

*SuperMap* 北京超图

SuperMap Software Co., Ltd.

# SuperMap iServer Distributed Tiling (for MongoDB)

SuperMap Software Co., Ltd.



**01**

**SuperMap iServer Cache**

**02**

**Cache Generation**

# Cache

- Cache technology is a very effective way to improve service access efficiency. It is a storage method that exchanges space for time. We generate cache:
  - When spatial data is complex
  - When a map or a specific area of a map is frequently accessed
  - When the map results returned to the client side are not frequently changed

# Cache Classification

## Map Tile Cache

- SuperMap UGC tile cache (UGCV5)
- Distributed storage cache (FastDFS / MongoDB)
- .....

Enhance map  
image access  
efficiency

## Vector Tile Cache

- SVTiles vector cache

Enhance vector  
data access  
efficiency

## Attribute Tile Cache

- UTFGrid attribute cache

Enhance  
attribute data  
access efficiency

# Cache Formats

Type	Tile format	Storage type	Storage location	Whether versioning is supported	Platforms supported	Delivery method
Map tiles	FastDFS	FastDFS distributed file system	FastDFS internal distributed storage	Yes	Linux	Export into *.smtiles files for delivery
	MongoDB	MongoDB distributed file system	Data stored at specified directory	Yes	Linux, Windows	Copy for delivery among MongoDB systems
	OTS	OTS distributed file system	Data stored in the OTS storage service system in Ali Cloud	No	Linux, Windows	--
	MBTiles	SQLite database	<a href="#">output directory</a> \sqlite\*.mbtiles file	No	Linux, Windows	Copy files for delivery
	SMTiles	SQLite database	<a href="#">output directory</a> \sqlite\*.smtiles file	No	Linux, Windows	Copy files for delivery
	UGCV5	File directory on local disk	<a href="#">output directory</a> \cache	No	Linux, Windows	Copy files for delivery
	GeoPackage	SQLite database	<a href="#">output directory</a> \sqlite\*.gpkg file	No	Linux, Windows	Copy files for delivery
Vector tiles	SVTiles	SQLite database	<a href="#">output directory</a> \sqlite\*.svtiles file	No	Linux, Windows	Copy files for delivery
Attribute tiles	UTFGrid	SQLite database	<a href="#">output directory</a> \sqlite\*.utfgrid file	No	Linux, Windows	Copy files for delivery

# Tiling Methods

- Single-machine tiling—time consuming with no obstacle recovery measures
- Distributed tiling—Multi-process tiling on a single machine, parallel tiling on multiple machines

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# 02 Cache Generation

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# Real Case

- Distributed tiling with SuperMap iServer
  - Multi-process tiling on a single machine
  - Store data with MongoDB

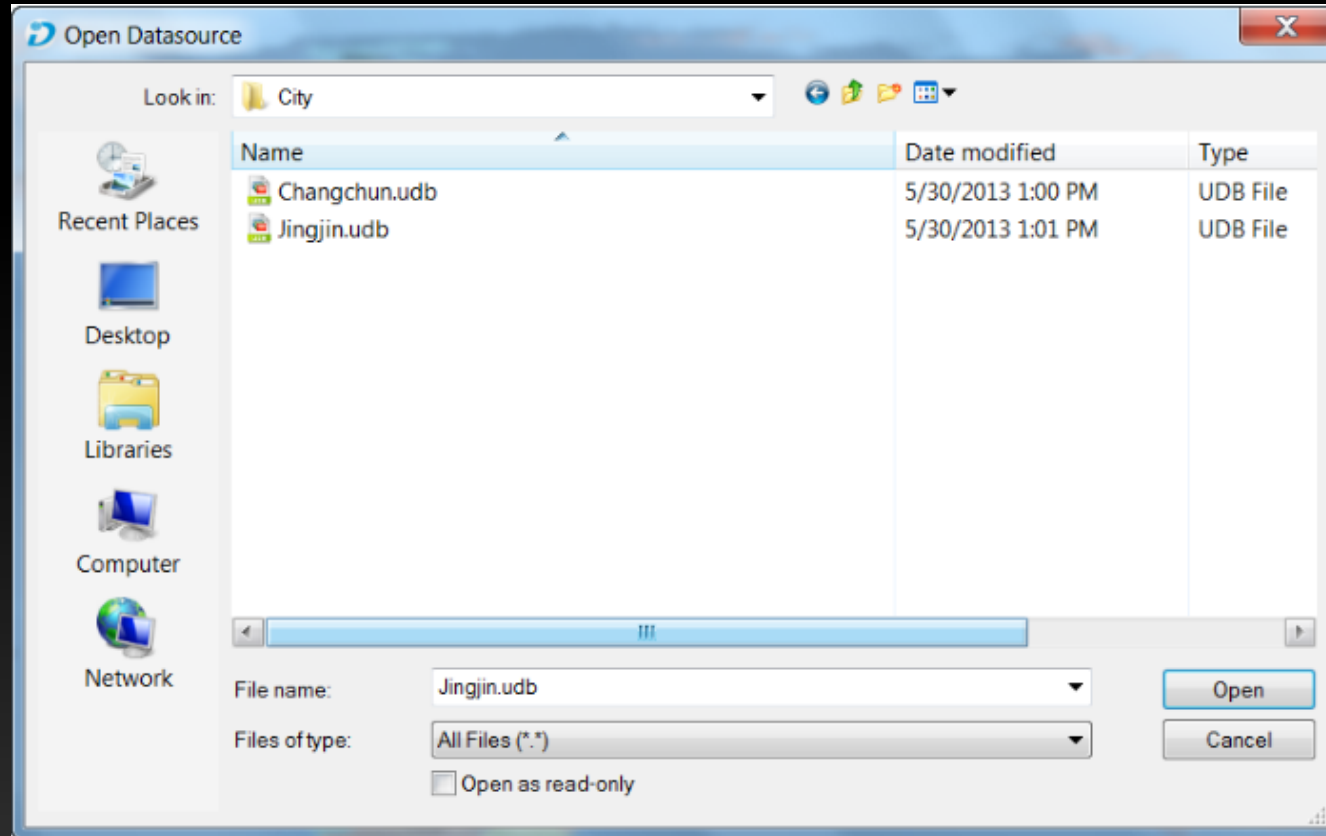


# Environment Preparation

- Windows10 64 bit
- MongoDB 64 bit
  - Located at D:\Software\mongodb
  - MongoDB data located at D:\Software\mongodb\mongodbddata
  - Port: 27010
- SuperMap iServer 9D\_win64

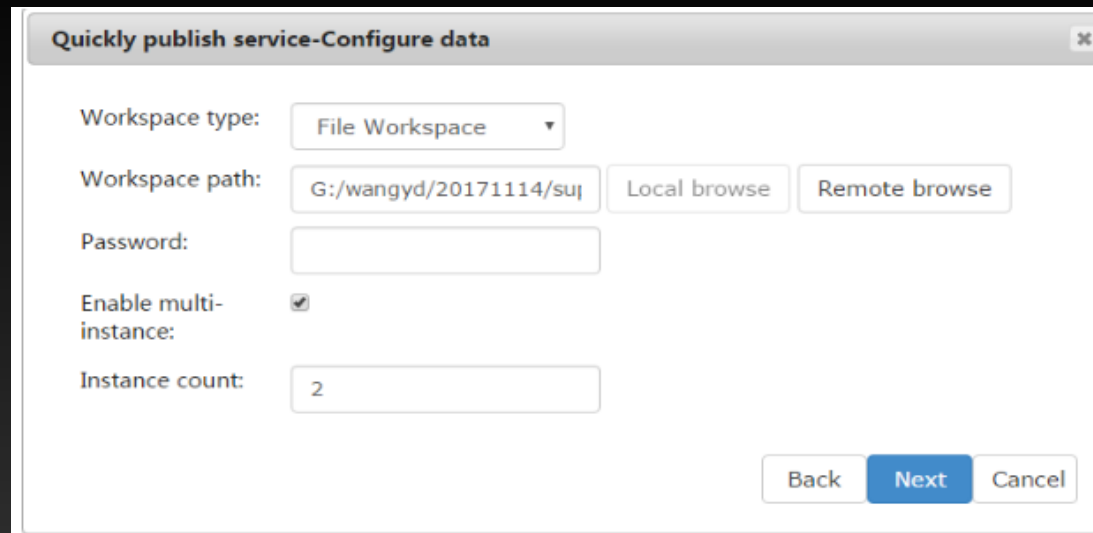
# Data Preparation

- Produce data with SuperMap iDesktop
  - Set the open mode of data in the workspace to read-only



# Operation Steps

- Enable the MongoDB service
- Enable the iServer service
  - Multi-process configuration—Web Manager → Services → Advanced → Multi-process Configuration
  - Publish service
  - Distributed tiling—Web Manager → Clusters → Distributed Tiles



Quickly publish service-Configure data

Workspace type: File Workspace

Workspace path: G:/wangyd/20171114/suj Local browse Remote browse

Password:

Enable multi-instance:

Instance count: 2

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**Thank You!**

