
Important: Upgrade on the production system requires that you run AX 2012 R2 Setup on each computer in your deployment. To insure a successful upgrade, you must install the AX components in a specific order and on a specific topology. Components of the deployment must be upgraded in the order that is shown in the following procedures.

13 Run setup to upgrade the database



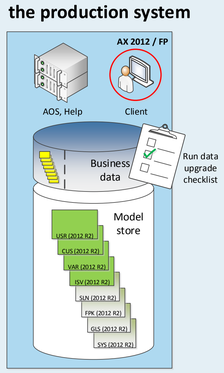
Run Setup on the computer that hosts the AOS. (1) Designate the existing AX database as the business database, (2) create a new database to contain the model store, and (3) import the upgraded model store file. The legacy model store tables persist alongside the business data but are not used. These tables should not be deleted, because they act as an archive of your pre-upgrade code customizations.

14 Upgrade AOS & other core components



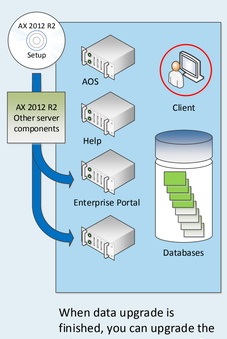
Run Setup again on the computer that hosts the AOS. Install new versions of the AOS, client, debugger, and management utilities.

15 Perform data upgrade on the production system



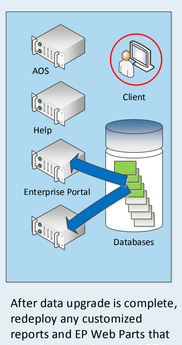
Before beginning data upgrade, set the SQL Server logging model to Simple, and confirm that the AOS is set up as a batch server and that it can process the DataUpgrade batch group. Then start the client and open the **Data upgrade checklist for in-place upgrade**. Complete the tasks on the checklist.

16 Upgrade additional server components



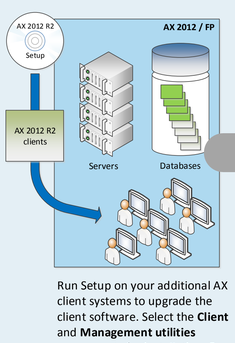
When data upgrade is finished, you can upgrade the other server components. Run Setup on the computers that host EP, Reporting Services, and Analysis Services.

17 Redeploy reports & Web Parts



After data upgrade is complete, redeploy any customized reports and EP Web Parts that were imported into the AOT in step 3. When deployment is complete, validate that these components are working correctly.

18 Upgrade additional clients



Run Setup on your additional AX client systems to upgrade the client software. Select the **Client** and **Management utilities** components for installation. For large deployments, you may want to perform a silent installation.

Final Testing & Go Live

Production environment