

COR - Cloud Optical Repository

COR is the name of a virtual image that can be deployed then used as a Network File Server (NFS) to perform various IBM i tasks that require media. A collection of the media necessary for various tasks on the IBM i, for all supported IBM i releases, is included in this virtual optical image. With this COR image deployed, a second Virtual Server Instance can be deployed on the same VLAN, set up as the client, and pointed to the COR (target) NFS Server Instance.

Reference: [Setting up an IBM i network install server](#)

From the IBM Cloud UI, create a Virtual Server instance using the COR image (ex. *IBMi_COR-74-05-1a.ova.gz*) When creating the instance, attach a private network. The VLAN (existing network) that is created is the same one that will be utilized from the CLIENT side.

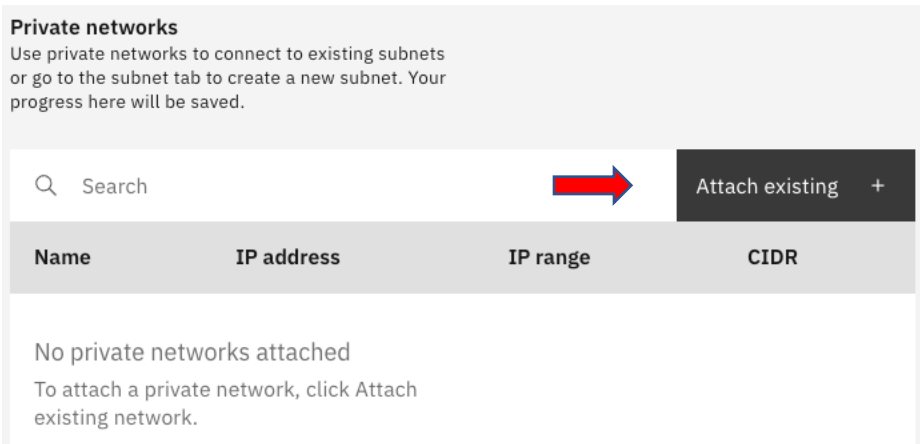


Figure 1

The Network File System (NFS) is already set up on the NFS server (COR) system.

- The IFS directories containing the media are in: /install

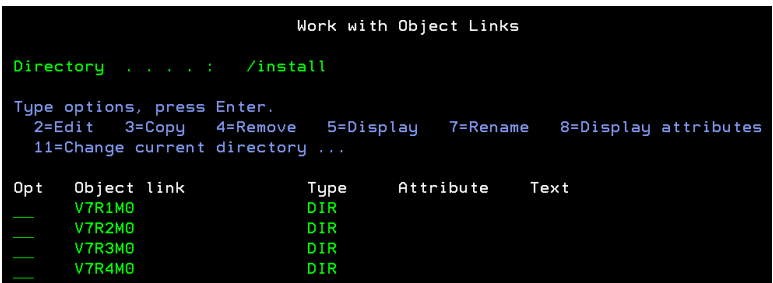


Figure 2

Within each release directory (V7RxM0) are the necessary files for standard upgrades, language changes, etc.

- All the directories (*Figure 2*) have been exported to */install*

Identify the VLAN IP address of the NFS server instance from your Cloud GUI

Private networks						
<input type="text"/> Search					Attach existing network	
Name	IP address	Gateway	MAC address	VLAN ID	CIDR	
vlan2	172.2.2.47	172.2.2.2	fa:2c:c2:15:7a:21	3001	172.2.2.0/24	Detach

Figure 3

IBM i NFS client set up

Deploy another IBM Cloud Virtual server instance or use an existing one. This will be your CLIENT system.

There are two ways to assign an adapter to the Client.

Option 1: Add a new adapter to the VM

Option 2: Re-use an existing an adapter

Option 1: Add a new adapter to the VM

When setting up the Client instance, select the option for 'Private network' use the "Attach existing +" to add VLAN.

Public networks
 A public network uses a public VLAN to connect to your VM. [Learn about the available firewall ports.](#)

☒ On

Private networks
 Use private networks to connect to existing subnets or go to the subnet tab to create a new subnet. Your progress here will be saved.

Search

Attach existing +

Name	IP address	IP range	CIDR
No private networks attached			
To attach a private network, click Attach existing network.			

Figure 4

Select the same network the NFS Server system is on.

After signing into this NFS Client instance, sign-on to accept licenses.
Verify the interfaces are configured (via CFGTCP, option 1), go back to the UI screen for the Client instance, add another adapter to the same network the NFS Server is on.

For the NFS set up, it's not necessary to configure this new IP address in CFGTCP (option 1)

Private networks						
<div><div>Q</div><div>Search</div></div>					<div>Attach existing network</div>	
Name	IP address	Gateway	MAC address	VLAN ID	CIDR	
vlan2	172.2.2.244	172.2.2.2	fa:ae:fa:89:11:21	3001	172.2.2.0/24	<div>Detach</div>

Figure 5

Now it shows a second IP address on VLAN2. Make note of it, along with the Gateway IP address.

Private networks						
<div><div>Q</div><div>Search</div></div>					<div>Attach existing network</div>	
Name	IP address	Gateway	MAC address	VLAN ID	CIDR	
vlan2	172.2.2.244	172.2.2.2	fa:ae:fa:89:11:21	3001	172.2.2.0/24	<div>Detach</div>
vlan2	172.2.2.65	172.2.2.2	fa:16:3e:c3:e4:97	3001	172.2.2.0/24	<div>Detach</div>

Figure 6

Use [Alternate method to select LAN resource](#) for an online reference to the following directions.

Use the UI to access IBM i operations, Action (21) Activate dedicated service tools, 'run action' to access the 'Dedicated Service tools' sign-on. Or, alternately, use STRSST.

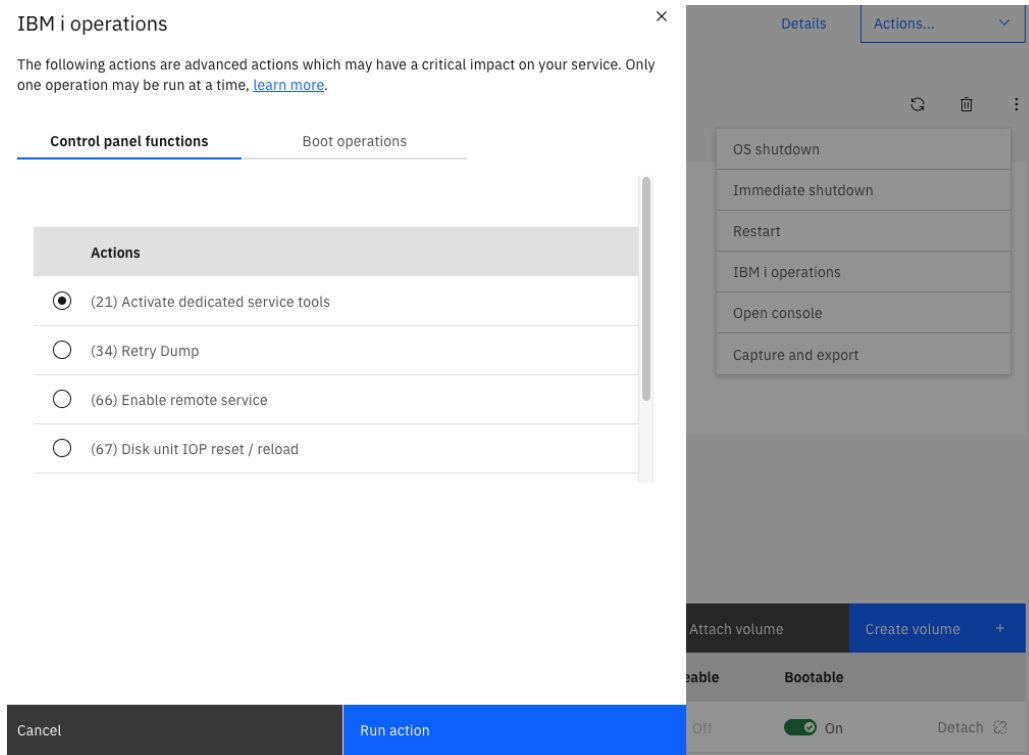


Figure 7

** You may need to change the Service Tools password if this is your first time into the Service Tools*

Option 5. Work with DST environment

Option 2. System Devices

Press F13= Select STS Lan Adapter

A new resource listed.

1= select

Fill in 'Internet address' of the new client IP address that was created (ex. **172.2.2.65** in figure 6).

Fill in 'Gateway router address' to match the VLAN Gateway (ex. **172.2.2.2** in figure 6)

Fill in Subnet mask

```

Configure Service Tools LAN Adapter
System: KJCLIENT
Type choices, press Enter to verify input.
Resource name . . . . . : CMN06      VLAN ID ____0 (0 is default)
Adapter type . . . . . : 268C
Adapter model . . . . . : 002
Adapter serial number . . . : 00-D0000A

Host name for service tools . 78A7A30404
Node . . . . . : 000000000000      (0 is default)
Duplex . . . . . : AUTO            HALF, FULL, AUTO
Network speed . . . . . : AUTO      AUTO, 10, 100, 1000, 10G, 40G

IP version allowed . . . . . BOTH      IPV4, IPV6, BOTH
Internet address . . . . . 172.2.2.65
Gateway router address . . . 172.2.2.2
Subnet mask . . . . . 255.255.255.0

IPV6 address . . . . .
IPV6 interface ID . . . . . 0000000000000000 (0 is default)

F3=Exit      F5=Load      F6=Clear  F7=Store  F12=Cancel
F13=Deactivate F14=Activate F17=Deactivate followed by activate

```

Figure 8

F7 = Store
F17 = Deactivate followed by activate
F3 = exit

1. Create a device description for a virtual optical device.

Example:

```

CRTDEVOPT DEVD(COR_IMG) RSRCTYPE(*VRT) LCLINTNETA(*SRVLAN)
RMTINTNETA('172.2.2.47') NETIMGDIR('/INSTALL/V7R4M0/LATEST/LANGGRP3') UID(0)
GID(0)

```

RMTINTNETA = IP address of the COR server (*figure 3*)

NETIMGDIR = point to whichever COR server directory that is appropriate for the task you're performing.

2. Vary on the virtual optical device. Note: If the images or VOLUME_LIST file is changed on the NFS server, the virtual optical device must be varied off and then varied back on to use the virtual images.

```

VRYCFG CFGOBJ(COR_IMG) CFGTYPE(*DEV) STATUS(*ON)

```

* Verify that a ping is successful from the Server to client.

3. Load the image catalog

```

LODIMGCLGE IMGCLG(*DEV) DEV(COR_IMG) IMGCLGIDX(*FIRST)

```

After the optical device has been created and varied on, specify this device description name when performing the intended operation (i.e. upgrade, language change, etc.).

Option 2: Re-use an existing adapter

From the UI, deploy a new VM and use the option to 'Attach existing network' to create an adapter that's on the same network that the NFS server is on.

Network interfaces


Public networks

☒ On

Extra steps required. ⓘ

Name	IP address	External IP	Gateway	MAC address	VLAN ID	CIDR
public-192_168_190_64-29-VLAN_3309	192.168.190.70	128.168.103.70	192.168.190.65	fa:8b:f4:83:27:20	3309	192.168.190.64/29

Private networks

Q Search 

Attach existing network

Name	IP address	Gateway	MAC address	VLAN ID	CIDR	
vlan2	<u>172.2.2.210</u>	172.2.2.2	fa:8b:f4:83:27:21	3001	172.2.2.0/24	Detach ⓘ

Figure 9

Accept the Software Agreements after signing on for the first time.

1. End the TCP interface of the network that was created. In the 'Figure 9' example, it would be 172.2.2.210.

```

Work with TCP/IP Interface Status
                                     System:  KJ74XIPL
Type options, press Enter.
 5=Display details   8=Display associated routes   9=Start   10=End
12=Work with configuration status   14=Display multicast groups

Opt  Internet      Network      Line      Interface
     Address       Address      Description Status
___  _____  _____  _____  _____
 10  172.0.0.1     127.0.0.0   *LOOPBACK  Active
    172.2.2.210   172.2.2.0   CLOUDINIT1  Active
    192.168.190.70 192.168.190.64 CLOUDINIT0  Active
  
```

Figure 9

2. Vary off the line associated with this interface.

```
VRYCFG CFGOBJ(CLOUDINIT1) CFGTYPE(*LIN) STATUS(*OFF)
```

3. Use the UI to access IBM i operations, Action (21) Activate dedicated service tools, 'run action' to access the 'Dedicated Service tools' sign-on. Or, alternately, use STRSST.

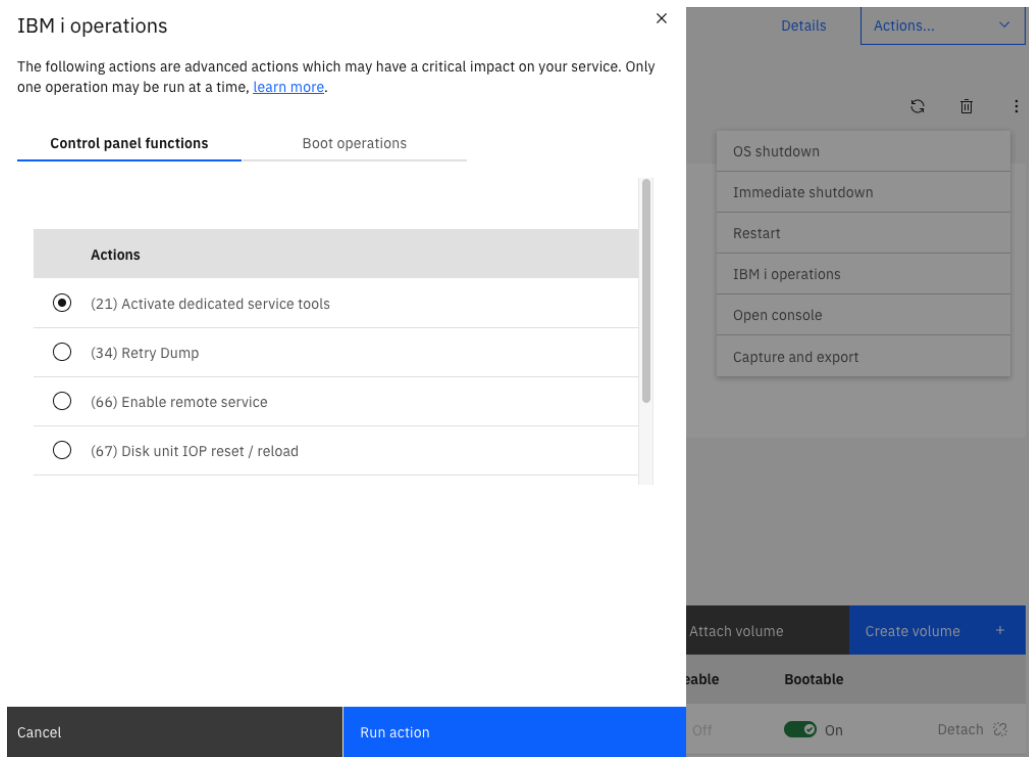


Figure 10

4. Use DST to select the adapter

Option 5. Work with DST environment

Option 2. System Devices

Press F13= Select STS Lan Adapter

Option 1. Select resource name

```

Configure Service Tools Server LAN Adapter
System: KJ74XIPL
Type choices, press Enter to verify input.
Resource name . . . . . : CMN04      VLAN ID ___0 (0 is default)
Adapter type . . . . . : 268C
Adapter model . . . . . : 002
Adapter serial number . . . : 00-D000030

Host name for service tools . 78A7A30404
Node . . . . . : 000000000000      (0 is default)
Duplex . . . . . : AUTO            HALF, FULL, AUTO
Network speed . . . . . : AUTO      AUTO, 10, 100, 1000, 10G, 40G

IP version allowed . . . . . BOTH      IPV4, IPV6, BOTH
Internet address . . . . . 172.2.2.210
Gateway router address . . . 172.2.2.2
Subnet mask . . . . . 255.255.255.0

IPV6 address . . . . .
IPV6 interface ID . . . . . 0000000000000000 (0 is default)

F3=Exit      F5=Load      F6=Clear  F7=Store  F12=Cancel
F13=Deactivate F14=Activate F17=Deactivate followed by activate
Warning: Selected resource is not full LAN console capable.
MA* A
16/042

```

Figure 11

F7 = Store
F17 = Deactivate followed by activate
F3 = exit

1. Create a device description for a virtual optical device.

Example:

```

CRTDEVOPT DEV(DCOR_IMG) RSRNAME(*VRT) LCLINTNETA(*SRVLAN)
RMTINTNETA('172.2.2.47') NETIMGDIR('/INSTALL/V7R4M0/LATEST/LANGGRP3') UID(0)
GID(0)

```

RMTINTNETA = IP address of the COR server

NETIMGDIR = point to whichever COR server directory that is appropriate for the task you're performing.

2. Vary on the virtual optical device. Note: If the images or VOLUME_LIST file is changed on the NFS server, the virtual optical device must be varied off and then varied back on to use the virtual images.

```

VRYCFG CFGOBJ(COR_IMG) CFGTYPE(*DEV) STATUS(*ON)

```

* Verify that a ping is successful from the Server to client.

3. Load the image catalog

```

LODIMGCLGE IMGCLG(*DEV) DEV(COR_IMG) IMGCLGIDX(*FIRST)

```


Additional resources:

Media labels and their contents can be found here :

<https://www.ibm.com/docs/en/i/7.4?topic=reference-media-labels-their-contents - rzahcswsmedialabel>

Tips and Techniques:

- From the client type in "**WRKIMGCLGE *DEV** < virtual_device_name >". This should display the "Work with Image Catalog Entries" panel showing a catalog of type *RMTCLG and show all the volumes. If all the volumes are displayed, this means the prep work on the server consisting of ensuring NFS servers were running, exporting the correct directory, and proper authorizations of the catalog directory contents.
- When displaying the 'Configure Service Tools LAN adapter' (*figure 11*), confirm the **Internet Address** field contains the IP address of the client's private network IP address.
- For OPT1605 RC1, Prior to activating the DST Service Tools server, ensure that the IP address cannot be pinged. After the activate of the DST service tool server, verify that the IP address assigned can be pinged.

To check and see if NFS is up and running properly, do the following:

WRKACTJOB SBS(QSYSWRK) JOB(QNFS*)

If you see the following active, all is good:

QNFSMNTD QUSER BCH .0 SELW <=== *Mnt

QNFSNFSD QUSER BCH .0 TIMW <=== *SRV

QNFSNFSD QUSER BCH .0 DEQW <=== *SRV

QNFSRPCD QUSER BCH .0 SELW <=== *RPC

- On the COR (Server instance), to verify the image catalog directory has been exported, do the following:

CALL QZNFRTVE and then press F10 to confirm this message is displayed:

CPIB41A - /INSTALL currently exported

OPT1860 will be logged if the NFS backed virtual optical device is not varied on.

- Verify the Server and Client instances are on the same private network.
- Ensure **PING** 'x.x.x.x' from the Server to Client instance is successful.
- After verifying the private network and virtual device are set up correctly, and the WRKIMGCLGE fails, open a support ticket.