

Database Processing

Preparing a database for user access

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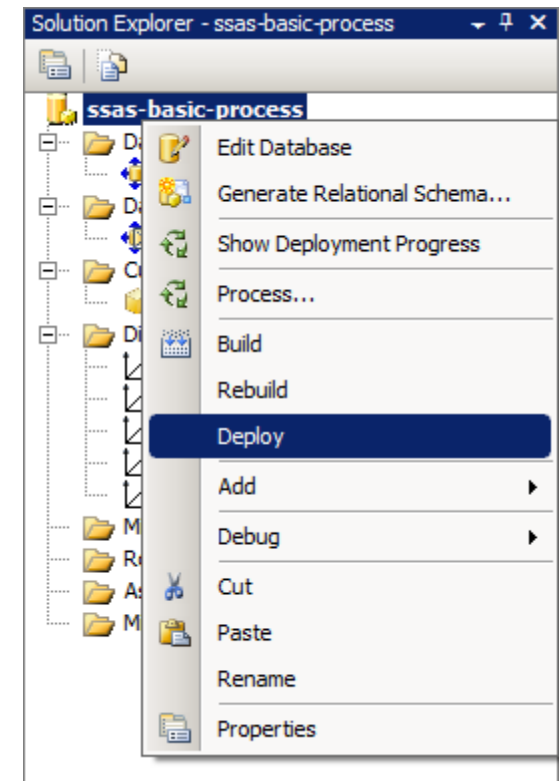


Overview

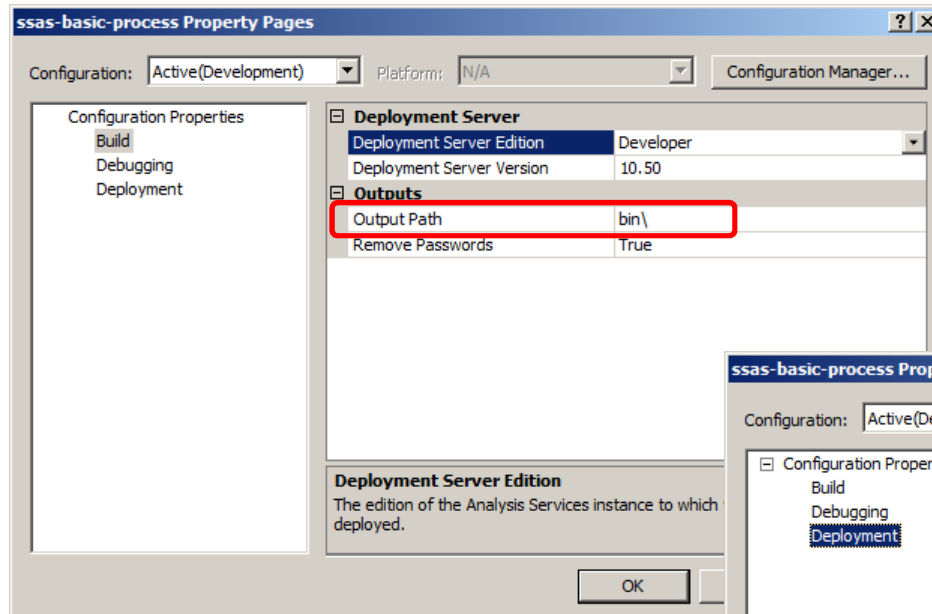
- Deployment
- Processing

BIDS Deployment

- **Build**
 - Bundles database object definitions into one file
- **Deploy**
 - Moves file to server location
 - Instantiates database objects (but no data yet)
- **Process**
 - Reads data sources to extract pertinent data
 - Loads data into server-based database objects

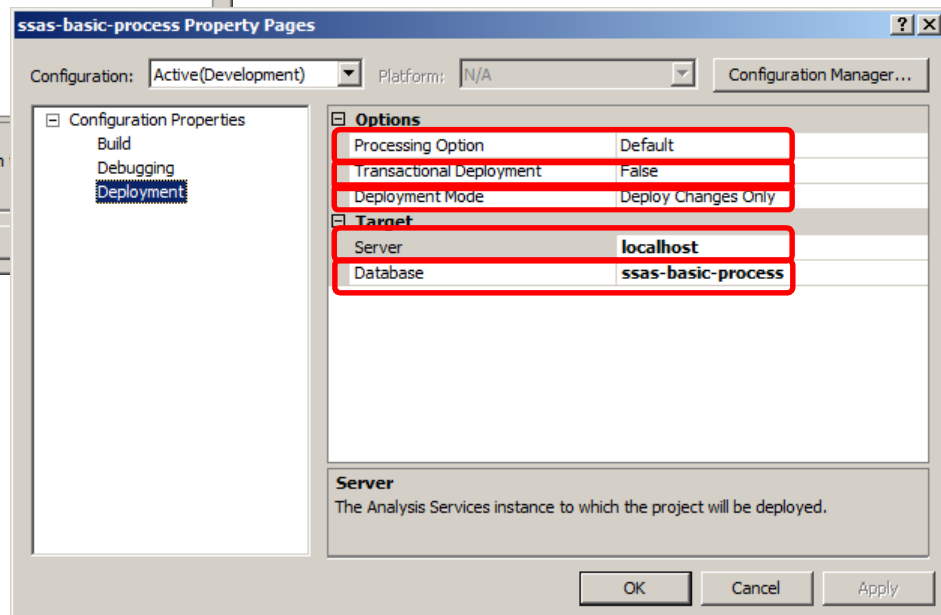


Project Properties



Processing Options:

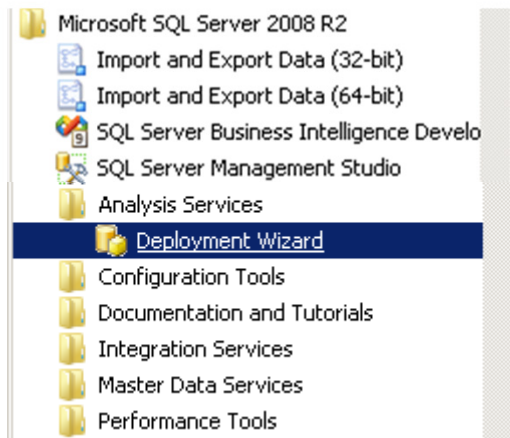
- Default
- Do Not Process
- Full



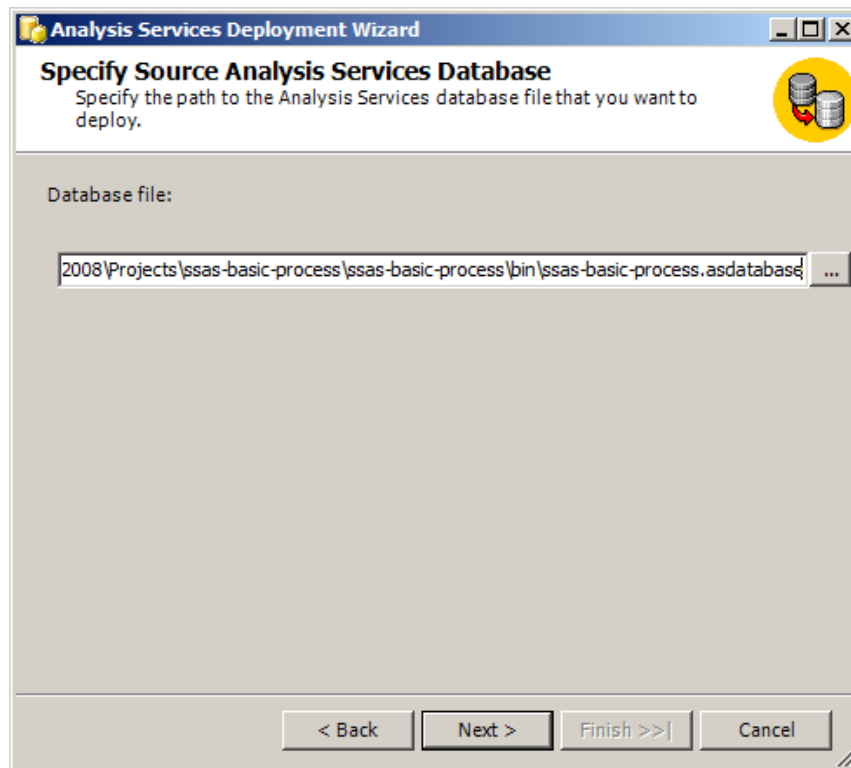
Deployment Mode:

- Deploy Changes Only
- Deploy All

Deployment Wizard



Requires database build



Deployment Wizard

Analysis Services Deployment Wizard

Installation Target
Specify a target server and database to which to deploy the Analysis Services database file.

The wizard will deploy ssas-basic-process to the following Analysis Server and database.

If the database does not exist, it will be overwritten.

Server: localhost
Database: AWDDataMart

Analysis Services Deployment Wizard

Specify Options for Partitions and Roles
Determine how existing partitions, security roles, and members are treated during deployment.

Partitions

- ☒ Deploy partitions. Any existing partitions will be replaced.
- ☐ Retain partitions. Partitions for existing measures will be retained.

Roles and members

- ☐ Deploy roles and members. Any existing roles and members will be replaced.
- ☒ Deploy roles and retain members for new roles. Existing roles and members will be retained.
- ☐ Retain roles and members. The existing roles and members will be retained.

Analysis Services Deployment Wizard

Specify Configuration Properties
Set the configuration properties for each object.

- ☐ Retain configuration settings for existing objects
- ☐ Retain optimization settings for existing objects

Data Source Connection Strings

Adventure Works DW2008R2	[Native OLE DB] Provider=SQL
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Data Source Impersonation Information

Adventure Works DW2008R2	Default
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Default Data Source Impersonation Information

Default Data Source Impersonation Information

Key error log files

Cube Sales	
Dimension Customer	
Dimension Date	
Dimension Employee	
Dimension Product 1	
Dimension Territory	

Storage locations

Database storage location	
Sales Cube	

Default Data Source Impersonation Information

Default Data Source Impersonation Information

Analysis Services Deployment Wizard

Select Processing Options
Specify the way in which objects are processed during deployment.

Processing method

- ☒ Default processing
- ☐ Full processing
- ☐ None

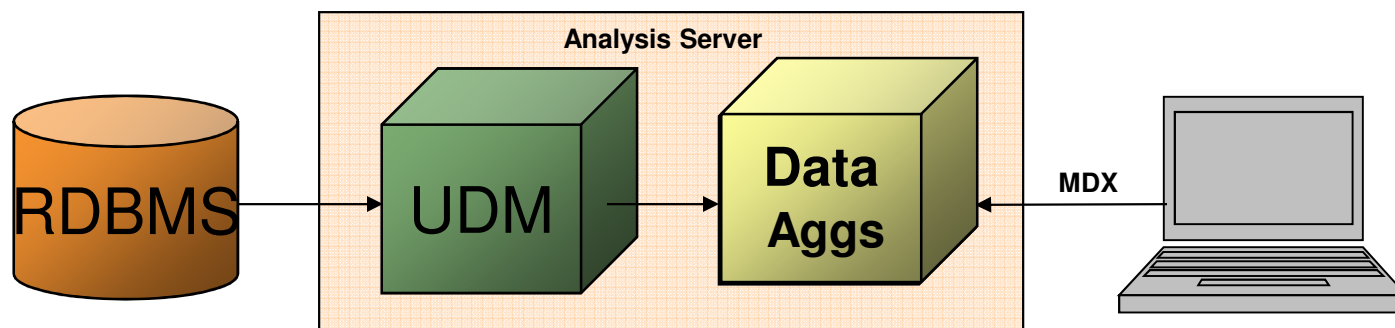
Writeback Table Options

- ☒ Use existing. A new table will be created if it does not already exist, otherwise the existing table will be used.
- ☐ Create. A new table will be created. If the table already exists, processing will fail.
- ☐ Create always. A new table will be created. If the table already exists, it will be deleted and replaced.

☐ Include all processing in a single transaction

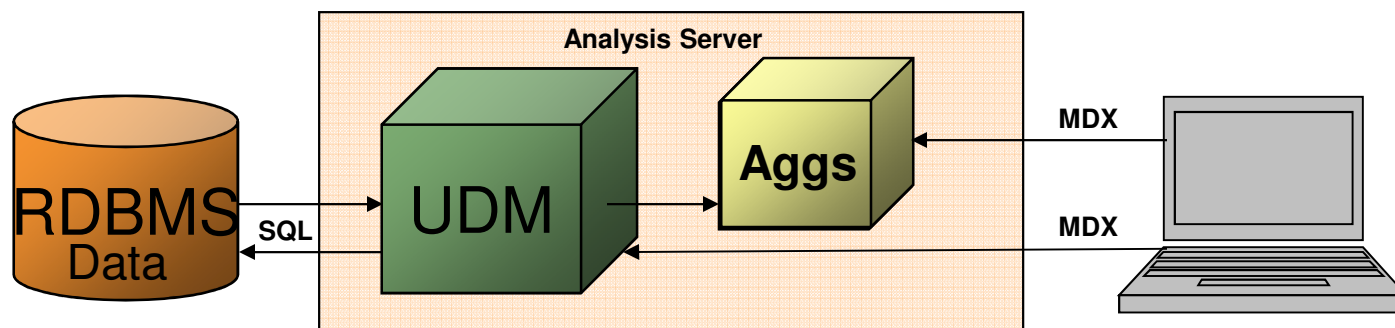
Analysis Services Storage Modes: MOLAP

- Multidimensional OLAP
- Storage of data and aggregations in cache



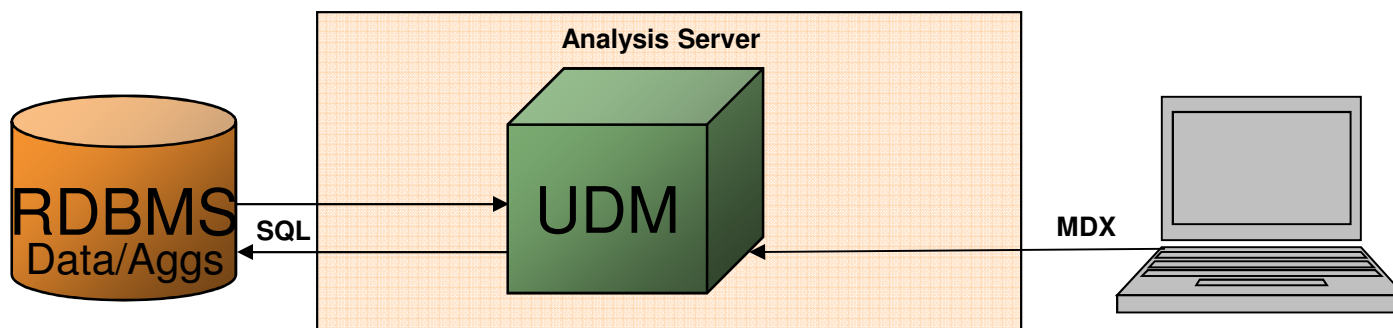
Analysis Services Storage Modes: HOLAP

- Hybrid OLAP
- Storage of aggregations only in cache

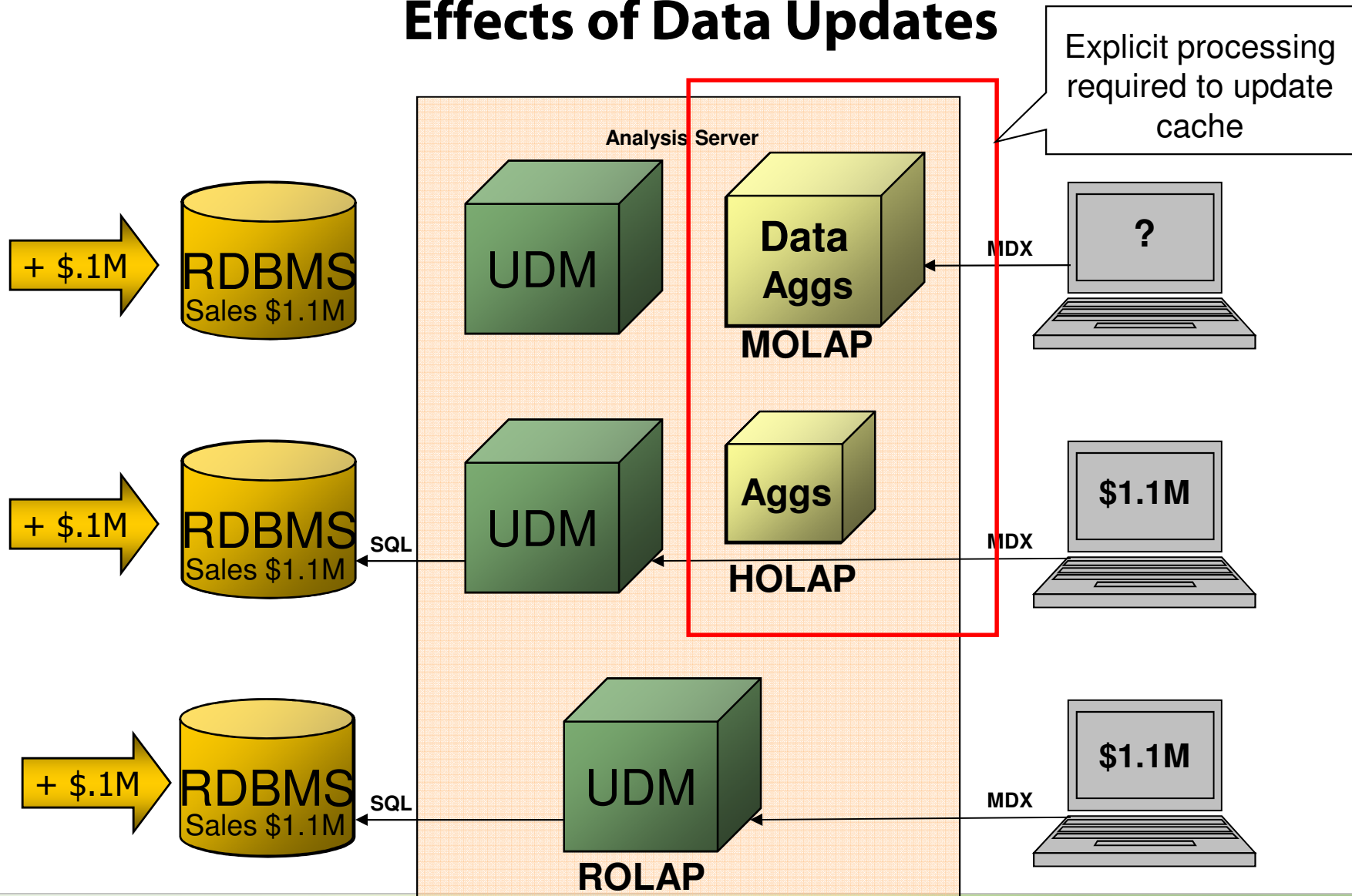


Analysis Services Storage Modes: ROLAP

- Relational OLAP
- Relational storage of data and aggregations

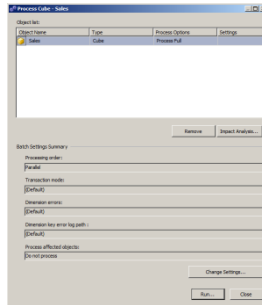


Effects of Data Updates



Processing

- BIDS / Management Studio



- Integration Services Package



- Management Studio

```
<Batch xmlns="http://schemas.microsoft.com/analysiservices/2003/engine">
  <Parallel>
    <Process xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:
        dd12="http://schemas.microsoft.com/analysiservices/2003/
        engine/2" xmlns:ddl2_2="http://schemas.microsoft.com/
        analysiservices/2003/engine/2/2" xmlns:ddl100_100="http://
        schemas.microsoft.com/analysiservices/2008/engine/100/100"
        xmlns:ddl200="http://schemas.microsoft.com/analysiservices/
        2010/engine/200" xmlns:ddl200_200="http://schemas.microsoft.
        com/analysiservices/2010/engine/200/200">
      <Object>
        <DatabaseID>ssas-basic-process</DatabaseID>
        <CubeID>Sales</CubeID>
      </Object>
      <Type>ProcessFull</Type>
      <WriteBackTableCreation>UseExisting</
      WriteBackTableCreation>
    </Process>
  </Parallel>
</Batch>
```

Process Options

- **Process Full**
 - Does full rebuild
- **Process Clear**
 - Empties object
- **Process Default**
 - Builds only unprocessed objects
- **Process Data**
 - Discards contents and reloads data (no indexes)
- **Process Incremental**
 - Loads data using filter
- **Process Indexes**
 - Preserves data and appends indexes
- **Process Update**
 - Affects dimensions only
 - Preserves data
 - Performs incremental update (new, changed, or deleted members)
- **Process Add**
 - Affects dimensions only
 - Adds new members only
- **Process Script Cache**
 - Evaluates and persists MDX script in cube

Summary

- **Deployment**
 - BIDS Deploy command, Deployment Wizard
- **Processing**
 - Storage modes, BIDS, SSIS, SSMS, full, incremental, update

References

- **Deploying an Analysis Services Project**
 - <http://msdn.microsoft.com/en-us/library/ms166576.aspx>
- **Partition Storage Modes and Processing**
 - [http://msdn.microsoft.com/en-us/library/ms174915\(v=SQL.105\).aspx](http://msdn.microsoft.com/en-us/library/ms174915(v=SQL.105).aspx)
- **Processing**
 - <http://msdn.microsoft.com/en-us/library/ms175634.aspx>