

Power  
Week

# Université IBM i 2019

22 et 23 mai

IBM Client Center Paris



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Power  
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## S41- La nouvelle solution DB2 Mirror for i – partie 2 : démonstration

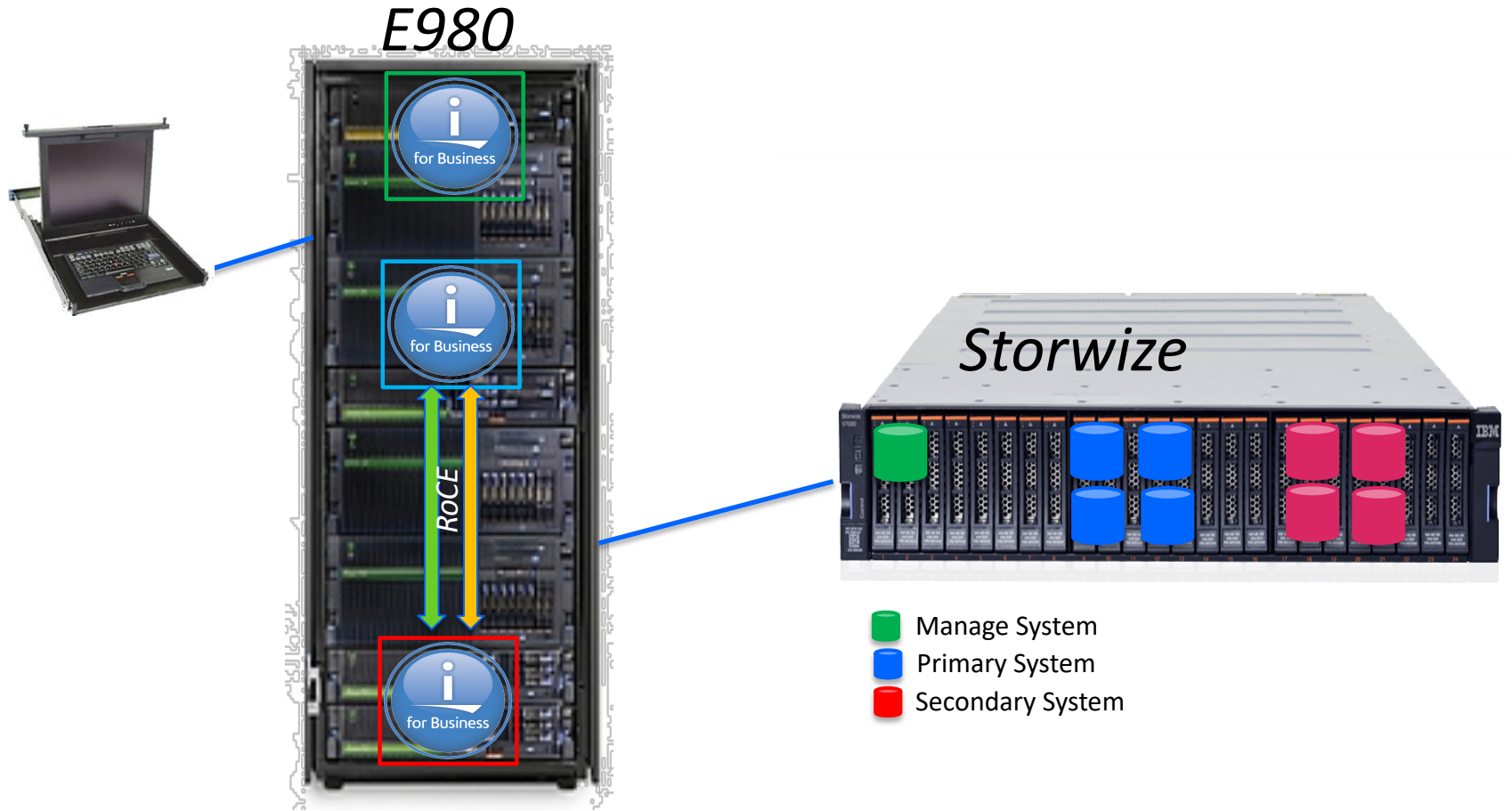
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## S41- La nouvelle solution DB2 Mirror for i – partie 2 : démonstration

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# Infrastructure



# Welcome to IBM Db2 Mirror for i



User Name:

Password:

**Log in**

# W E R C

The image features the letters 'W', 'E', 'R', and 'C' in a large, bold, sans-serif font. Each letter is filled with a different photograph of a diverse group of business professionals. The 'W' shows a woman with dark hair in a green top. The 'E' shows a man with a mustache in a patterned green shirt. The 'R' shows a woman with dark hair in a light blue top, resting her chin on her hands. The 'C' shows a man in a light blue suit and yellow tie. To the right of the 'C' is a vertical strip showing a man with glasses in a blue suit. The letters have a slight drop shadow.





**Power  
Week**

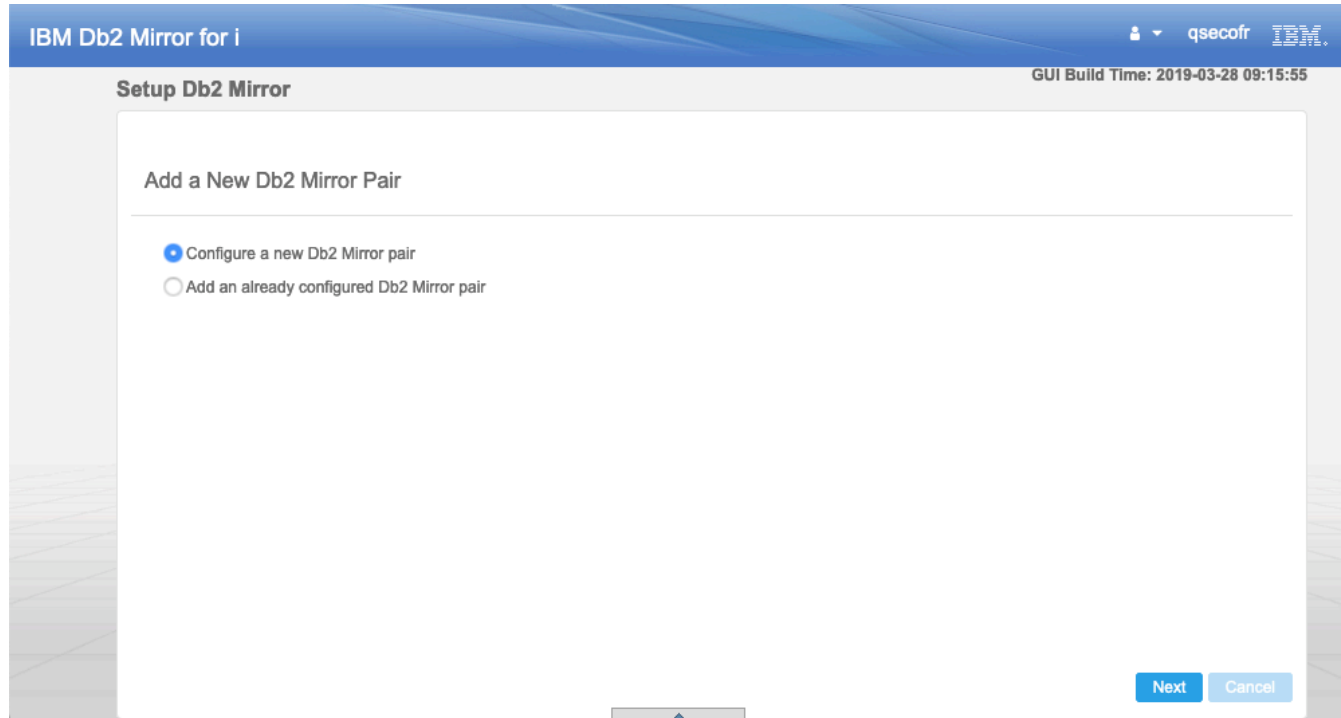
**Université IBM i**

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# **DB2 Mirror Setup screens**

**IBM**

# Setup DB2 Mirror



IBM Db2 Mirror for i qsecofr IBM

GUI Build Time: 2019-03-28 09:15:55

### Setup Db2 Mirror

Add a New Db2 Mirror Pair

- Configure a new Db2 Mirror pair
- Add an already configured Db2 Mirror pair

[Next](#) [Cancel](#)



# Setup DB2 Mirror

IBM Db2 Mirror for i qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror

Source and Copy Node Configuration ?

**HMC Information**

Node Information

Cloning Method

Cluster Information

Time Server

The diagram illustrates the Source and Copy Node Configuration. At the top, an HMC (Hardware Management Console) is connected to two nodes: a Source node and a Copy node. The Source node contains three applications (App 1, App 2, App 3) and is connected to a DISK. The Copy node contains CPU Memory and is also connected to a DISK. A double-headed arrow labeled 'ROCE' connects the Source node and the Copy node. A red arrow labeled 'Clone Source to Copy' points from the Source node to the Copy node.

### Setup Configuration

- Managed by one or two HMCs
- Two Power servers with hardware resource configured
  - Source Node
    - Running IBM i with the production workload configured and running
  - Copy Node
    - LPAR created
      - Assigned CPU & Memory
      - Storage allocated

In this phase, the GUI will guide you through selecting the LPARs from the HMC as well as collect the necessary system and networking information that will be set automatically once the clone process has been completed.

Do not show



# Setup DB2 Mirror

IBM Db2 Mirror for i qsecofr IBM

GUI Build Time: 2019-03-28 09:15:55

### Setup Db2 Mirror

Source and Copy Node Configuration

**HMC Information** Are source and copy managed on the same HMC?  Yes  No

Node Information

Cloning Method

Cluster Information

Time Server

**HMC Information:**

HMC Address:

User:

Password:

Select from the HMC LPARs list:

**Certificate Install Confirmation**

**Note:** The following certificate needs to be added to your jvm truststore to proceed.

SSH connection with HMC

**i** DBM\_101001: Getting HMC certificate

10.3.60.116:2006/Db2Mirror/#

# Setup DB2 Mirror

Select from HMC LPAR list ✕

Selected Source: **LPAR\_SYSA**

- ▼ DORKING
  - LPAR\_GUI
  - LPAR\_SYSA**
  - LPAR\_SYSB

Selected Copy: **LPAR\_SYSB**

- ▼ DORKING
  - LPAR\_GUI
  - LPAR\_SYSA
  - LPAR\_SYSB**








# Setup DB2 Mirror

IBM Db2 Mirror for i qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror



Source and Copy Node Configuration ?

**HMC Information**

Node Information

Cloning Method

Cluster Information

Time Server

Are source and copy managed on the same HMC?

**HMC Information:**

HMC Address:

User:

Password:

**Select from the HMC LPARs list:**

Source:

Copy:

i⚙DBM\_101016: Loading copy node IP Address details ✕



# Setup DB2 Mirror

The screenshot shows the 'Setup Db2 Mirror' GUI. At the top, it says 'IBM Db2 Mirror for i' and 'qsecofr IBM'. The main title is 'Setup Db2 Mirror' with a 'GUI Build Time: 2019-04-20 22:31:40' timestamp. A navigation sidebar on the left includes 'HMC Information', 'Node Information', 'Cloning Method', 'Cluster Information', and 'Time Server'. The main content area is titled 'Source and Copy Node Configuration'. It contains a question 'Are source and copy managed on the same HMC?' with 'Yes' and 'No' buttons. Below this is a 'Specify Accessible Host Name or IP Address' field with an error message: 'DBM\_305002: Host name lpar\_sysa is unknown.' and a 'Details' link. A list of instructions follows: 'Ensure the following: Specify the accessible host name or IP address for source node LPAR\_SYSA; Host servers are running. To start all host servers run the following command: STRHOSTSVR SERVER(\*ALL); Specify the user profile that can be authenticated to the source node'. There are input fields for 'Host Name or IP Address: LPAR\_SYSA', 'User Name', and 'Password'. An 'Ok' button is visible. A 'Next' button is at the bottom right.

IBM Db2 Mirror for i qsecofr IBM  
GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror

DBM\_305002: Host name lpar\_sysa is unknown. [Details](#)

### Source and Copy Node Configuration

Are source and copy managed on the same HMC?

Specify Accessible Host Name or IP Address

Ensure the following:

- Specify the accessible host name or IP address for source node LPAR\_SYSA
- Host servers are running. To start all host servers run the following command: STRHOSTSVR SERVER(\*ALL)
- Specify the user profile that can be authenticated to the source node

Select Host Name or IP Address: LPAR\_SYSA

User Name: .....

Password: .....

Ok

Next

Host name not Lpar name










# Setup DB2 Mirror

IBM Db2 Mirror for i qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror



### Source and Copy Node Configuration ?

HMC Information

**Node Information**


Cloning Method

Cluster Information

Time Server

**Source**  
Host Name  
IP Address  
Gateway  
System Name  
Domain Name  
DNS Servers

ROCE



**Copy**  
Host Name  
IP Address  
Gateway  
System Name  
Domain Name  
DNS Servers

**Node Information**

Each system is a fully functioning IBM i. These two nodes are completely separate systems that are connected via the Db2 Mirror technology. Once the cloning process has been completed, there are a number of attributes that will need to be updated to ensure each server is unique.

The following attributes are updated during the initial IPL after the clone:

- Host Name
- IP Address
- Gateway
- System Name
- Domain Name
- DNS Servers

This page collects the necessary information and it is stored in  Do not show

# Setup DB2 Mirror

IBM Db2 Mirror for i qsecofr IBM

Setup Db2 Mirror GUI Build Time: 2019-04-20 22:31:40

### Source and Copy Node Configuration ?

Specify the system information for each node in this Db2 Mirror pair.

**HMC Information**

**Node Information**

Cloning Method

Cluster Information

Time Server

Source LPAR\_SYSA - Primary

**Host Name:**

**IP Address:**

**Communication Port:**

**Line Description:**

**Subnet Mask:**

**Gateway:**

**System Name:**

**Domain Name:**

**DNS Servers:**

Copy LPAR\_SYSB - Secondary

i The copy node is not configured, enter the following details that will be used to setup the copy node after the system clone is complete.

**Host Name:**

**IP Address:**

**Communication Port:**

**Line Description:**

**Subnet Mask:**

**Gateway:**

**System Name:**

**Domain Name:**

**DNS Servers:**  +  
 -

PreviousNext








# Setup DB2 Mirror

IBM Db2 Mirror for i qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror



### Source and Copy Node Configuration ?

Specify the system information for each node in this Db2 Mirror pair.

#### Source LPAR\_SYSA - Primary

**Host Name:**

**IP Address:**

**Communication Port:**

**Line Description:**

**Subnet Mask:**

**Gateway:**

**System Name:**

**Domain Name:**

**DNS Servers:**

#### Copy LPAR\_SYSB - Secondary

! The copy node is not configured, enter the following details that will be used to setup the copy node after the system clone is complete.

**Host Name:**

**IP Address:**  <<

**Communication Port:**  ▾

**Line Description:**

**Subnet Mask:**

**Gateway:**

**System Name:**

**Domain Name:**

**DNS Servers:**  +  
 -

>>

PreviousNext

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SOURCE Secondary: TARGET User: qsecofr IBM

Setup Db2 Mirror GUI Build Time: 2019-04-20 22:31:40

Source and Copy Node Configuration ?

- HMC Information
- Node Information
- Cloning Method**
- Cluster Information
- Time Server

*IPL Source During clone ?*

**Cloning Method**

There are several options when it comes to creating the replica of the source for the copy node.

The following cloning methods are supported:

- Flash Copy - If the storage for both nodes are on the same storage server, flash copy can be leveraged to create an 'instant' copy of the source node.
- Remote Copy - The remote copy or global copy support for the IBM storage servers are used to create the replica.
- Manual Copy - This is the option non-IBM storage must use. The user will be guided through the process of collecting the necessary IBM i attributes, but all the storage copying must be done manually.

The cloning can be done either cold or warm:

- Cold cloning - the source node is IPLed during the cloning process. This ensures the most accurate copy of the source node because it is powered off.
- Warm cloning - The source node remains up and running during the cloning process.

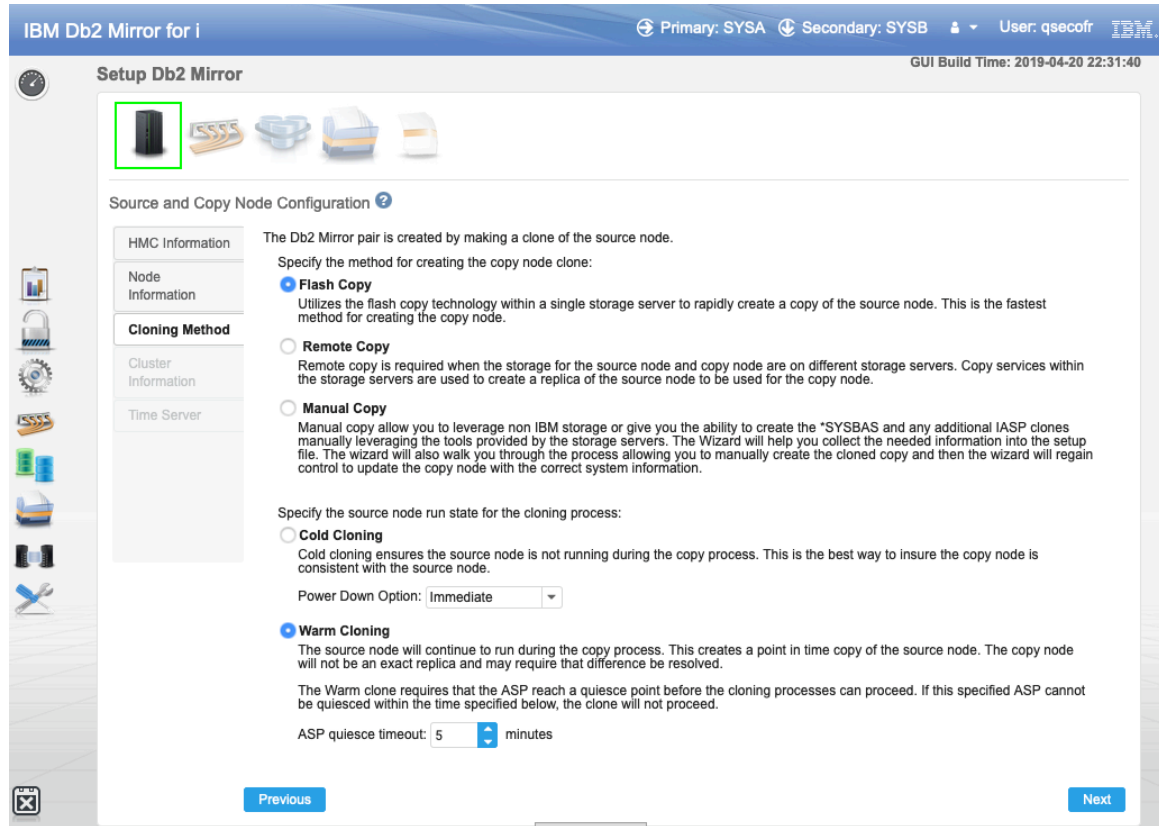
Do not show

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# Setup DB2 Mirror



IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

### Setup Db2 Mirror

Source and Copy Node Configuration

The Db2 Mirror pair is created by making a clone of the source node.  
Specify the method for creating the copy node clone:

- Flash Copy**  
Utilizes the flash copy technology within a single storage server to rapidly create a copy of the source node. This is the fastest method for creating the copy node.
- Remote Copy**  
Remote copy is required when the storage for the source node and copy node are on different storage servers. Copy services within the storage servers are used to create a replica of the source node to be used for the copy node.
- Manual Copy**  
Manual copy allow you to leverage non IBM storage or give you the ability to create the \*SYSBAS and any additional IASP clones manually leveraging the tools provided by the storage servers. The Wizard will help you collect the needed information into the setup file. The wizard will also walk you through the process allowing you to manually create the cloned copy and then the wizard will regain control to update the copy node with the correct system information.

Specify the source node run state for the cloning process:

- Cold Cloning**  
Cold cloning ensures the source node is not running during the copy process. This is the best way to insure the copy node is consistent with the source node.  
Power Down Option:
- Warm Cloning**  
The source node will continue to run during the copy process. This creates a point in time copy of the source node. The copy node will not be an exact replica and may require that difference be resolved.  
The Warm clone requires that the ASP reach a quiesce point before the cloning processes can proceed. If this specified ASP cannot be quiesced within the time specified below, the clone will not proceed.  
ASP quiesce timeout:  minutes

Navigation: Previous Next

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SOURCE Secondary: TARGET User: qsecofr IBM

Setup Db2 Mirror GUI Build Time: 2019-04-20 22:31:40

Source and Copy Node Configuration ?

- HMC Information
- Node Information
- Cloning Method
- Cluster Information**
- Time Server

**Cluster Information**

A cluster is a required component of Db2 Mirror. It is required for IASP management and maintaining quorum data.

Quorum data is cluster wide data that is stored on all the nodes in the cluster. It is used by Db2 Mirror to query status and information about the nodes when they are unable to communicate. To protect the reliability of the quorum data, it is recommended to add a third node to the cluster, known as the quorum server.

Cluster monitors will be leveraged by Db2 Mirror when communication between the nodes has been unexpectedly lost. Cluster monitors provide the capability to query the HMC for the status of the other node. It is not required but highly recommended to configure cluster monitors on the Db2 Mirror nodes. To protect the reliability of the quorum data, it is recommended to configure cluster monitors on additional cluster nodes.

Do not show



# Setup DB2 Mirror

IBM Db2 Mirror for i

Primary: SYSA Secondary: SYSB User: qsecofr

## Setup Db2 Mirror

Source and Copy Node Configuration

Specify the cluster name, device domain name and node information:

Cluster Name: DB2MCLU  
Device Domain Name: DB2MDEVDMN

Source Cluster Information

Cluster Node Name: SYSA  
Cluster Node IP Address: [ ]  
- Select -

Copy Cluster Information

Cluster Node Name: SYSB  
Cluster Node IP Address: [ ] [Update] [Specify]

Additional Quorum Server Information (Optional)

Cluster Node Name: [ ]  
Cluster Node IP Address: [ ]  
qsecofr

Cluster Monitor Information (Optional)

Monitor the copy node from the source and the source node from the copy  
 Monitor both source and copy node from quorum server node

Specify IP Address for Cluster

Copy IP Address: [ ]  
Communication Port: U9080M9S.781C8B8-V9-C2-T1  
Subnet Mask: 255.255.255.0  
Line Description: ETH360  
Gateway: [ ]

Ok Cancel

Previous Next

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SOURCE Secondary: TARGET User: qsecofr IBM

Setup Db2 Mirror GUI Build Time: 2019-04-20 22:31:40

Source and Copy Node Configuration ?

HMC Information

Node Information

Cloning Method

Cluster Information

Time Server

The diagram illustrates the configuration of a Source and Copy node. Both nodes are connected to a central Time Server. The Source node contains App 1, App 2, and App 3, and is connected to a DISK. The Copy node also contains App 1, App 2, and App 3, and is connected to a DISK. The two nodes are connected via ROCE (RDMA over Converged Ethernet).

Time Server

It is important to keep the system clocks synchronized between the Db2 Mirror nodes. The Network Time Protocol (NTP) client will be used to automatically synchronize the system clocks with the network time.

The recommended NTP configuration is to have both nodes configured to reference the same external time server. The time server should ideally be accessible through a reliable and low latency network link to minimize jitter. A site time server is highly recommended for this reason.

Another possible NTP configuration is a chained time server configuration. The source node will be configured to reference an external time server and the copy node will be configured to reference the source node as the preferred time server. The external time server will be configured as a non-preferred time server on the copy node so it will automatically synchronize directly with the external time server whenever the source node is unavailable.

Do not show










# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror





### Source and Copy Node Configuration ?

Note: For a newly added time server, it may take several minutes after starting for the time server to become active and adjusting the time.


Specify Network Time Protocol (NTP) server information for source node:

Time Server Address	Preferred
<input type="text"/>	YES

Specify NTP server information for copy node:

Use the same external time server as the source node

Use source node as the chained time server

 **Warning: DBM\_301109:** The NTP client is running but has not adjusted system time yet. If the time server is just started, wait a few minutes for the NTP client to adjust time and try again. ✕

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SOURCE Secondary: TARGET User: qsecof IBM

GUI Build Time: 2019-04-20 22:31:40

### Setup Db2 Mirror

Network Redundancy Group Configuration

IP Address Pairs

Database

IFS

ReSync

Mgr

Sys Obj

Database

IFS

ReSync

Mgr

Sys Obj

9.5.1.1 — 9.5.1.2

9.5.1.3 — 9.5.1.4

9.5.1.5 — 9.5.1.6

9.5.1.7 — 9.5.1.8

ROCE

ROCE

ROCE

ROCE

9.5.1.11

9.5.1.15

9.5.1.7

9.5.1.13

9.5.1.16

9.5.1.14

9.5.1.18

9.5.1.12

Point to point cables  
Important to know  
what IP address is  
assigned to each port

Network Redundancy Groups

The IP addresses assigned to the RoCE cards are assigned to 5 separate Network Redundancy Groups. An optional configuration includes the use of a switch between the two nodes. This allows the user to have some control over the network resources that are used for various mirroring activities. By default all configured lines are assigned equally to all groups.

Do not show

10.3.60.116:2006/Db2Mirror/#



# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror

Network Redundancy Group Configuration

**IP Address Pairs** Specify IP address pairs that are created on the RoCE network cards between the source and copy nodes for network redundancy group:

Source IP Address	Copy IP Address
<input type="text"/>	<input type="text"/>

Add IP Address Pair

**Source IP Address:**

Address Type: IPV4  
Communication Port: U78D5.ND3.CSS1C22-P1-C1-C1-T1  
Subnet Mask: 255.255.255.0

**Copy IP Address:**

Communication Port: U78D5.ND3.CSS1C22-P1-C3-C1-T1  
Line Description: rocesysb1  
Subnet Mask: 255.255.255.0

Add IP Address Pair

**Source IP Address:**

Address Type: IPV4  
Communication Port: U78D5.ND3.CSS1C22-P1-C1-C1-T2  
Subnet Mask: 255.255.255.0


**Copy IP Address:**

Communication Port: U78D5.ND3.CSS1C22-P1-C3-C1-T2  
Line Description: rocesysb2  
Subnet Mask: 255.255.255.0

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SOURCE Secondary: TARGET User: qsecofr IBM

Setup Db2 Mirror GUI Build Time: 2019-04-20 22:31:40



Storage Configuration ?

**Storage Server**

\*SYSBAS Hosts

IASP Hosts

**Source** **Copy**

App 1 **ROCE** App 1

IFS DB Storage Server IFS DB Storage Server

**Storage Server**

External storage is required for the Db2 Mirror environment.

- IBM Spectrum Virtualize
- DS8000

Specify the IP address and storage server access information.

Do not show

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

### Setup Db2 Mirror

Storage Configuration ?

**Storage Server**

Db2 Mirror supports the following IBM storage systems: IBM Spectrum Virtualize and the DS8000 family of storage servers. IBM Spectrum Virtualize includes the SVC, V5000, V7000 and V9000 storage models.

Specify the storage server information:

DS8000  IBM Spectrum Virtualize

**Storage Server Address:**

**Storage Server User:**

**SSH Private Key:**

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror

Storage Configuration

Specify the host defined on the storage server for copy node:

Source Host	Copy Host
IBMi_V7R4_DB2Mirror_SYSA	IBMi_V7R4_DB2Mirror_SYSB
IBMi_V7R4_DB2Mirror_SYSA_1_49 (100 GiB)	IBMi_V7R4_DB2Mirror_SYSB_1_50 (100 GiB)
IBMi_V7R4_DB2Mirror_SYSA_2_25 (100 GiB)	IBMi_V7R4_DB2Mirror_SYSB_2_28 (100 GiB)
IBMi_V7R4_DB2Mirror_SYSA_3_26 (100 GiB)	IBMi_V7R4_DB2Mirror_SYSB_3_29 (100 GiB)
IBMi_V7R4_DB2Mirror_SYSA_4_27 (100 GiB)	IBMi_V7R4_DB2Mirror_SYSB_4_30 (100 GiB)

Advanced Settings

Specify the flash copy rate for \*SYSBAS:

Background Copy Rate: 150 (2 GB/s)

Clean Rate: 100 (64 MB/s)

Specify the host for the copy node

Host
AIX71-KSYS3-732bb141-000000bb-90695255
ESX1
ESX2
IBMi_PowerHA_Prod
IBMi_PowerHA_iASP
IBMi_PowerVC
IBMi_V7R4_DB2Mirror_SYSB
IBMi_V7R4_DB2Mirror_SYSGUI
IBMi_V7R4_ESP
arcachonvios1fcs0
arcachonvios1fcs1
<b>Selected Host:</b>



Previous Next Refresh Ok Cancel


# Setup DB2 Mirror



IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror







**Storage Configuration** ?

Storage Server

\*SYSBAS Hosts

**IASP Hosts**

Specify IASP information: ?

**DB IASP Only** - Register IASP to only contain database objects.

**IFS IASP Only** - IFS IASP may only be registered once the Db2 Mirror environment is configured and running.

**Ignore** - This IASP will not be cloned.

iasp Name	IASP Usage	Source Host	Copy Host
No records found			

ReloadRefreshVary On






PreviousSave and Continue



# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

Setup Db2 Mirror GUI Build Time: 2019-04-20 22:31:40



### Replication List Configuration

#### Mirror Options

\*SYSBAS

ASIP	Library	Object Type	Name	Replication Criteria
*SYSBASE	*ALL	*ALL	*ALL	<input type="radio"/> Exclude
*SYSBASE	LIB1	*ALL	*ALL	<input checked="" type="radio"/> Include
*SYSBASE	LIB1	*FILE	*ALL	<input type="radio"/> Exclude
*SYSBASE	LIB1	*FILE	MyFile	<input checked="" type="radio"/> Include
*SYSBASE	LIB1	*FILE	MyFile2	<input checked="" type="radio"/> Include

**Source**  
LIB3  
LIB1  
- File1  
- MyFile  
- File2  
- MyFile2  
- DTA1  
- PGM1

ROCE

**Copy**  
LIB4  
LIB1  
- MyFile  
- File4  
- MyFile2  
- DTA1  
- PGM1

#### Replication Criteria List - Default Inclusion State

The RCL defines a set of rules that determine if an eligible object will be synchronously updated on both systems for any Create, Add, Delete or Update operation.

In this example, the default inclusion state is Exclude. By default, no user libraries or objects are to be replicated. A rule has been added to have all objects in the library LIB1 included. A following rule Excludes ALL objects of type \*FILE in library LIB1. Two additional rules have been added to set the two files MyFile and MyFile2 as Included. You can see the object 'File1' is only on the source and object File4 is only on the copy.

The other option is a default inclusion state of Include. This option will cause every mirror eligible object on the system to be replicated. Only objects that have explicit Exclude rules created will not be mirrored. While being very inclusive does have some benefit, there is a potential performance impact that needs to be considered.

Do not show



# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror

Replication List Configuration ?

Mirror Options	Default Inclusion State
*SYSBAS	

**Default Inclusion State**

The objects within \*SYSBAS or an IASP are eligible to be included in the Db2 Mirror environment. The default inclusion state must be set for each before continuing.

**Exclude** - All objects for this group are excluded by default. Additional rules may be added to include specific libraries and objects within this group.

**Include** - All eligible objects for this group libraries and objects from being mirrored.

**Mirror Options Change Confirmation** ✕

DBM\_102007: The IASP \*SYSBAS will be registered with a default inclusion state of INCLUDE.

DBM\_102001: Do you want to proceed ?

✓ Yes ✕ No

Refresh

Previous Next

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

## Setup Db2 Mirror

Replication List Configuration

Mirror Options

\*SYSBAS

Replication Rules	Library	Object Type	Name	Replication State
*SYSBAS	*ALL	*ALL	*ALL	Exclude
*SYSBAS	LIB1	*ALL	*ALL	Include
*SYSBAS	LIB1	*FILE	*ALL	Exclude
*SYSBAS	LIB1	*FILE	MyFile	Include
*SYSBAS	LIB1	*FILE	MyFile2	Include

**Source**

- LIB3
- LIB1
  - File1
  - MyFile
  - File2
  - MyFile2
  - DTA1
  - PGM1

**Copy**

- LIB4
- LIB1
  - MyFile
  - File4
  - MyFile2
  - DTA1
  - PGM1

ROCE

### Replication Criteria List - Assign Rules

The RCL defines a set of rules that determine if an eligible object will be synchronously updated on both systems for any Create, Add, Delete or Update operation.

In this example, the default inclusion state is Exclude. By default, no user libraries or objects are to be replicated. A rule has been added to have all objects in the library LIB1 included. A following rule Excludes ALL objects of type \*FILE in library LIB1. Two additional rules have been added to set the two files MyFile and MyFile2 as Included. You can see the object 'File1' is only on the source and object File4 is only on the copy.

Do not show



# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

Setup Db2 Mirror GUI Build Time: 2019-04-20 22:31:40

Replication List Configuration **Rules** **Inspect** **Active** **Pending** **Active/Pending** **All Pending Groups**

Mirror Options **\*SYSBAS**

Add a Rule **Library Name** **Object Type** **Object Name** **Exclude** **In**

Show All Rules

- Show All Rules
- User Defined Rules Only
- System Defined Rules Only

State	Library Name	Object Type	Object Name	Replication State	Rule Group
🔒	*ALL	*ALL	*ALL	➕ Include	Active
🔒	#CGULIB	*ALL	*ALL	➖ Exclude	Active
🔒	#COBLIB	*ALL	*ALL	➖ Exclude	Active
🔒	#DFULIB	*ALL	*ALL	➖ Exclude	Active
🔒	#DSULIB	*ALL	*ALL	➖ Exclude	Active
🔒	#ISDARY	*ALL	*ALL	➖ Exclude	Active

Filter All Filter All All All

1 2 3 100 Total Rows: 273






Previous Save and Continue

# Setup DB2 Mirror

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-20 22:31:40

### Setup Db2 Mirror

**Summary**

**Configuration**

**Cloning Method:** Flash Copy, Warm Cloning  
**Cluster Name:** DB2MCLU  
**Device Domain Name:** DB2MDEVDMN  
**Node Information:**

**Source - Primary**

HMC Address:

Host Name:

System Name:

Domain Name:

DNS Servers:

Cluster Node Name:

Cluster Node IP Address:

Time Server:

Storage Server:

**Copy - Secondary**

HMC Address:

Host Name:

System Name:

Domain Name:

DNS Servers:

Cluster Node Name:

Cluster Node IP Address:

Time Server:

Storage Server:

**Primary IP Address:**

IP Address	Communication Port	Subnet Mask	Gateway
<input type="text"/>	U9080.M9S.781C8B8-V8-C2-T1	255.255.255.0	<input type="text"/>
<input type="text"/>	U78D5.ND3.CSS1C22-P1-C1-C1-T2	255.255.255.0	<input type="text"/>
<input type="text"/>	U78D5.ND3.CSS1C22-P1-C1-C1-T1	255.255.255.0	<input type="text"/>

**Secondary IP Address:**

IP Address	Communication Port	Subnet Mask	Gateway
<input type="text"/>	U9080.M9S.781C8B8-V9-C2-T1	255.255.255.0	<input type="text"/>
<input type="text"/>	U78D5.ND3.CSS1C22-P1-C3-C1-T1	255.255.255.0	<input type="text"/>
<input type="text"/>	U78D5.ND3.CSS1C22-P1-C3-C1-T2	255.255.255.0	<input type="text"/>

**Network Redundancy Group IP Address Pairs:**



Source IP Address	Copy IP Address
<input type="text"/>	<input type="text"/>

**\*SYSBAS:**

Source Host	Source Volume	Copy Host	Copy Volume
IBMI_V7R4_DB2Mirror_SYSA	▶ Total 4	IBMI_V7R4_DB2Mirror_SYSB	▶ Total 4

Previous
Finish

# Setup DB2 Mirror

 DBM\_101009: Validating setup configuration which may take several minutes 

## Setup Progress

### Setting up

**Note:** Depending on the parameters selected and the system configuration, the setup may be a very long running process. The progress of the setup can be followed on this dialog page or can be retrieved at a later time by clicking on the View Setup Details link from the Actions drop down or Setup left navigation on the Home page.

```
Tue May 07 10:38:38 UTC 2019 FINEST [MRDB setup tools] <245> : Informational:FlashCopy Mapping, id [17], successfully created@@Diagnostic:
Tue May 07 10:38:38 UTC 2019 FINEST [MRDB setup tools] <245> : Running IBM Spectrum Virtualize command prestartfcconsistgrp mrdbfccgrp705
Tue May 07 10:38:39 UTC 2019 FINEST [MRDB setup tools] <245> : Informational:Diagnostic:
Tue May 07 10:38:39 UTC 2019 FINEST [MRDB setup tools] <245> : Running IBM Spectrum Virtualize command lsfccconsistgrp -delim : mrdbfccgrp705
Tue May 07 10:38:40 UTC 2019 FINEST [MRDB setup tools] <245> : Informational:id:5@@name:mrdbfccgrp705@@status:prepared@@autodelete:on@@start_time:@@FC_map
Tue May 07 10:38:40 UTC 2019 FINEST [MRDB setup tools] <245> : Start session for ASP *SYSBAS
Tue May 07 10:38:40 UTC 2019 FINEST [MRDB setup tools] <245> : The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 07 10:38:40 UTC 2019 FINEST [MRDB setup tools] <245> : Suspend new transactions for ASP *SYSBAS
Tue May 07 10:38:41 UTC 2019 FINEST [MRDB setup tools] <245> : The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 07 10:38:41 UTC 2019 INFO [MRDB setup tools] <245> : Suspend for ASP *SYSBAS was successful
Tue May 07 10:38:41 UTC 2019 FINEST [MRDB setup tools] <245> : Run CALL QmrdDeleteOTLEntries
Tue May 07 10:38:53 UTC 2019 FINEST [MRDB setup tools] <245> : Start warm clone was successful, the asp number is 0
Tue May 07 10:38:53 UTC 2019 FINEST [MRDB setup tools] <245> : Forcing write ASPs
Tue May 07 10:38:53 UTC 2019 FINEST [MRDB setup tools] <245> : The action is force write
Tue May 07 10:38:55 UTC 2019 FINEST [MRDB setup tools] <245> : Force write for ASP *SYSBAS was successful
Tue May 07 10:38:55 UTC 2019 FINEST [MRDB setup tools] <245> : Forcing write ASPs was successful
Tue May 07 10:38:55 UTC 2019 FINEST [MRDB setup tools] <245> : Running IBM Spectrum Virtualize command startfcconsistgrp mrdbfccgrp705
Tue May 07 10:38:56 UTC 2019 FINEST [MRDB setup tools] <245> : Informational:Diagnostic:
Tue May 07 10:38:56 UTC 2019 FINEST [MRDB setup tools] <245> : Resume new transactions for ASP *SYSBAS
Tue May 07 10:38:57 UTC 2019 FINEST [MRDB setup tools] <245> : The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 07 10:38:57 UTC 2019 INFO [MRDB setup tools] <245> : Resume for ASP *SYSBAS was successful
Tue May 07 10:38:57 UTC 2019 FINEST [MRDB setup tools] <245> : Write changes to auxiliary storage for ASP *SYSBAS
Tue May 07 10:38:57 UTC 2019 FINEST [MRDB setup tools] <245> : The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 07 10:38:57 UTC 2019 FINEST [MRDB setup tools] <245> : End session for ASP *SYSBAS
Tue May 07 10:38:58 UTC 2019 FINEST [MRDB setup tools] <245> : The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 07 10:38:58 UTC 2019 INFO [MRDB setup tools] <245> : The status of partition LPAR_SYSB(52C1399D-33DF-4403-9BF0-981A87EED3A4) is not activated
Tue May 07 10:38:58 UTC 2019 INFO [MRDB setup tools] <245> : Power on partition LPAR_SYSB(52C1399D-33DF-4403-9BF0-981A87EED3A4) starting
Tue May 07 10:38:58 UTC 2019 FINEST [MRDB setup tools] <245> : Setup copy node power on process started
Tue May 07 10:38:59 UTC 2019 FINEST [MRDB setup tools] <245> : Log job started
Tue May 07 10:38:59 UTC 2019 FINEST [MRDB setup tools] <245> : <entry xmlns="http://www.w3.org/2005/Atom" xmlns:ns2="http://a9.com/-/spec/opensearch/1.1/" xmlns:ns3="h
Tue May 07 10:38:59 UTC 2019 FINEST [MRDB setup tools] <245> : Log job ended
Tue May 07 10:38:59 UTC 2019 FINEST [MRDB setup tools] <245> : Remote HMC power on job status is RUNNING, and the partition name is LPAR_SYSB
```

 Refresh

 Close

# Setup DB2 Mirror

∨ IBMi_V7R4_DB2Mirror_SYSA_1			100.00 GiB		
IBMi_V7R4_DB2Mirror_SYSB_1	↻ Copying	<div><div style="width: 19%;">19%</div></div>		mrdbfccgrp705	May 7, 2019, 10:39:30 AM
IBMi_V7R4_DB2Mirror_SYSA_BACKUP_1	✓ Copied	<div><div style="width: 100%;">100%</div></div>		IBMi_V7R4_DB2Mir...	May 7, 2019, 8:44:31 AM
∨ IBMi_V7R4_DB2Mirror_SYSA_2			100.00 GiB		
IBMi_V7R4_DB2Mirror_SYSB_2	↻ Copying	<div><div style="width: 46%;">46%</div></div>		mrdbfccgrp705	May 7, 2019, 10:39:30 AM
IBMi_V7R4_DB2Mirror_SYSA_BACKUP_2	✓ Copied	<div><div style="width: 100%;">100%</div></div>		IBMi_V7R4_DB2Mir...	May 7, 2019, 8:44:31 AM
∨ IBMi_V7R4_DB2Mirror_SYSA_3			100.00 GiB		
IBMi_V7R4_DB2Mirror_SYSA_BACKUP_3	✓ Copied	<div><div style="width: 100%;">100%</div></div>		IBMi_V7R4_DB2Mir...	May 7, 2019, 8:44:31 AM
∨ IBMi_V7R4_DB2Mirror_SYSA_4			100.00 GiB		
IBMi_V7R4_DB2Mirror_SYSA_BACKUP_4	✓ Copied	<div><div style="width: 100%;">100%</div></div>		IBMi_V7R4_DB2Mir...	May 7, 2019, 8:44:31 AM
IBMi_V7R4_DB2Mirror_SYSB_4	↻ Copying	<div><div style="width: 28%;">28%</div></div>		mrdbfccgrp705	May 7, 2019, 10:39:30 AM



# Setup DB2 Mirror

Setup Progress

✘ Setup failed. Setup may be continued once error has been manually corrected.

**Note:** Depending on the parameters selected and the system configuration, the setup may be a very long running process. The progress of the setup can be followed on this dialog page or can be retrieved at a later time by clicking on the View Setup Details link from the Actions drop down or Setup left navigation on the Home page.

```
Tue May 07 10:38:59 UTC 2019 FINEST [MRDB setup tools] <245> : Remote HMC power on job status is RUNNING, and the partition name is LPAR_SYSB
Tue May 07 10:40:00 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code for setup copy node is C20060F0
Tue May 07 10:40:00 UTC 2019 INFO [MRDB setup tools] <268> : The reference code for setup copy node is C20060F0
Tue May 07 10:41:01 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code for setup copy node is C6004201
Tue May 07 10:41:01 UTC 2019 INFO [MRDB setup tools] <268> : The reference code for setup copy node is C6004201
Tue May 07 10:42:01 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code for setup copy node is D6000484
Tue May 07 10:42:01 UTC 2019 INFO [MRDB setup tools] <268> : The reference code for setup copy node is D6000484
Tue May 07 10:43:02 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code for setup copy node is C20060F0
Tue May 07 10:44:03 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code for setup copy node is C6004250
Tue May 07 10:44:03 UTC 2019 INFO [MRDB setup tools] <268> : The reference code for setup copy node is C6004250
Tue May 07 10:45:04 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code for setup copy node is 00000000
Tue May 07 10:45:04 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code before second IPL check is 00000000
Tue May 07 10:47:04 UTC 2019 FINEST [MRDB setup tools] <268> : The reference code for setup copy node before second IPL check is 00000000
Tue May 07 10:47:04 UTC 2019 INFO [MRDB setup tools] <268> : Setup copy node power on process complete. The reference code is 00000000
Tue May 07 10:47:04 UTC 2019 INFO [MRDB setup tools] <245> : SYSBAS cloning is complete. Continuing cloning process
Tue May 07 10:47:05 UTC 2019 FINEST [MRDB setup tools] <245> : Log file /QIBM/UserData/OS/ADMININST/admin3/wip/usr/servers/admin3/logs/toolkit.setup.sysbas.SYSA_SY
Tue May 07 10:47:05 UTC 2019 FINEST [MRDB setup tools] <245> : /usr/bin/db2mtool action=checksysbas setupSrcAddress=hosta.ICC.LOCAL setupSrcUser=qsecofr setupSrcS
Tue May 07 10:47:05 UTC 2019 FINEST [MRDB setup tools] <245> : Starting
Tue May 07 10:47:05 UTC 2019 FINEST [MRDB setup tools] <245> : MB 130, PTF SI69319 is required to delete OTL for DB IASPs
Tue May 07 10:47:05 UTC 2019 FINEST [MRDB setup tools] <245> : Creating step reporter...
Tue May 07 10:47:05 UTC 2019 INFO [MRDB setup tools] <245> : Action checksysbas is selected
Tue May 07 10:50:06 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL] Checking NTP/SNTP configurations
Tue May 07 10:54:07 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL] NTP client is running successfully and has adjusted the time
Tue May 07 10:54:07 UTC 2019 FINEST [MRDB setup tools] <245> : QmrdSetIntraNodeTimeMgmt flag=0
Tue May 07 10:54:07 UTC 2019 INFO [MRDB setup tools] <245> : Error from callProgram (QmrdSetIntraNodeTimeMgmt)
Tue May 07 10:54:07 UTC 2019 SEVERE [MRDB setup tools] <245> : CPF226E:Value for a parameter was not valid.
Tue May 07 10:54:07 UTC 2019 FINEST [MRDB setup tools] <245> : Run SQL SELECT AUTOSTART FROM QUSRSYS.QATOCSTART WHERE SERVER=""NTP"
Tue May 07 10:55:07 UTC 2019 FINEST [MRDB setup tools] <245> : Run SQL SELECT NRG_NAME, NRG_STATE, LINK_COUNT FROM QSYS2.NRG_INFO
Tue May 07 10:55:07 UTC 2019 SEVERE [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL] [MIRROR_DATABASE, INACTIVE, 2]
Tue May 07 10:55:08 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTA.ICC.LOCAL] Count of post exit programs called: 0
Tue May 07 10:55:08 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL] Count of post exit programs called: 0
Tue May 07 10:55:08 UTC 2019 SEVERE [MRDB setup tools] <245> : checksysbas action failed. The return code is IBM_I_NRG_CONFIG_FAIL
```

Continue Setup

Refresh

✘ Close



# Setup DB2 Mirror

## Setup Progress

### Setting up

**Note:** Depending on the parameters selected and the system configuration, the setup may be a very long running process. The progress of the setup can be followed on this dialog page or can be retrieved at a later time by clicking on the View Setup Details link from the Actions drop down or Setup left navigation on the Home page.

```
Tue May 07 10:47:05 UTC 2019 INFO [MRDB setup tools] <245> : Action checksysbas is selected
Tue May 07 10:50:06 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL:] Checking NTP/SNTP configurations
Tue May 07 10:54:07 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL:] NTP client is running successfully and has adjusted the time
Tue May 07 10:54:07 UTC 2019 FINEST [MRDB setup tools] <245> : QmrdbsSetIntraNodeTimeMgmt flag=0
Tue May 07 10:54:07 UTC 2019 FINEST [MRDB setup tools] <245> : Error from callProgram (QmrdbsSetIntraNodeTimeMgmt)
Tue May 07 10:54:07 UTC 2019 SEVERE [MRDB setup tools] <245> : CPF226E:Value for a parameter was not valid.
Tue May 07 10:54:07 UTC 2019 FINEST [MRDB setup tools] <245> : Run SQL SELECT AUTOSTART FROM QUSRSYS.QATOCSTART WHERE SERVER=""NTP"
Tue May 07 10:55:07 UTC 2019 FINEST [MRDB setup tools] <245> : Run SQL SELECT NRG_NAME, NRG_STATE, LINK_COUNT FROM QSYS2.NRG_INFO
Tue May 07 10:55:07 UTC 2019 SEVERE [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL:] [MIRROR_DATABASE, INACTIVE, 2]
Tue May 07 10:55:08 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTA.ICC.LOCAL:] Count of post exit programs called: 0
Tue May 07 10:55:08 UTC 2019 INFO [MRDB setup tools] <245> : [HOSTB.ICC.LOCAL:] Count of post exit programs called: 0
Tue May 07 10:55:08 UTC 2019 SEVERE [MRDB setup tools] <245> : checksysbas action failed. The return code is IBM_i_NRG_CONFIG_FAIL
Tue May 07 11:00:02 UTC 2019 FINEST [MRDB setup tools] <365> : Log file /QIBM/UserData/OS/ADMININST/admin3/wlp/usr/servers/admin3/logs/toolkit.setup.sysbas.SYSA_SY$
Tue May 07 11:00:02 UTC 2019 FINEST [MRDB setup tools] <365> : /usr/bin/db2mtool action=checksysbas setupSrcAddress=hosta.ICC.LOCAL setupSrcUser=qsecofr setupSrcS
Tue May 07 11:00:02 UTC 2019 FINEST [MRDB setup tools] <365> : Starting
Tue May 07 11:00:02 UTC 2019 FINEST [MRDB setup tools] <365> : MB 130, PTF SI69319 is required to delete OTL for DB IASPs
Tue May 07 11:00:02 UTC 2019 FINEST [MRDB setup tools] <365> : Creating step reporter...
Tue May 07 11:00:02 UTC 2019 INFO [MRDB setup tools] <365> : Action checksysbas is selected
Tue May 07 11:03:03 UTC 2019 INFO [MRDB setup tools] <365> : [HOSTB.ICC.LOCAL:] Checking NTP/SNTP configurations
Tue May 07 11:04:03 UTC 2019 INFO [MRDB setup tools] <365> : [HOSTB.ICC.LOCAL:] NTP client is running successfully and has adjusted the time
Tue May 07 11:04:03 UTC 2019 FINEST [MRDB setup tools] <365> : QmrdbsSetIntraNodeTimeMgmt flag=0
Tue May 07 11:04:03 UTC 2019 SEVERE [MRDB setup tools] <365> : Error from callProgram (QmrdbsSetIntraNodeTimeMgmt)
Tue May 07 11:04:03 UTC 2019 SEVERE [MRDB setup tools] <365> : CPF226E:Value for a parameter was not valid.
Tue May 07 11:04:03 UTC 2019 FINEST [MRDB setup tools] <365> : Run SQL SELECT AUTOSTART FROM QUSRSYS.QATOCSTART WHERE SERVER=""NTP"
Tue May 07 11:05:04 UTC 2019 FINEST [MRDB setup tools] <365> : Run SQL SELECT NRG_NAME, NRG_STATE, LINK_COUNT FROM QSYS2.NRG_INFO
Tue May 07 11:05:04 UTC 2019 INFO [MRDB setup tools] <365> : [HOSTB.ICC.LOCAL:] Cluster DB2MCLU was created successfully
Tue May 07 11:05:04 UTC 2019 FINEST [MRDB setup tools] <365> : Checking configuration states
Tue May 07 11:05:04 UTC 2019 FINEST [MRDB setup tools] <365> : Configuration State: 2
Tue May 07 11:05:04 UTC 2019 FINEST [MRDB setup tools] <365> : Configuration Cluster State: 2
Tue May 07 11:05:04 UTC 2019 FINEST [MRDB setup tools] <365> : Configuration network redundancy group State: 2
Tue May 07 11:05:04 UTC 2019 FINEST [MRDB setup tools] <365> : [HOSTB.ICC.LOCAL:] The Db2 Mirror state: ACTIVE
Tue May 07 11:05:04 UTC 2019 INFO [MRDB setup tools] <365> : [HOSTB.ICC.LOCAL:] Post SYSBAS setup checking complete
```

Refresh

Close



# Setup DB2 Mirror

## Setup Progress

### ✓ Setup completed

**Note:** Depending on the parameters selected and the system configuration, the setup may be a very long running process. The progress of the setup can be followed on this dialog page or can be retrieved at a later time by clicking on the View Setup Details link from the Actions drop down or Setup left navigation on the Home page.

```
Tue May 07 11:08:34 UTC 2019 FINEST [MRDB setup tools] <365> : Log file /QIBM/UserData/OS/ADMININST/admin3/wlp/usr/servers/admin3/logs/toolkit.setup.iasps.SYSA_SYSE
Tue May 07 11:08:34 UTC 2019 FINEST [MRDB setup tools] <365> : /usr/bin/db2mtool action=iaspcopy setupSrcAddress=hosta.ICC.LOCAL setupSrcUser=qsecofr setupSrcSysN
Tue May 07 11:08:34 UTC 2019 FINEST [MRDB setup tools] <365> : Starting
Tue May 07 11:08:34 UTC 2019 FINEST [MRDB setup tools] <365> : MB 130, PTF SI69319 is required to delete OTL for DB IASPs
Tue May 07 11:08:34 UTC 2019 FINEST [MRDB setup tools] <365> : Creating step reporter...
Tue May 07 11:08:34 UTC 2019 INFO [MRDB setup tools] <365> : Action iaspcopy is selected
Tue May 07 11:08:34 UTC 2019 INFO [MRDB setup tools] <365> : There are no configured IASPs in JSON configuration file
Tue May 07 11:08:34 UTC 2019 INFO [MRDB setup tools] <365> : iaspcopy is complete
```

Refresh

Close



**Power  
Week**

**Université IBM i**

22 et 23 mai 2019

# **DB2 iASP setup screens**

**IBM**

# DB2 iASP setup

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

Manage IASP - Database GUI Build Time: 2019-04-27 10:03:08

Primary: SYSA Active

Secondary: SYSB Active

Independent Auxiliary Storage Pools

- Database IASP - Management
- Database IASP - Add
- IFS IASP - Management
- IFS IASP - Add

Add IASP for Database GUI Build Time: 2019-04-27 10:03:08

Select IASP

Cloning Method

Inclusion State

Summary

Specify the IASP to be added for database:

Source Node:

SYSA  SYSB

IASP Status	Iasp Name
<input type="checkbox"/>	IASP

Refresh Vary On

# DB2 iASP setup

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr 

GUI Build Time: 2019-04-27 10:03:08

## Add IASP for Database

**Select IASP**

Choose the source node to view and select an existing IASP to be added to the mirror environment. The IASP add process will clone the selected IASP. A replica is created on the other node and its contents can be actively mirrored. The IASP may not exist on the other node, you will be required to specify storage information to be used by the cloning process or do the storage clone outside GUI.

Cloning Method

Storage Server

IASP Hosts

Inclusion State

RCL - IASP

Summary

Specify the IASP to be added for database:

**Source Node:**

SYSA  SYSB

<input checked="" type="checkbox"/>	IASP Status	iasp Name
<input checked="" type="checkbox"/>	↑	IASP

 DBM\_105002: Varying on IASPs... 



# DB2 iASP setup

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-27 10:03:08

## Add IASP for Database

Select IASP

Cloning Method

Storage Server

IASP Hosts

Inclusion State

RCL - IASP

Summary

Specify the source node run state for the cloning process:


**Cold Cloning**  
Cold cloning will vary off the IASP before making a copy of this IASP. If there are currently jobs running using this IASP, you may have to manually end the jobs so the IASP can be varied off. The cold cloning method provides the most consistent copy as there is no activity at the time of the copy.

**Warm Cloning**  
The IASP will remain varied on during the cloning process. This creates a point in time copy of the IASP. As this is not an exact replica, any differences encountered may require user intervention to resolve.  
The Warm clone requires that the ASP reach a quiesce point before the cloning processes can proceed. If this specified ASP cannot be quiesced within the time specified below, the clone will not proceed.  
ASP quiesce timeout:  minutes

Specify the method that is to be used for the cloning process:

**Flash Copy**  
Utilizes the flash copy technology within a single storage server to rapidly create a copy of the source node. This is the fastest method for creating the copy node.  
Note: Clone method can not be changed after Db2 Mirror is setup.

# DB2 iASP setup

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr 

GUI Build Time: 2019-04-27 10:03:08

## Add IASP for Database

**Select IASP** The process of adding an IASP for database to the mirror environment, requires that we have storage identified on the secondary node to use for creating this cloned IASP. This requires the wizard to connect to the storage server where you can identify the storage that is to be used.

**Cloning Method** Db2 Mirror supports the following IBM storage systems: IBM Spectrum Virtualize and the DS8000 family of storage servers. IBM Spectrum Virtualize includes the SVC, V5000, V7000 and V9000 storage models.



**Storage Server** Specify the storage server information:

DS8000  IBM Spectrum Virtualize

**Storage Server Address:**

**Storage Server User:**

**SSH Private Key:**



# DB2 iASP setup

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-27 10:03:08

### Add IASP for Database

Select IASP Specify IASP information: ⓘ

Cloning Method

Storage Server

IASP Hosts

Inclusion State


RCL - IASP

Summary

iasp Name	Source Host	Copy Host
IASP	▶ IBMi_V7R4_DB2Mirror_IASP_SYSA	▶ IBMi_V7R4_DB2Mirror_IASP_SYSB <span>Select</span>

Reload Refresh Vary On Advanced

Previous Next Cancel



# DB2 iASP setup

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM  
GUI Build Time: 2019-04-27 10:03:08

### Add IASP for Database

Select IASP  
Cloning Method  
Storage Server  
IASP Hosts  
Inclusion State  
RCL - IASP  
Summary

**Default Inclusion State**  
The objects within \*SYSBAS or an IASP are eligible to be included in the Db2 Mirror environment. The default inclusion state must be set for each before continuing.

**Exclude** - All objects for this group are excluded by default. Additional rules may be added to include specific libraries and objects within this group.

**Include** - All eligible objects for this group are included by default. Additional rules may be added to restrict specific libraries and objects from being mirrored.

IASP

**Confirmation**

DBM\_102007: The IASP IASP will be registered with a default inclusion state of INCLUDE.

DBM\_102001: Do you want to proceed ?



# DB2 iASP setup

IBM Db2 Mirror for i Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-27 10:03:08

### Add IASP for Database

Select IASP  
Cloning Method  
Storage Server  
IASP Hosts  
Inclusion State  
RCL - IASP  
Summary

**Add a Rule**

Library Name  Object Type  Object Name  Exclude Include Definition Only

System Defined Rules Only

**Default Inclusion State:**

Status	Library Name	Object Type	Object Name	Replication State	Rule Group	Action	Rule Source	IASP Name
	Filter	All	Filter	All	All		All	All
	*ALL	*ALL	*ALL	Include	Active		System	IASP
	QRCL00144	*ALL	*ALL	Exclude	Active		System	IASP
	QRCY00144	*ALL	*ALL	Exclude	Active		System	IASP
	QRPL00144	*ALL	*ALL	Exclude	Active		System	IASP
	QSPL0144	*ALL	*ALL	Exclude	Active		System	IASP
	QSYS00144	*ALL	*ALL	Exclude	Active		System	IASP
	QSYS200144	*ALL	*ALL	Exclude	Active		System	IASP
	SYSIB00144	*ALL	*ALL	Exclude	Active		System	IASP

Total Rows: 8

Previous Next Cancel

# DB2 iASP setup

IBM Db2 Mirror for i

Primary: SYSA Secondary: SYSB User: qsecofr IBM

GUI Build Time: 2019-04-27 10:03:08

### Add IASP for Database

Select IASP: **Source Node:** HOSTA.ICC.LOCAL

Cloning Method: **Cloning Method:** Warm Cloning

Storage Server: **Source Storage Server:** 10.15.17.7

IASP Hosts: **DB IASPs:**

IASP Name	Source Host	Source Volume	Copy Host	Copy Volume
		▼ Total 1		▼ Total 1
IASP	IBMI_V7R4_DB2Mirror_IASP_SYSA	IBMI_V7R4_DB2Mirror_IASP_SYSA_57 (100 GiB)	IBMI_V7R4_DB2Mirror_IASP_SYSB	IBMI_V7R4_DB2Mirror_IASP_SYSB_58 (100 GiB)

Summary

Previous Finish Cancel

# DB2 iASP setup

Add IASP for Database Progress

✓ IASP cloning completed successfully!

Log file: /QIBM/UserData/OS/ADMININST/admin3/wlp/usr/servers/admin3/logs/Db\_Iasp\_Clone\_flashCopy\_HOSTA.ICC.LOCAL\_IASP\_2019\_05\_14\_15\_04\_26.log

```
Tue May 14 15:04:33 UTC 2019 FINEST [MRDB setup tools] <11854>: Running IBM Spectrum Virtualize command mkrmap -source 57 -target 58 -name mrdbrccr145iasp -consis
Tue May 14 15:04:34 UTC 2019 FINEST [MRDB setup tools] <11854>: Informational:FlashCopy Mapping, id [14], successfully created@@@Diagnostic:
Tue May 14 15:04:34 UTC 2019 FINEST [MRDB setup tools] <11854>: Running IBM Spectrum Virtualize command prestartfconsistgrp mrdbrccgrp145iasp
Tue May 14 15:04:34 UTC 2019 FINEST [MRDB setup tools] <11854>: Informational:Diagnostic:
Tue May 14 15:04:34 UTC 2019 FINEST [MRDB setup tools] <11854>: Running IBM Spectrum Virtualize command lsfconsistgrp -delim : mrdbrccgrp145iasp
Tue May 14 15:04:35 UTC 2019 FINEST [MRDB setup tools] <11854>: Informational:id:5@@@name:mrdbrccgrp145iasp@@@status:prepared@@@autodelete:on@@@start_time:@@F
Tue May 14 15:04:35 UTC 2019 FINEST [MRDB setup tools] <11854>: Start session for ASP IASP
Tue May 14 15:04:35 UTC 2019 FINEST [MRDB setup tools] <11854>: The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 14 15:04:35 UTC 2019 FINEST [MRDB setup tools] <11854>: Suspend new transactions for ASP IASP
Tue May 14 15:04:36 UTC 2019 FINEST [MRDB setup tools] <11854>: The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 14 15:04:36 UTC 2019 INFO [MRDB setup tools] <11854>: Suspend for ASP IASP was successful
Tue May 14 15:04:36 UTC 2019 FINEST [MRDB setup tools] <11854>: Run CALL QmrdDeleteOTLEntries
Tue May 14 15:04:48 UTC 2019 FINEST [MRDB setup tools] <11854>: Start warm clone was successful, the asp number is 144
Tue May 14 15:04:48 UTC 2019 FINEST [MRDB setup tools] <11854>: Forcing write ASPs
Tue May 14 15:04:48 UTC 2019 FINEST [MRDB setup tools] <11854>: The action is force write
Tue May 14 15:04:51 UTC 2019 FINEST [MRDB setup tools] <11854>: Force write for ASP IASP was successful
Tue May 14 15:04:51 UTC 2019 FINEST [MRDB setup tools] <11854>: Forcing write ASPs was successful
Tue May 14 15:04:51 UTC 2019 FINEST [MRDB setup tools] <11854>: Running IBM Spectrum Virtualize command startfconsistgrp mrdbrccgrp145iasp
Tue May 14 15:04:51 UTC 2019 FINEST [MRDB setup tools] <11854>: Informational:Diagnostic:
Tue May 14 15:04:51 UTC 2019 FINEST [MRDB setup tools] <11854>: Resume new transactions for ASP IASP
Tue May 14 15:04:52 UTC 2019 FINEST [MRDB setup tools] <11854>: The number of seconds QYASPCHGAA actually took to complete the specified action: 0
Tue May 14 15:04:52 UTC 2019 INFO [MRDB setup tools] <11854>: Resume for ASP IASP was successful
Tue May 14 15:04:52 UTC 2019 FINEST [MRDB setup tools] <11854>: Write changes to auxiliary storage for ASP IASP
Tue May 14 15:04:52 UTC 2019 FINEST [MRDB setup tools] <11854>: The number of seconds QYASPCHGAA actually took to
Tue May 14 15:04:52 UTC 2019 FINEST [MRDB setup tools] <11854>: End session for ASP IASP
Tue May 14 15:04:53 UTC 2019 FINEST [MRDB setup tools] <11854>: The number of seconds QYASPCHGAA actually took to
Tue May 14 15:04:54 UTC 2019 INFO [MRDB setup tools] <11854>: IASP storage copy is successful
Tue May 14 15:04:54 UTC 2019 FINEST [MRDB setup tools] <11854>: Run QmrdIaspAllow for IASP IASP
Tue May 14 15:04:54 UTC 2019 FINEST [MRDB setup tools] <11854>: Run QmrdResetMultiPath for IASP IASP
Tue May 14 15:04:54 UTC 2019 FINEST [MRDB setup tools] <11854>: Vary on DB IASPs on the setup source node
Tue May 14 15:04:54 UTC 2019 FINEST [MRDB setup tools] <11854>: Run CALL VRYCFG CFGOBJ(IASP) CFGTYPE(*DEV)
Tue May 14 15:04:54 UTC 2019 INFO [MRDB setup tools] <11854>: [HOSTA.ICC.LOCAL:] Count of post exit programs called: 0
Tue May 14 15:04:54 UTC 2019 FINEST [MRDB setup tools] <11854>: Vary on process for primary DB IASP IASP was successful
Tue May 14 15:04:54 UTC 2019 FINEST [MRDB setup tools] <11854>: Vary on DB IASPs on the setup copy node
Tue May 14 15:04:54 UTC 2019 FINEST [MRDB setup tools] <11854>: Run CALL VRYCFG CFGOBJ(IASP) CFGTYPE(*DEV)
Tue May 14 15:05:20 UTC 2019 INFO [MRDB setup tools] <11854>: [HOSTB.ICC.LOCAL:] Count of post exit programs called: 0
Tue May 14 15:05:20 UTC 2019 FINEST [MRDB setup tools] <11854>: Vary on process for primary DB IASP IASP was successful
Tue May 14 15:06:20 UTC 2019 FINEST [MRDB setup tools] <11854>: [HOSTA.ICC.LOCAL:] MirrorInfo [iaspName=IASP, aspState=AVAILABLE, iaspUsage=DATABASE, primary
Tue May 14 15:06:21 UTC 2019 INFO [MRDB setup tools] <11854>: iaspcopy is complete
```



Refresh Close

# DB2 iASP setup

The screenshot displays the IBM Db2 Mirror for i management interface. At the top, the title bar reads "IBM Db2 Mirror for i" and includes status information: "Primary: SYSA", "Secondary: SYSB", "User: qsecofr", and the IBM logo. Below the title bar, the main window is titled "Manage IASP - Database" and shows the "GUI Build Time: 2019-04-27 10:03:08".

The interface is divided into two main sections: "Primary: SYSA" on the left and "Secondary: SYSB" on the right. Each section features a server rack icon with a green plus sign and the word "Active" below it. A green line connects the server icon to a blue database cylinder icon labeled "IASP Active". A horizontal green line connects the two "IASP Active" database icons, representing the mirroring connection between the primary and secondary instances.

On the left side of the interface, there is a vertical toolbar with various icons for monitoring, security, configuration, and maintenance. At the bottom left corner, there is a small icon with the number "52" next to it.



# DB2 iASP setup

