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Technical Workshops | July 14, 2011

Upgrading to ArcGIS 10.0 Geodatabases

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Workshop outline

- Enterprise Geodatabase Configuration
  - Geodatabase Components
  - Connection Type
  - Client Server Compatibility
- Upgrade to Geodatabase 10.0
  - When do I need to upgrade
  - How to upgrade
  - Tips and good practices
  - What's new at 10.1

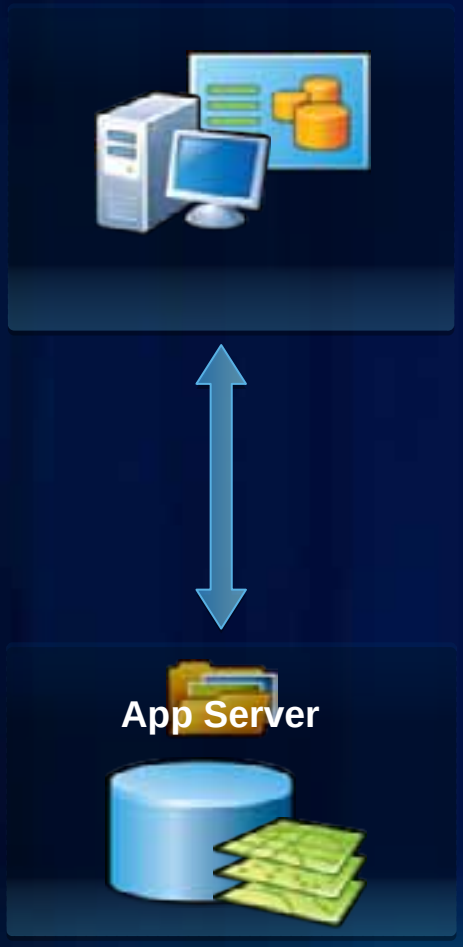
Components of Enterprise Geodatabase

- ArcGIS Client
  - Access spatial data

- Geodatabase Software
  - Enable Esri Spatial data Storage
  - Application Server

- Enterprise DBMS
  - Oracle, SQL Server, DB2 ….

Geodatabase: Application Server Connection



- ArcGIS Client
- ApplicationServer
- Enterprise DBMS

Geodatabase: Direct Connect

- ArcGIS Client
  - Direct Connect Drivers

- Enterprise DBMS

Components to Be Upgraded

- ArcGIS Client
  - Geodatabase Direct Connect Driver
- Geodatabase Software
  - Application Server (ArcSDE)
- Geodatabase Schema
  - Tables, Stored Procedures, ST_Geometry Type ….

Types of Upgrade

- Major Release Upgrade
  - 9.3.1 to 10
  - 9.3 to 10
- Service Pack, Patch, Hotfix
  - 10 SP1, 10 SP2, Replication Upgrade Patch, etc.

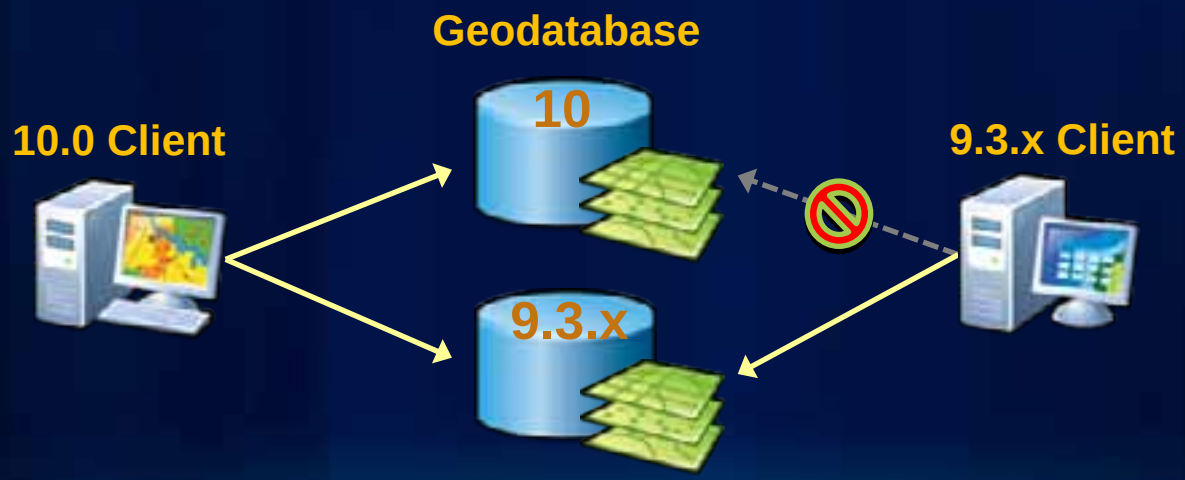
Types of Upgrade: Steps

	Major Release Upgrade	Service Pack /Patch
ArcGIS Client	Uninstall & Re-install	Apply fix to existing install
Geodatabase Software (App. Server)	Uninstall & Re-install	Apply fix to existing install
Geodatabase Schema	Schema upgrade	Schema upgrade if necessary

Client Server Compatibility

- Backward/Forward Compatibility

- Upgrade Strategy
  - Always Upgrade ArcGIS clients first



Prepare for Upgrade

- Make a Full Backup of Your Database
- Check New System Requirements

  http://resources.arcgis.com/content/arcgis-server-system-requirements
- Read *ArcGIS Server 10 online help*

  Topic: Enterprise geodatabase upgrade

Create Upgrade Test Environment

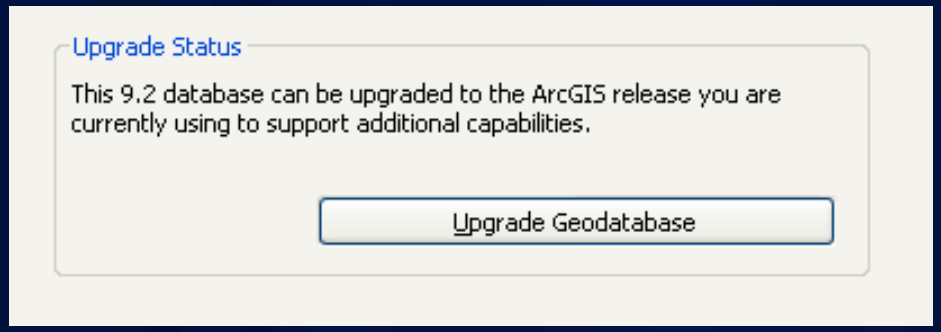
- Duplicate of Production System as Test Environment
  - Matching platform, operating system, and DBMS
  - Geodatabase restored from production system backup
- Benefits
  - Identify potential upgrade problems
  - Smooth product system upgrade process
  - Identify potential client / server compatibility issues
  - Estimate upgrade performance and reduce production impact

Getting Ready to Schema Upgrade

- Install ArcGIS 10.0 client
- Disconnect All Active Connections
- Connect From 10.0 Client
  - Direct connect
  - Connect as a required user

Geodatabase Schema Upgrade

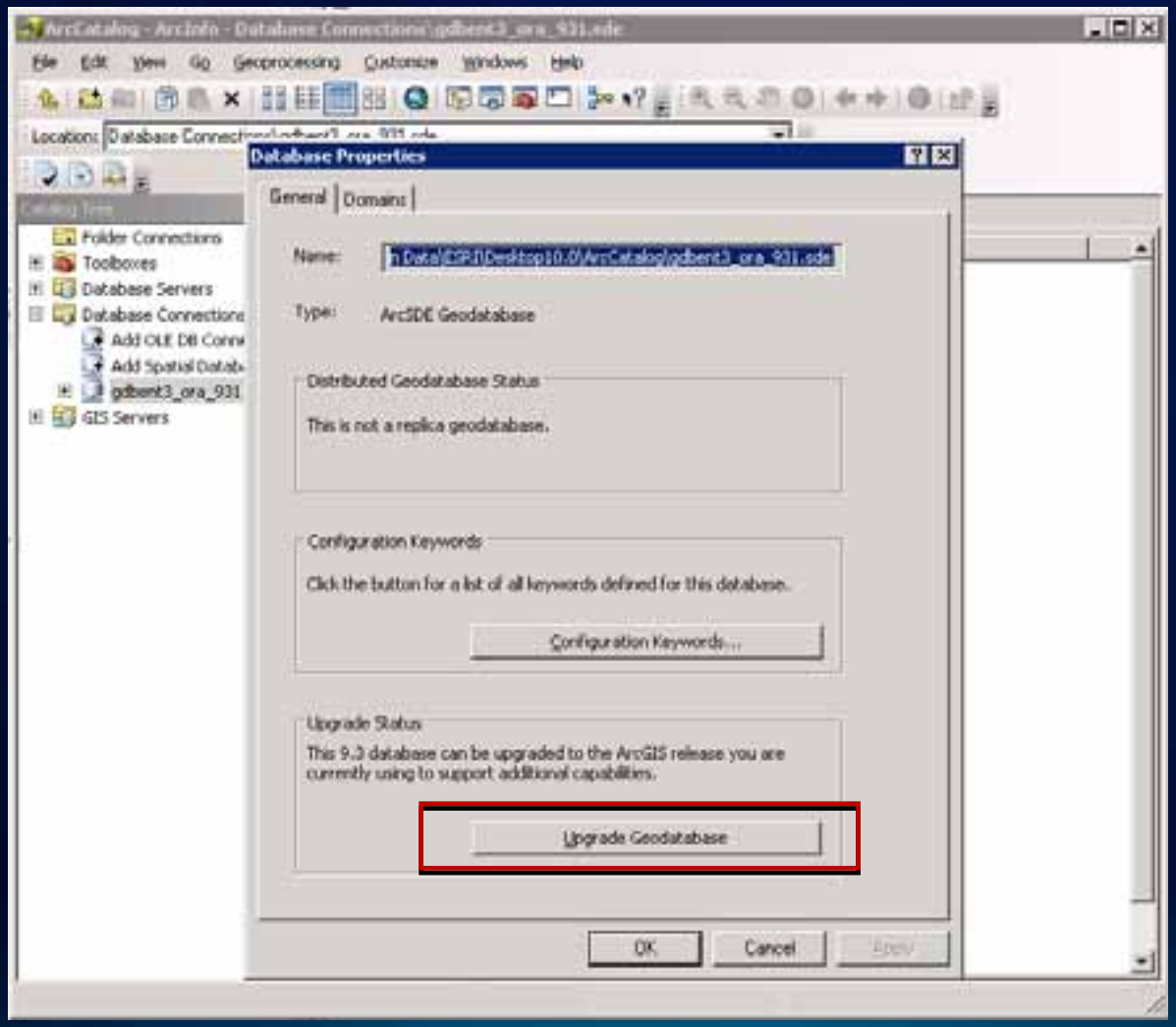
- Two options
  - Upgrade button in ArcCatalog



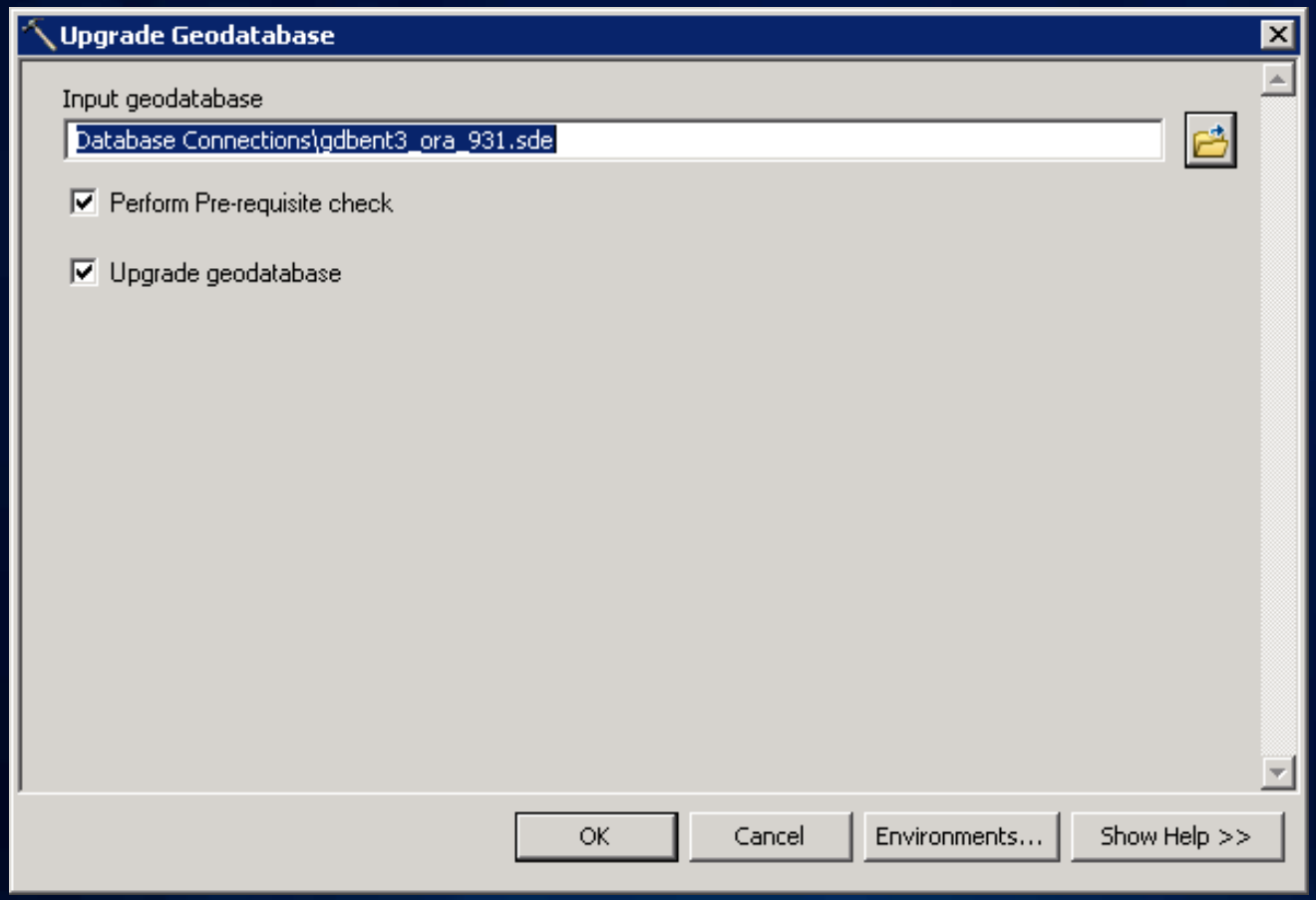
  - Python Script with Geoprocessing API

    UpgradeGDB_management(…)

Geodatabase Upgrade: ArcCatalog



Geodatabase Upgrade: ArcCatalog



Prerequisite Checks

- No active user connections
- Correct user to perform upgrade
- Required privileges for upgrade
- DBMS XML Support
- Geodatabase schema integrity
- Geodatabase configuration check
  - ST shape library
  - Multiple user schema geodatabases

Upgrade Geodatabase: GP Command

UpgradeGDB_management (input_workspace, input_prerequisite_check, input_upgrade_check)

Parameter	Value
input_workspace	Connection file of the geodatabase to be upgraded.
input_prerequisite_check	• NO_ PREREQUISITE_CHECK —Prerequiste check is not run. • PREREQUISITE_CHECK (default)—Prerequiste check is run.
input_upgrade_check	• NO_UPGRADE —The Upgrade is not run. • UPGRADE (default)—The Upgrade is run.

Upgrade Geodatabase: GP Script

- Example script in ArcGIS 10 online help under subjects

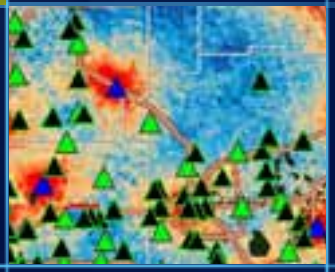
Scripting an ArcSDE Geodatabase Upgrade

```
# Import arcpy module import arcpy
 import arcpy
… …

# Local variables:
GDB_to_upgrade = "<file_path>\<Connection file>"
… …

# Process: Upgrade Geodatabase
 arcpy.UpgradeGDB_management(  GDB_to_upgrade,
                                "PREREQUISITE_CHECK",
                                "UPGRADE")
```

Diagnostic files

- Log files under system TEMP directory
  - *sde_setup.log* – Detailed schema upgrade output and error message log
  - *GDBUpgradeN.log* – Overall GP tool output log with details on geodatabase schema migration
  - sdedc_<dbms>.log direct connect log
- DBMS and Operating system
  - DBMS specific log for DBMS errors
  - Windows: Event log

DEMO: Geodatabase Upgrade



New Features in ArcGIS 10.1

- Create Enterprise Geodatabase from ArcCatalog
- Create Geodatabase User
- Install Standalone ST_Geometry Type
- Simplified Direct Connect to Database

Additional Resources

- ArcSDE Install Guides
- KB articles

  http://resources.arcgis.com/content/kbase
- Online help

  http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html
- ArcSDE geodatabase user forum

  http://forums.arcgis.com/forums/32-Geodatabase-amp-ArcSDE

Thank you!

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