

UPGRADATION & MIGRATION

THERE ARE 2 WAYS OF DOING UPGRADATION.

1. INPLACE UPGRADATION. 2. SIDE BY SIDE MIGRATION

UPGRADATION INVOLVES OVERWRITING EXISTING SQL SERVER INSTANCE AND UPGRADING FROM ONE VERSION TO ANOTHER VERSION.

MIGRATION

MIGRATION INVOLVES MOVING DATA (DATABASES/OBJECTS) BETWEEN HOMOGENOUS AND HETEROGENOUS SQL SERVER INSTANCES AND ALSO TO OTHER RDBMS.

REASONS OF UPGRADATIONS

1. UPGRADING BETWEEN VERSIONS,
2. UPGRADING WITH A SERVICE PACK
3. UPGRADING FROM ONE EDITION TO ANOTHER.

REASONS OF MIGRATION

1. UPGRADING SERVER HARDWARE (FROM OLD SERVER TO NEW SERVER)
2. OS UPGRADATION
3. UPGRADING TO A NEWER VERSION
4. MOVING DATABASES FROM ONE DRIVE TO ANOTHER DRIVE.
5. MOVING DATA BETWEEN DIFFERENT RDBMS (SQL TO ORACLE...)
6. 32-BIT TO 64-BIT IS MIGRATION.
7. PROD-QA /DEV REFRESH ACTIVITY.

DIFFERENT WAYS OF MIGRATION

1. BACKUP AND RESTORE
2. DETACH AND ATTACH
3. COPY DATABASE WIZARD
4. IMPORT/EXPORT
5. BCP (BULK COPY PROGRAMME)

DIFF BETWEEN UPGRADE/MIGRATE

UPGRADE IS CHANGE OF STATE i.e. FROM

1. VERSION TO ANOTHER VERSION
2. EDITION TO ANOTHER EDITION

3. LICENSE UPGRADE

4. SERVICE PACK UPGRADE

MIGRATE DATABASE FROM

1. FROM 2000 TO 2012

2. FROM 2005 TO 2012 (CHECK FOR 14, 16 POSSIBLE OR NOT)

IN-PLACE UPGRADE STEPS

UPGRADITION DEMO

OPEN SSMS OF SQL SERVER 2005 (IN THIS DEMO WE ARE TRYING ON WINDOWS SERVER 2008, YOU CAN TRY ANOTHER WINDOWS SERVER VERSIONS)

CREATE SOME DATABASES, CREATE SOME LOGINS AND GIVE SOME PERMISSIONS TO THAT LOGINS. CREATE JOBS.

FIRST STEP

TAKE THE BACKUPS OF ALL THE DATABASES INCLUDING SYSTEM DATABASES. WE CAN TAKE THE BACKUP OF ALL THE DATABASES AT ONCE BY USING MAINTENANCE PLANS. BUT FOR SQL SERVER 2005 MAINTENANCE PLANS WILL NOT WORK, WE HAVE TO APPLY SERVICE PACK IF WE WANT TO RUN MAINTENANCE PLAN. ONLY FOR 2005 RTM HAS THIS PROBLEM.

--IN RTM MAINTENANCE PLANS WILL NOT WORK EITHER WE HAVE TO APPLY SERVICE PACK

PUT SQL SERVER 2012 MEDIA—PLANNING PAGE—INSTALL UPGRADE ADVISOR. (IT WILL CHECK ANY FEATURES THAT ARE WORKING IN LOWER VERSIONS ARE NOT WORKING IN UPGRADED VERSIONS.)

IT SAYS THAT SOME FILES ARE MISSING, WE NEED TO DOWNLOAD FILES FOR THAT. TYPE TRANSACT SCRIPT ERROR IN GOOGLE. CLICK MICROSOFT LINK—DOWN LOAD THE SETUP FILE. IT WILL BE 2.4 MB FILE. OPEN THE FILE FROM SHARED FOLDERS IN VIRTUAL BOX AND INSTALL IT.

NOW OPEN SSMS, PLANNING, INSTALL UPGRADE ADVISOR, NEXT, NEXT FINISH. OPEN UPGRADE ADVISOR FROM START BUTTON-- SQL SERVER 2005. SELECT LAUNCH UPGRADE ADVISOR ANALYSIS

NEXT, NEXT CHECK ALL SYS DATABASES, ALL USER DEFINED DATABASES. NEXT. AFTER INSTALLATION.. LAUNCH REPORT. JUST TO CHECK ONLY.

NOW INSTALL SQL SERVER 2012. OPEN INSTALLTION CENTER.. INSTALLATION – UPGRADE FROM 2005, 08.. CLICK ON THIS OPTION. NEXT ,, NEXT. NEXT, SELECT THE INSTANCE U WANT TO UPGRADE. NEXT IN FULL TEXT SCREEN (THIS SCREEN IS THE WORK OF APPLICATION WORK.) KEEP DEFAULT OPTION ‘IMPORT’ IF WE GOT ERROR LIKE .NET FRAME WORK, SERVICE PACK SP4 ERROR. FOR 2005 WE NEED TO INSTALL SP4 AND VERY IMPORTANT IS WE CAN NOT UPGRADE FROM DEVELOPER EDITION OF SQL SERVER 2005 TO ENTERISE EDTION OF SQL SEEVER 2012 .

SO IN THIS CASE WE WILL DO MIGRATION.

MIGRATION STEPS

PRE IMPLEMENTATION PHASE

1. ALWAYS RUN UPGRADE ADVISOR TOOL
2. TAKE A BACKUP OF ALL DATABASES
3. IF REQUIRED TAKE A SYSTEM STATE BACKUP MEANS OS BACKUP(WINDOWS WORK)

IMPLEMENTATION

HOMOGENOUS INSTANCES (FROM SAME VERSION TO SAME VERSION MEANS 2005 TO 2005 LIKE FROM 32 BIT TO 64 BIT)

DISABLE FIREWALL.

HERE FROM WINDOWS SERVER 2008 TO WINDOWS SERVER 2012. ONE IS SSQL SERVER 2008 R2 TO SQL SERVER 2012.

COPY THE BACKUPS FROM SOURCE MACHINE AND PASTE IT IN DESTINATION MACHINE. OPEN SSMS OF 2K12, RESTORE ONLY USER DATABASES WITH MOVE OPTIONS OR RELOCATE. RESTORE OF SYSTEM DATABSES WILL NOT WORK . OLD VERSION SYSTEM DATABASES ARE DIFFERENT FROM NEW TARGET VERSION SYSTEM DATABSES. SO RESOTRE ONLY USER DEFINED DATABASES.

NOW WE HAVE TO MOVE LOGINSOLD VERSION DATABSES.

AFTER RESTORATION FIRST WE HAVE TO CHANGE THE COMPATIBILITY LEVEL OF ALL DATABSES WHICH WE RESTORED.

NEXT RUN **DBCC UPDATEUSAGE('DB NAME') WITH COUNT_ROWS** , IT WILL FIX META DATA INACCURACY ISSUES.

NEXT RUN DBCC CHECK DB, COMPULSORY

NEXT RUN UPDATE STATISTICS.—>

USE DBNAME

GO

UPDATE STATISTICSs DBO.TAB11 WITH SAMPLE 60 PERCENT (IT WILL CHECK 60 PERCENT OF STATISTICS FOR A SINGLE TABLE WHICH WE GAVE IN COMMAND JUST FOR SMAPLING WHETHER ALL STATISTICS ARE UPDATED OR NOT.)

****HOW TO CHECK WHEN WILL THE UPDATES STATISTICS RUN IN MY ENVIRONMENT.**

SELECT *FROM SYS.STATS

GOTO PARTICULAR DB, R.CLICK, OPTIONS—PAGE VERIFY OPTION, NORMALLY IT WILL BE IN CHECKSUM, IF WE PUT NONE IS THERE IN THAT, THEN WE CAN OPEN MDF FILE AND WE CAN CHANGE ANY VALUE LIKE SALARY, THEN IT WILL UPDATE IN THE TABLE. THIS IS REALLY BAD. SO ALWAYS THIS OPTINS WILL BE IN CHECKSUM ONLY. CHECKSUM WILL ALWAYS CHECKS THE VALUES OR DATA WITH THE TABLE. SO KEEP IT CHECKSUM FOR ALL THE DATABASES.

NEXT TRANSFER LOGINS.

RUN SCRIPT TO TRANSFER ALL THE LOGINS.

SEARCH FOR SP_HELP_REVLOGIN SCRIPT IN GOOGLE.

KB ARTICLE 918992 (FAMOUS KB ARTICLE)

COPY THAT SCRIPT AND RUN IT IN THE SOURCE LOCAITON MEANS IN THIS CASE IT IS SQL 2005. IF WE RUN THIS CODE IT WILL GENERATE 2 STORED PROCEDURES. SP_HELP_REVLOGIN, SP_HEXADECIMAL IN THE SOURCE. IF U RUN THAT 2 STORED PROCEDURES IN THE SOURCE IT WILL GENERATE SCRIPTS. RUN THESE SCRIPTS TARGET LOCATION BY USING HIDDEN SHARE. OR WE CAN DO THE SAME WORK WITH SSIS PACKAGE.(BUT WE DON'T KNOW THAT SSIS PACKAGE, U CAN CHECK IN THE GOOGLE.)

WHILE RUNNING THIS CODE U NEED TO REMOVE SOME LOGINS LIKE BUILT\ADMINISTARORS, NT AUTHORITY SYSTEM.REMOVE GROUP LOGINS AS THOSE ARE NOT REQUIRED IN TARGET SERVER.

--CODE WHICH WE DOWNLOAD FOR TRANSFER LOGINS WE CAN SEE 2 STORED PROCEDURES IN THAT CODE. SP_HELP_REVLOGIN AND SP_HEXADECIMAL(CHANGE LOGINS PASSWORDS TO ALPHANUEMERIC) LOGINS WILL COME, BUT PERMISSONS WILL NOT COME. SO WE NEED TO SCRIPT THE PERMISSIONS.

--KD ALREADY SENT THIS SCRIPT OPEN THAT COPY ONLY ROLES AND PERMISSONS CODE AND RUN IT IN SOURCE.

COPY PASTE THE VALUES FROM THE TABEL REMOVE ALL UNNECESARY LIKE BUILT ADMIN PERMISSIONS. COPY THIS SCRIPTS IN TO THE DESTINATION INSTANCE.

(SAVE THAT SCRIPS IN MAIL BOX AS SCRIPT LIBRARY)

ORPHAN USERS WILL NOT COME IN THE DESTINATION BUT CHECK WHETHER ANY ORPHAN USERS ARE THERE IS SOURCE DATABSES.

NEXT TRANSFER JOBS.

we can only transfer jobs, we can not transfer maintenance plans. There is no point of Transferring Maintenance plans from any version to any version.

select all jobs r.click—script as —script to query editor—run that script in destination server. In this way we can Transfer Jobs.

OR WE CAN TRANSFER JOBS BY USING SSIS PACKAGES.

OPEN MEDIA —ADD FEATURES—SELECT SQL SERVER DATA TOOLS. (FROM 2014 ONWARDS IT IS A SEPARATE COMPONENT, SO NEED TO DOWNLOAD FROM NET)

OPEN MICROSOFT VISUAL STUDIO FROM START WINDOW. OPEN DATA TOOS

ALSO. OPEN VISUAL STUDIO, LEFT HAND SIDE, NEW PROJECT, SELECT

INTERGRATON SERVICES. IN CONTROL TAB, LEFT HAND SIDE TOOL BOX, SELECT

TRANSFER JOBS TASKS AND TRANSFER LOGINS TASKS. DOUBLE CLICK ON JOBS

TASKS,IN GENERAL PAGE GIVE THE NAME, IN JOBS PAGE.. SOURCE CONNECTION ,

GIVE THE IP ADDERSS OF THE SORCE INSTANCE. SELECT DESTINATION SERVER..

GIVE THE IP ADDRESS OF THE DESTINATION SERVER, SELECT TRUE FOR TRANSFER

ALL JOBS. IF OBJECT EXISTS SELECT FAIL TASK , ENABLE JOBS AT DESTINATION — TRUE.

LOGINS TRANSFER TASKS. LOGINS TO TRANSFER: SELECT SELECT LOGINS. SELECT THE REQUIRED PARAMETERS.. AND SELECT OK. RUN THIS THE SERVERS THAT ARE THERE IN ONE DOMAIN.

AFTER MIGRATION DON'T REMOVE THE SOURCE INSTANCE TILL EVERY THING IS

WORKING FINE FOR A SPECIFIC PERIOD. WE MAY GET CONNECTION ISSUES OR MAY BE SOME OTHER ISSUES SO IN ORDER TO REDIRECT DON'T REMOVE TILL THE CONFIRMATION CAME.

NEXT CHECK

IF HIGH AVAILABILITY IS INVOLVED, ENSURE THAT THE HA OPTION IS FIRST DISABLED BEFORE DOING MIGRATION. (AG IS NOT POSSIBLE IF TARGET IS SQL SERVER 2005, FOR LOGSHIPPING AND MIRRORING MIGRATE ALL THE SQL SERVERS THAT ARE PARTICIPATING HA. MEANS IF WE MIGRATE PRIMARY SERVER IN LOGSHIPPING WE NEED TO MIGRATE SECONDARY SERVERS THAT ARE PARTICIPATING IN LOGSHIPPING ALSO. SAME FOR MIRRORING. MIRROR INSTANCES ALSO NEED TO MIGRATE IF MY PRINCIPAL IS MIGRATED.

NEXT CHECK

INFORM AND CONFIRM FROM APPLICATION TEAM THAT THE NEWLY MIGRATED INSTANCE IS FUNCTIONAL WITHOUT ANY ERROR/WARNINGS. TESTING WILL BE PERFORMED BY APPLICATION TEAM.

NEXT CHECK

AS PART OF ROLLBACK PLAN, IT IS GOOD TO CONFIGURE REPLICATION BETWEEN DESTINATION AND SOURCE INVOLVED IN MIGRATION. THIS IS JUST ANTICIPATING THAT IF ANY ERRORS OCCUR DATA IS AVAILABLE AT BOTH 2012 AND 2005 IT BECOMES EASY TO SWITCH BETWEEN THE SOURCE AND DESTINATION.

/--Scenario

migration of sql server 2000 to 2012.

we can do in 2 ways either we can do upgradation or migration . But direct upgradation is not possible first upgrade sql 2000 to sql 2005/08 then upgrade it to 2012 or latest versions u want. Migration we can do directly.

Windows 2003→ sql server 2000 sp4

windows 2012→ sql server 2012--/