DB2 User Guide

DB2 is a relation database manage system developed by IBM company.

DB2 is mainly used in large application systems and it supports the user environment from mainframe to single. It provides high-level data usability, integrity, security, recoverability, and the application executive capacity from small to large scale. It has the basic functions and SQL commands that has nothing with platform. DB2 uses the data classification technology and enables mainframe data easily be downloaded to the LAN database server. And make the database localization and remote connections transparency. Its external connections change the query performance and support the parallel query for multiple tasks. The DB2 database can be assessed by any applications through using the Microsoft open database to connect the ODBC interface, Java interface or CORBA interface agency.

Based on the DB2 features above, more and more users start to use the DB2 to manage the vast amount spatial data in GIS applications. In order to support the DB2 database, SuperMap providers a series of supports for DB2 datasource. This guide introduces how to install DB2, catalog DB2 and import and export DB2.

Main Contents:

Install DB2

This section introduces the installation of DB2 program. Please refer to the help for the supported platform. This help mainly introduce the installation on Window. It is suggested that install DB2 9.7 version based on the optimal performance of DB2 database

1. Double click **setup.exe** program and pop up the **DB2 Setup Launchpad**, as shown below.



2. Click the Install a Product link on the window left to enter the page of Install a Product. This page lists all the DB2 products that are available. Select DB2 Advanced Enterprise Server Edition Version 9.7 Fix Pack 4 and click the Install New button.



Figure: Select the DB2 products

3. Pop up the following Welcome dialog box and click Next button.

BDB2 Setup - DB2 Advanced Enterprise Server Edition - DB2COPY2	x
IBM	
Welcome to the DB2 Setup wizard for DB2 Advanced Enterprise Server Edition, Version 9.7 5765-F41	
The DB2 Setup wizard will install DB2 Advanced Enterprise Server Edition on your computer. To continue, dick Next.	
Licensed Materials - Property of IBM Corp. © Copyright, IBM Corp. and others, 1993, 2011. This Program is licensed under the terms of the license agreement accompanying the Program. This license agreement may be either located in a Program directory folder or library identified as 'License' or 'Non_IBM_License', if applicable, or provided as a printed license agreement. Please read this agreement carefully before using the Program. By using the Program, you agree to these terms. IBM and the IBM logo is a trademark or registered trademark of International Business Machines Corporation in the United States, other countries, or both. Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both. US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.	
Cancel]

Figure: The Welcome dialog box

4. Pop up the Software License Agreement dialog box. Please read the following license agreement carefully. If you accept this license, please select I accept the terms in the license agreement and click the Next button; If you don't accept this license, please select the I do not accept the terms in the license agreement and click the Cancel button to exit the installation.

BB2 Setup - DB2 Advanced Enterprise Server Edition - DB2COPY2	x
Software License Agreement	
Please read the following license agreement carefully.	
IMPORTANT: READ CAREFULLY	<u> </u>
Two license agreements are presented below.	
1. IBM International License Agreement for Evaluation of Programs 2. IBM International Program License Agreement	
If you are obtaining the Program for purposes of productive use (other than evaluation, testing, trial "try or buy," or demonstration): By clicking on the "Accept" button below, You accept the IBM International Program License Agreement, without modification.	
If you are obtaining the Program for the purpose of evaluation, testing, trial "try or buy," or demonstration (collectively, an "Evaluation"): By clicking on the "Accept" button below, You accept both (i) the IBM International License Agreement for Evaluation of Programs (the "Evaluation License"),	÷
Read non-IBM terms.	
 I accept the terms in the license agreement ○ I do not accept the terms in the license agreement 	
InstallShield Print Cancel	

Figure: The Software License Agreement dialog box

5. Continue installing and pop up the Select the installation type dialog box.

🗒 DB2 Setup - DB2 Advanced Enterprise Server Edition - DB2COPY2				
Select the installat	ion type			
Typical:	Approximately 900 - 1300 MB			
Compact:	Approximately 800 - 1100 MB			
Custom:	Approximately 600 - 2000 MB			
Information about The typical set features and fu To add feature Custom.	the installation type up includes basic database server function, database administration tools, and most product unctionality. s for application development and other optional functionality later in the setup process, click View Features			
	< Back Next > Cancel Help			

Figure: The Select Installation Type dialog box.

Add: 6/F, Building 107, No. A10, Jiuxianqiao North Road, Chaoyang District, Beijing, 100015, CHINA, 100015 E-mail: request@supermap.com Website: www.supermap.com Select the installation as the **Typical Installation**. You can view all the functional units by clicking the **View Features...** button.



Figure: The View Features dialog box

6. Continue installing and pop up the Select the installation, response file creation, or both dialog box. Click the Next button.

BB2 Setup - DB2 Advanced Enterprise Server Edition - DB2COPY2	
Select the installation, response file creation, or both	
The DB2 Setup Wizard can install DB2 Advanced Enterprise Server Edition on this computer, create a response file that you can use to install this product on a computer later, or both.	
If you are setting up an Enterprise Server Edition partitioned database environment, you can also create a response file to install DB2 on the other computers that will act as database partition servers.	
Install DB2 Advanced Enterprise Server Edition on this computer	
Save my installation settings in a response file	
No software will be installed on this computer.	
$_{\odot}$ Install DB2 Advanced Enterprise Server Edition on this computer and save my settings in a response file	
Response file name C:\Users\Elma\Documents\PROD_AESE.rsp	
InstallShield	
< Back Next > Cancel	Нер

Figure: The Select the installation, response file creation, or both dialog box

Add: 6/F, Building 107, No. A10, Jiuxianqiao North Road, Chaoyang District, Beijing, 100015, CHINA, 100015 E-mail: request@supermap.com Website: www.supermap.com The response file is a text file containing the settings and configuration. The DB2 installation can read this file and execute the installation according to the specified value. The installation with response file is also called **Silent Installation**. It provides the access for the parameters of DB2 Installation Wizard Settings.

7. Continue installing and pop up the **Select the installation folder** dialog box. If the system install it by default, click the **Next** button directly; If click the **Changes...** button to specify the installation path, click the **Next** button.

闄 DB2 Setup - DB2 A	dvanced Enterprise Se	rver Edition - DB2C	OPY2		
Select the inst	allation folder				
The DB2 Setup wi dick Change or ty	zard installs DB2 Advanc pe a directory.	ed Enterprise Server I	Edition in the following f	older. To select a different fo	lder,
Directory	D:\Program Files\IBM Space required:	SQLLIB) 653 MB		Change	
InstallShield ————		< Back	Next >	Cancel	Help

Figure: The Select the installation folder dialog box

If users select the **Custom** mode, pop up the **Select the features to install** dialog box. Users can select the features according to their needs. You also need to specify the installation folder, as shown below.

BB2 Setup - DB2	Advanced Enterprise Se	erver Edition - DB2C	COPY1
To customize wh	ich features are installed,	, click on icons in the fo	following list.
	DB2 Advanced Enterprise DB2 Update Servic Server support Client support Administration too Administration develo Getting started	Server Edition ce Is pment tools	Feature Description DB2 Advanced Enterprise Server Edition is designed to meet the data server needs of mid- to large-size businesses,
			This feature requires 415 MB on your hard drive. It has 6 of 6 subfeatures selected. The subfeatures require 151 MB on your hard drive.
Installation fold	der		
Directory	D:\Program Files\IBM Space required:	I\SQLLIB\ 564 MB	Change Disk Space
InstallShield		< Back	Cancel Help

Figure: The Select the features to install dialog box

8. Continue installing, and pop up the Set user information for the DB2 Administration Server dialog box. Here you need to set the password for the DB2 administration server and click the Next button.

뭥 DB2 Setup - DB2 Adv	anced Enterprise Server Edition - DB2CO	PY1
Set user informat	tion for the DB2 Administration Se	erver
The DB2 Administ Specify the requir	ration Server (DAS) runs on your computer t ed user information for the DAS.	o provide support required by the DB2 tools.
	User information	
	Domain	None - use local user account 🗸
	User name	db2admin
	Password	•••••
	Confirm password	•••••
Use the same	account for the remaining DB2 services	Next > Cancel Help

Figure: The DB2 Administration Server dialog box

Add: 6/F, Building 107, No. A10, Jiuxianqiao North Road, Chaoyang District, Beijing, 100015, CHINA, 100015 E-mail: request@supermap.com Website: www.supermap.com "DB2 Administration Server" (DAS) is a kind of special DB2 administration service, which is used to support GUI tools and help manage the tasks on the local and remote DB2 server. DAS has a specified user account. When start the DAS server, it uses this user account to make the DAS service log in the computer.

DAS user has the SYSTEM permissions for every DB2 system in your environment, so that it can start and stop other instances when you need to.

9. Continue installing, and pop up the **Configure DB2 instances** dialog box. If you user the default configuration, click the **Next** button directly; If you change the configuration of DB2 instance, click the **Configure...** button.

Instance is also called database administration program. It is the DB2 code to admin the data. It can control the implementations for the data and manage them to their child systems. Each instance has the following features:

- Every instance is a complete environment, including all the database partitions defined by the given parallel database system.
- Every instance has its own database (Other instances can't assess), and all its database partitions share the same mother system.
- It has the independent safety and other instances in the same system don't influence it.

闄 DB2 Setu	up - DB2 Advanced Enterprise Server Edition - DB2COPY1
Configu	ure DB2 instances
Th	e following instances will be created during installation. You can customize the configurations by clicking on e Configure button.
	DB2 Instances:
	DB2 Configure
	Instance description The default instance, DB2, stores application data. You can build a partitioned database environment by installing Enterprise Server Edition on other computers, and specify that these computers participate in the default instance.
InstallShield	< Back Cancel Help

Figure: The Configure DB2 instances dialog box

In the **Configure DB2 instances** dialog box, you can configure the service name and port number of DB2 instance. You also can' configure it after finish installing, as shown below.

DB2 instance configuration - DB2	×
TCP/IP Named Pipes Startup	
TCP/IP has been detected on the	e system.
Select Configure to enable TCP/I	P support.
Do not configure at this time	
Configure	
Service name	db2c_DB2
Port number	50000
	Defaulte
	Deraults
	OK Cancel Help

Figure: The "DB2 Instance Configuration" dialog box

10. Continue installing, and pop up the **DB2 instance configuration** dialog box. Set the related user information of the default DB2 instances.

闄 DB2 Setup - DB2 Ad	vanced Enterprise Server	Edition - DB2COPY1			
Set user informa	ation for the DB2 Adn	ninistration Serve	er		
The DB2 Adminis Specify the requ	stration Server (DAS) runs or ired user information for the	n your computer to pro 2 DAS.	vide support require	d by the DB2 tools	
	User information Domain		None - use local u	user account	•
	User name		db2		
	Password		•••••		
	Confirm password		•••••		
🕅 Use the sam	e account for the remaining	DB2 services			
Instalishield	(< Back	Next >	Cancel	Help

Figure: The DB2 instance configuration dialog box

Add: 6/F, Building 107, No. A10, Jiuxianqiao North Road, Chaoyang District, Beijing, 100015, CHINA, 100015 E-mail: request@supermap.com Website: www.supermap.com 11. Continue installing and pop up the **Prepare the DB2 tools catalog** dialog box. Click the **Next** button.

Only create the DB2 tools catalog, can you use the task center and dispatcher. The database created by DB2 tools catalog is stored in the DB2 database.

븅 DB2 Setup - DB2 Advanced Enterprise Serv	ver Edition - DB2COPY1
Prepare the DB2 tools catalog	
The DB2 tools catalog must be created in schedule common tasks such as backups	n order to use the Task Center and scheduler. These tools allow you to . The DB2 tools catalog must be stored in a DB2 database.
☑ Prepare the DB2 tools catalog	
Instance	DB2
Database	
New	TOOLSDB
C Existing	
Schema	
New	SYSTOOLS
Existing	
InstallChield	
	< Back Next > Cancel Help

Figure: The Prepare the DB2 tools catalog dialog box

12. Continue installing, and pop up the Set up notifications dialog box, which is used to configure SMTP server for the DB2 server. You can send the running status alarm to the SMTP server. If you cancel the check box before **Set up your DB2 server to send notifications**, the running status of DB2 will be recored in the administration log, as shown below. Click the **Next** button.

BB2 Setup - DB2 Advanced Enterprise Server Edition - DB2COPY1
Set up notifications
You can set up your DB2 server to automatically send e-mail or pager notifications to alert administrators when a database needs attention. The contact information is stored in the administration contact list. You need an unauthenticated SMTP server to send these notifications.
If you do not set up your DB2 server to send notifications at this time, the health alerts are still recorded in the administration notification log.
Set up your DB2 server to send notifications
Notification SMTP server
Administration contact list location
Local - Create a contact list on this computer
Remote - Use an existing contact list on another DB2 server
Remote DB2 server
InstallShield <back next=""> Cancel Help</back>

Figure: The Set up notifications dialog box

13. Continue installing and pop up the **Enable operating system security for DB2 objects** dialog box. Click the **Next** button.

🔡 DB2 Setup - DB2 Advanced Enterpri	se Server Edition - DB2COPY1	x				
Enable operating system security for DB2 objects						
Specify if you would like to enabl objects on your computer. If you the groups specified below.	Specify if you would like to enable operating system security for DB2 files, folders, registry keys, and other objects on your computer. If you enable this security, operating system access to DB2 objects will be limited to the groups specified below.					
Note: The DB2 Setup wizard has	detected that the group names shown below already exist on your computer.					
Enable operating system security	rity					
Information on the DB2	administrators group and DB2 users group is available by clicking Help.					
DB2 administrators gr	oup					
Domain	None - use local group 👻					
Group name	DB2ADMNS					
DB2 users group						
Domain	None - use local group 🗸					
Group name DB2USERS						
InstallShield						
	< Back Next > Cancel Help					

Figure: The Enable operating system security for DB2 objects dialog box

14. Continue installing and pop up the **Start copying files** dialog box. Click the **Finish** button.

BB2 Setup - DB2 Advanced Enterprise Server Edition - DB2COPY1						
Start copying files						
The DB2 Setup wizard has enough information to start copying the program files. If you want to review or change any settings, click Back. If you are satisfied with the settings, click Install to begin copying files.	эг					
Current settings:						
Product to install: DB2 Advanced Enterprise Server Edition - DB2COPY1 Installation type: Typical	E					
DB2 copy name: DB2COPY1 Set as default DB2 copy: Yes Set as default IBM database client interface copy: Yes						
Selected features: DB2 Update Service Base application development tools Base client support Configuration Assistant Control Center	Ŧ					
InstallShield < Back Install Cancel	Help					
Figure: The Start copying files dialog box.						

15. After finish installing, pop up the **Setup is complete** dialog box and click the **Next** button to install other products.

闄 DB2 Setup - DB2 Advanced Enterprise	Server Edition - DB2COPY1
IBM.	Setup is complete
	DB2 Setup wizard has finished copying files to your computer and has completed all the required system configuration tasks. Shut down all software programs running on the system now. The programs can then be restarted and DB2 will be ready for use. The install log is located in C: \Users\Elma\Documents\DB2LOG\DB2-AESE-Sun Feb 17 16_49_46 2013.log. Consult the log file to ensure that all tasks completed successfully.
	If you have not already done so, it is recommended that you complete the post-install steps after installation.
	Required steps:
	You have enabled DB2 extended Windows security. You must add DB2 users that need to run DB2 local applications or tools to either the DB2 administrators group or DB2 users group.
	You can connect to the DB2 instance "DB2" using the port number "50000". Record it for future reference.
	Click Next to install additional products.
	Next >

Figure: The Setup is complete dialog box

16. Pop up the **Install additional products** dialog box. If you don't want to install the additional products, click the **Finish** button. If you want to install the additional products, click the **Install** button to install the additional products.



Figure: The Install additional products dialog box

The Catalog of DB2

Catalog is a database connecting process form the client to the server on local or remote. The purpose is to get the catalog information, namely generate the catalog used to assess the database. The system database catalog contains a list and a pointer. You can find the known database through the catalog no matter on local or remote. If there is no catalog info, the application can not connect to the database, so it should catalog before use the DB2.

Catalog includes the following two processes:

- Map the server to the client, namely the catalog node.
- Map the database under the server instances to the client, namely the catalog database.

You can execute the DB2 catalog operation through both the command method and the **Control Center** interface. There are three edit command modes:

- The Command Window with non-interactive mode.
- The **Command Line Processor** with interactive mode.
- The Command Editor with visualization and interactive mode.

The following introduces the detail operation for the two processes.

Node Cataloging

Through the catalog node, the client machine can recognize the server machine, building the mapping from server to the client, which includes how to catalog and anti-catalog the nodes.

In order to make the client distinguish the server, it needs to catalog the node. This will map the system on server and the instances in system to the client; If you want to cancel the mapping from server to client, it needs to anti-catalog node.

Node Cataloging

Node cataloging can map the server systems and instances on system to the client. You can catalog the node through command line or interface operation.

Basic Steps

Method One: Command Method

• Mode One: The **Command Window** with non-interactive mode

Input db2cmd on Run to enter the command window of DB2; You can also enter the command window through Program \rightarrow IBM DB2 \rightarrow DB2COPY1-> Command Line Tools.

Input the node catalog command in the command window:

db2 catalog tcpip node node_name remote server_ip server server_port

• server_port: Input the port number of server to catalog and the default is 50000.

node_name: Input the node name to catalog, namely the instance name of server. The instance name must be unique in one machine. You can input the letter only or the combination of letters and figures. The letter is case insensitive. Note: The instance name can't be DB2 and it doesn't support the special character.

server_ip: Input the IP address of server to catalog.

If catalog the node successfully, the following contents are shown in command window.



• Mode Two: The Command Line Processor with interactive mode

The same with mode one, enter the command line processor through $Program \rightarrow IBM DB2 \rightarrow DB2COPY1 \rightarrow Command Line Tools.$ Input the node catalog command in this processor:

catalog tcpip node node_name remote server_ip server server_port

- node_name: Input the node name to catalog, namely the instance name of server. The instance name must be unique in one machine. You can input the letter only or the combination of letters and figures. The letter is case insensitive. Note: The instance name can't be DB2 and it doesn't support the special character.
- server_ip: Input the IP address of server to catalog.
- **server_port**: Input the port number of server to catalog and the default is 50000.

Compared to the **Command Window**, the commands in "Command Line Processor" only lack db2 key word.

If catalog the node successfully, the following contents are shown in command line processor.



• Mode Three: The Command Editor with visualization and interactive mode

The same with mode one, enter the command line processor through Program - >IBM DB2 -> DB2COPY1 -> Command Line Tools. Input the database catalog command in this processor; You can also open this window through Control Center and Open with : Program -> IBM DB2 -> DB2COPY1 -> General Administration Tools -> Control Center.

Input the node catalog command in the command editor window and the command

format is the same as mode two. Then click the button to execute the command; Or you can select the **selected item** -> **execute**. The command result is shown in the window below. If something goes wrong, it will give the error info. If the result catalog successfully, the following contents are shown in the command editor.

G Command Editor 1 - DB2COPY1	
Command Editor Selected Edit View Tools Help	
	<
Commands	
🕨 🔲 Target 🕢 🗸 Add	
catalog tcpip node DB remote 172.16.119.49 server 50000	
If the nodename parameter is typed correctly, continue processing. Uncatalog the cataloged node in the node directory if the node cataloged information is no longer valid and resubmit the command. If the node cataloged information is valid, define a new node name and resubmit the command using the new node name.	^
Commands Entered	II. V
Statement termination character ;	

Method Two: Interface Execution Method

We can also catalog the DB2 node in **Control Center** through human computer interaction of interface method. It has two processes: the server node cataloging and the instances of server cataloging. The **Control Center** open with: **Program** -> **IBM DB2** -> **DB2COPY1** -> **General Administration Tools** -> **Control Center**.

1. Server node catalog.

Right click All System node in the left directory tree of the control center, and select Add. Pop up the Add System dialog box and set the system type, system name, host name, node name, operating system, connection protocol and notes of the server, as shown below. Click OK to finish.

Ro Control Center - DB2COPY1	
Control Center Selected Edit View Tools Help	
‱ ⅔ № ⊡ ≫ ഈ 8 ⅔ 📮 < ☷ < ?	<
Object View	
All Systems	
All Systems All Databases	nt 😄 Protocol 🗢 Protocol paramet
System Type	ork LOCAL Instance name=D
System name 172.16.119.49 Discover	
Host name 172.16.119.49 View Details	
Node name ENGINE	
Operating system Windows	•
Protocol TCP/IP	Default View View
Comment	<u> Help</u> ×
OK Cancel Apply Reset Show Command Help	bove to display more details.

Besides, when set the system name and host name for the server, you can search the system by clicking the **Discover** button on the right of system name. Select the server system to connect, as shown below. At this time, other contents will be generated automatically.

Po Dis	covery Search				x
Sele	ct an instance f	rom the discovery	/ res	sults.	
Sys	tem 🔶	Protocol	Ş	Protocol Parameters	
ENGI	TE	ICP/IP		Host name=engine	Â
LIWEI	ILONG	ICP/IP	Ho	st name =liwenlong	Ξ
LIXC-	-PC	TCP/IP	Ho	st name=lixc=PC	
SM-Ю	t in the second s	ICP/IP	Ho	stname= _{sm} -hx	
WUKK-	-PC	TCP/IP	Ho	st name =wukk=PC	-
				OK Cancel He	p

2. The catalog of instances in server.

Right click the **Instance** node under the server and select the **Add**. Pop up the **Add Instance** dialog box and set the instance name, instance node name, operating system, connection protocol, host name and port number that the target database belongs to, as shown below. Click "OK" to finish.

Control Center - DB2COPY1		
Control Center Selected Edit Vi	ew Tools Help	
🔓 😚 🍄 🖬 🔤	Ro Add Instance	{
Control Center Cobject View Control Center Control Center	Protocol TCP/IP Protocol TCP/IP Protocol information Instance Host name 172.16.119.49 View Details Service name engine	
	Port number Retrieve Enable TCP/IP SOCKS security Comment OK Cancel Apply Reset Show Command Help	Default View View

When set the instance, you can search the system by clicking the **Discover** button, and select the instance name to connect, as shown below.

Discovery Search				l	х	J
Select an instance from the	discovery results.]
Remote instance name ⇔	Protocol	≑	Protocol Parameters ⇔	System	:	
DB2	TCP/IP		Host name=Elma-PC,	172.16.119.49)	
•					۰.	
			ОКС	ancei H	elp	

After finish the node catalog between database and the client through the method above, you can view the catalog result in the **Control Center**. Right click the **Control Center** node of the directory tree, and select the **Refresh** item. The

result is shown as below. You can see that the server has already connected with the client.

Rontrol Center - DB2COPY1	
Control Center Selected Edit View Tools Help	
₽ % 8 ⊡ > @ % ₽ <	
Object View	
Control Center	172.16.119.49 - DBTEST - Databases
All Systems	Name
ELMA-PC	
in 172.16.119.49	
🖻 ··· 🛅 Instances	
⊕ \ DB	
I all Databases	0 of 0 items displayed ↓ Z S · · · · · · · · · · · · · · · · · ·
	🗅 Databases () Help X
	Actions: Select an object from the list above to display more details.
	Create New Database
]

Node Anti-cataloging

If cancel the mapping the server to the client, it needs to node anti-cataloging. You can finish the node anti-cataloging through the methods of command line or interface operation.

Basic Steps

Command Method

- Mode one: The Command Window of non-interactive mode
 - In the Command Window, the command of node anti-cataloging is as below:

db2 uncatalog node node_name

• **node_name**: The server name that needs to node anti-cataloging.

• Mode Two: The Command Line Processor with interactive mode

The commands in **Command Line Processor** and **Command Editor** are shown as below:

uncatalog node node_name

Interface Execution Method

In the directory tree of **Control Center**, right click the database that needs to database anti-cataloging and select the **Remove**.



Database Cataloging

After finish cataloging node, it needs to catalog the database, which is used to map the database under the server instance to the client in the form of alias. Include two parts: database cataloging and database anti-cataloging.

In order to access the database on server, after finish node cataloging, you should catalog the database. Cataloging database is to map the database under the server instance to the client in the form of alias; Canceling the mapping needs to anti-catalog the database.

Database Cataloging

After finish the node cataloging, you can catalog the database. Map the database underground the server instances to the client in the way of alias.

Basic Steps

Method One: Command Method

The same with the method of node catalog, you can catalog the database through following three command mode.

• Mode One: The **Command Window** with non-interactive mode

Input db2cmd on Run to enter the command window of DB2; You can also enter the command window through Program \rightarrow IBM DB2 \rightarrow DB2COPY1-> Command Line Tools.

Input the database catalog command in the command window:

db2 catalog db db_name as db_alias at node node_name

- **db_name**: Input the database name to catalog. You can input the letters only or the combination of letters and figures. The letters are case-insensitive and doesn't support the special character.
- o **db_alias**: Input the database catalog to the alias used by the client.
- node_name: Input the node name that the sever to catalog belongs to.

If catalog the node successfully, the following contents are shown in command window.



• Mode Two: The **Command Line Processor** with interactive mode

The same with mode one, enter the command line processor through $Program \rightarrow IBM DB2 \rightarrow DB2COPY1 \rightarrow Command Line Tools.$ Input the database catalog command in this processor:

catalog db db_name as db_alias at node node_name

• **db_name**: Input the database name to catalog. You can input the letters only or the combination of letters and figures. The letters are case-insensitive and doesn't support the special character.

- o **db_alias**: Input the database catalog to the alias used by the client.
- \circ $\$ node_name: Input the node name that the sever to catalog belongs to.

Compared to the **Command Window**, the commands in "Command Line Processor" only lack db2 key word.

If catalog the database successfully, the following contents are shown in command line processor.



• Mode Three: The Command Editor with visualization and interactive mode

The same with mode one, enter the command line processor through **Program** -> IBM DB2 -> DB2COPY1 -> Command Line Tools. Input the database catalog command in this processor; You can also open this window through Control Center and Open with: Program -> IBM DB2 -> DB2COPY1 -> General Administration Tools -> Control Center.

Input the node catalog command in the command editor window and the command

format is the same as mode two. Then click the button to execute the command; Or you can select the **selected item** -> **execute**. The command result is shown in the window below. If something goes wrong, it will give the error info. If the result catalog successfully, the following contents are shown in the command editor.



Interface Execution Method

Right click the database under the server instances, and select the Add. Set the database name, alias etc. in the pop-up Add Database dialog box. The database name can be searched through the Discover button, as shown below. Click OK to finish the mapping from database to the client.

Control Center - DB2COPY1		
Control Center Selected Edit View Tools	Help	
% % ⊠ ≫ 🗐 🛛 %	₽ < 0 = < 0	<
Object View		
Control Center	R Add Database	
🚊 🗠 🛅 All Systems	172 16 119 49 - DB2	
🖃 🗁 Instances		
DB2TEST (DB2)	Database name ENGBASE Discover	
🗄 💼 Databases	Alias engbase	
i⊞… 🚰 ELMA-PC	Commont	
🗄 ··· 🛅 All Databases		
	Authentication	
	Type Value in server's DBM configuration we want the server's DBM configuration we w	View
	Principal name	
		(?) Help X
	var	nced
	OK Cancel Apply Reset Show Command Help	
	Ro Discovery Search	
	Select a database from the discovery results.	
	Database Alias 💠 Database Name 💠 Target Database Name 🖨 Comment	
	DBTEST DBTEST	
	NEWTEST NEWTEST	
	OLDTEST OLDTEST	
	TOOLSDB TOOLSDB	
	TST TST	

After establish the database catalog between database under the server instances and the client through the method above, you can view the catalog result in the **Control Center**. Right click the **Control Center** node of the directory tree, and select the **Refresh** item. The result is shown as below. You can see that the server has already connected with the client.

Ro Control Center - DB2COPY1			
Control Center Selected Edit View Tools Help			
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Dbject View			
Control Center	172.16.119.49 - DB2TEST (DB2) - ENGBASE		
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	16 of 16 items displayed ↓ ^A _Z ♀ ↔	🛱 🎗 Default View	▲ View
	Database - ENGBASE		<u> Help</u> x
	Alias name : ENGBASE Not Connected System : 172.16.119.49 Type : Remote	<u> </u>	onnect
	Actions:		
	Application List		
	Design Advisor		
	Activity Monitor		
	Create New Database		

Database Anti-cataloging

If cancel the mapping from database to the client, it needs to database anticataloging. You can execute the commands of database anti-cataloging through command line or interface operation to finish anti-cataloging the database.

Basic Steps

Command Method

• Mode One: The Command Window with non-interactive mode

In the "Command Window", the commands of database anti-cataloging are shown below:

db2 uncatalog db db_alias

- db_alias: The database alias that needs to be node anti-cataloging.
- Mode Two: The "Command Line Processor" with interactive mode

The commands in **Command Line Processor** and **Command Editor** are shown as below:

uncatalog db db_alias

Interface Execution Method

In the directory tree of **Control Center**, right click the database that needs to database anti-cataloging and select the **Remove**.

Connect Database

After finish the node cataloging and database cataloging, connect the databases on server and the client.

Command Method

• The commands in **command window** are shown as follows:

db2 connect to db_alias user user_name using user_password

- **db_alias**: Input the database catalog to the alias used by the client.
- **user_name**: Input the user name of server to catalog.
- user_password: Input the password of server to catalog.
- The commands in Command Line Processor and Command Editor are shown as below:

connect to db_alias user user_name using user_password

If connected the database successfully, the following contents are shown in command window.

C:\Program F	iles\IBM\SQLLIB\BIN>db2	connect	to	engbase	user	map	using	map
Database o	connection information							
Database Server	=DB2/NT 9.7.4							
SQL Identifier	=MAP							
Local Database Alia	as =ENGBASE							

Interface Execution Method

Right click the database to be connected in the directory tree in **Control Center**. Select **Connect** and pop up the **Connect** dialog box. Input the server name and password, and click **OK** to finish. You can view the connecting status of mapping server in the **Control Center**, as shown below:



Import and Export DB2 Data

In the DB2 database, we can import and export the data through the commands. The following introduces the two process in detail.

Export data from the database

- 1. Sign in the operating system as the DB2 database user.
- 2. Create a new empty folder, which is used to store the data exported from the server database.
- Execute the db2cmd command in the Run to enter the command window. And use the cd command to enter the folder which is stores the data (namely the new folder).
- 4. Execute the following command and export the statement:

db2look -d dbname -e -c -o *.sql -i username -w password

- **dbname**: The name of server database.
- *.wql: The sql file of exported statements for building table.
- o **username**: The user name of server database.
- **password**: The password of server database.
- 5. Execute the following command and export the data of data table:

db2move dbname export>*.log -u username -p password

6. After execute these commands, the data will be imported to the new folder.

Import the data into the database

- 1. Sign in the operating system as the DB2 database user.
- 2. Create a new empty folder, which is used to store the data imported to the server database.
- 3. Execute the **db2cmd** command in the **Run** to enter the command window. And use the cd command to enter the folder which is stores the data (namely the new folder).
- 4. Execute the following command and import to the datasheet:

db2 -tvf *.sql

5. Execute the following command and import to the data of data table:

db2move dbname import -u username -p password

6. After execute the command, the data will be imported into the database of server.

Note

About authorization. When export the DB2 database, it needs to give the corresponding permissions to the users. Here it gives the administrator permission of db2admin.