

Installing z/VM, Demonstration and Commentary

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- Last updated 2018 Sept. 14 by Tim Greer

In this presentation we demonstrate an install of z/VM. As the install forces us to make decisions, we discuss the various options and how particular choices affect the install and the eventual result.

Because an installation entails movement of a lot of files, which can take quite a bit of clock time, the presentation consists of two hands-on sessions. In the first, we discuss preparation for install, and then move through the steps of an actual install, up to the point of the mentioned movement of files. In the second session, we will complete the install, do some of the post-install set-up work, and look at the configuration that the install gives you.

This collection of slides is intended to be presented in parallel with an actual install. However, it is also intended to contain sufficient material to be useful without an accompanying demonstration.

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Overview

- This presentation is primarily a walk-through of an install
 - In particular, install of z/VM 7.1.0 for a 2-member 2nd-level SSI
- Along the way, alternative goals are occasionally addressed
 - Upgrading an existing system
 - 1st-level install
 - Different sources
- A few mistakes are included
 - To show that the process is resilient
 - To decrease any fear you may have
 - To show how to recover
 - To match what you are bound to see in a live demo

Be sure to read the notes, which include explanatory material, as well as the slides.

Install Overview

- Determine source and target of install
- If you are manually upgrading an existing system
 - Consider Upgrade In Place instead of a fresh install
 - Make copies of any DASD you will be overwriting
 - Save in a handy location files you know you will use later, e.g.
 - USER DIRECTory
 - SYSTEM CONFIG
 - TCPIP DATA and DTCPARMS, CONFIGs for MPROUTE, etc.
 - Configuration files for RSCS, PERFSVM, DIRMAINT, etc.
 - PROFILE EXEC from AUTOLOG1
 - Favorite PROFILE XEDIT
- Fill in worksheets
- Initiate install, use INSTPLAN to instantiate what you filled in on the worksheets
- Run INSTALL
- ...wait for INSTALL to finish
- Post-install set up

Install is mostly a sequence of steps that must be done in order. There is little you can do in parallel. The major divisions above are just one way to view the process. More generally, we do some stuff before the install, do the install, then do some stuff after the install.

When manually upgrading an existing system (eschewing UIP)

- SPXTAPE to save spool files
 - Better yet, announce that spool files will not be saved
- DDR existing COMMON, RELVOL, and RES
 - And save a copy of the USER DIRECTory so that you can DEFINE MDISK to get at what you forgot
- Save copies of files so you don't need the DEFINE MDISK trick
- Understand what DASD you have accessible, plan how to avoid letting newly-installed system access by volume label the wrong DASD.

This slide is for the benefit of those who are choosing to do a fresh install rather than using Upgrade In Place, but will then be modifying the newly-installed systems to become the upgraded versions of previously existing systems.

Here are some of the files I found I wanted to use or refer to from the original system:

From PMAINT: SYSTEM CONFIG

From MAINT: USER DIRECT, SYSTEM NETID

From DIRMAINT: CONFIGxx DATADVH, EXTENT CONTROL, AUTHFOR CONTROL, DATAMOVE CONTROL, EXCLUDE CONTROL

From AUTOLOG1: PROFILE EXEC, other EXECs added

From TCPMAINT: PROFILE TCPIP, TCPIP DATA, SYSTEM DTCPARMS

From RSCS: PROFILE GCS, * RSCSCFG

In case you don't understand the last bullet on the slide, here is a longer explanation. zVM picks up DASD by label unless you override, and if

multiple DASD with the same label are online, it will use the lowest-numbered DASD. An easy way to be sure the system grabs the correct DASD upon IPL is to add `DEVICES OFFLINE_AT_IPL` statements to `SYSTEM CONFIG` for the DASD you do not want it to grab. But the initial `SYSTEM CONFIG` from install will not have those `OFFLINE_AT_IPL` statements; you have to know and remember to put them there. Of course, if none of your DASD labels are identical, you won't have a problem. But you can easily run into this problem if you are not careful, e.g. by doing multiple installs and accepting the default labels in each case.

Step 0: Get the Book!

- z/VM Installation Guide
 - 6.4.0 version:
<http://publibz.boulder.ibm.com/epubs/pdf/hcsk2c31.pdf>
- z/VM online Library
 - <http://www.vm.ibm.com/library/>

We will use the 7.1.0 version of the Installation Guide, and be doing a 7.1.0 install. You can expect a few changes to install from release to release, but usually not many. If you are familiar with a 7.1.0 install, then install of a 6.4.0 system would feel familiar too. However, enough differences exist that it is important to use the text matching the level you are installing.

Step 1: Select your installation procedure

- DVD in Hardware Management Console (HMC) drive (1st-level install only)
- DVD accessed via FTP
- FTP server with DVD contents
- A CMS-formatted minidisk with DVD contents pre-loaded (2nd-level install only)

In my experience, the first choice (DVD in HMC) was simplest and easy to understand. But it was slow! It takes awhile to read data from the DVD and boot the VM system from it – plan on a nice long coffee break while waiting. The last (CMS minidisk) is the fastest, but you have to have already done the setup work to get files onto the minidisk.

Step 2: Review and Comply with Requirements

- These requirements are mostly easy to comply with
 - Do you have access to the DASD you will install to?
 - Do you have some workspace?
 - Do you have sufficient memory?
 - Do you have access to hardware and FTP server that you might use?

Step 3: Complete the Installation Worksheets

- This is the key step
- Much easier to gather this information before you are in the middle of an install
- This is where you make decisions such as your system names, so by doing it now you will have a little time to reconsider
- Later, once this data has been used, it is very inconvenient to change

Worksheets

Traditional installation worksheets

Table 1: Traditional installation worksheet 1.

Installation method (first-level or second-level): _____

Record an "M" if you will load the product to a minidisk or an "F" if you will load the product to the VMPSFS file pool in the **Install To** column.

Install To	Product	Install To	Product	Install To	Product
M	VM	F	DIRM	F	ICKDSF
F	PERFTK	F	RACF*	F	RSCS
M	TCPIP	F	VMHCD		

Default system language: _____

DASD type: _____

Volume size: _____

Common service filepool name: _____

Installation Type:

___ Non-SSI

☒ SSINumber of Members: 2

System Name*: _____

SSI Cluster

Name: _____

* The system name you select should be considered a **permanent** name. Changing the system name after installation is a complicated process.

Table 2: Traditional installation worksheet 2.

Would you like to have your system automatically configured to be managed by a SMAPI client for system management? Enter Y or N N

Keep the following in mind:

If you Enter Y, you should not attempt to manage your system in any other way.

If you'd like to manage your own system, or use a purchased external security manager or a purchased directory manager, Enter N.

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Worksheets		
<i>Table 5: Traditional installation worksheet 5.</i>		
IP address or host name:	<u>9.60.14.91</u>	
FTP server user ID and password:	<u>installaccess</u> <u>???</u>	
DVD/FTP directory path name:	<u>710/CKD_GA-7101/CPDVD</u>	
VM user ID and address of VM minidisk to upload DVD:	_____	
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This information on table 5 is used only during the install. The IP address is that of the FTP server with the DVD data. It is NOT the IP address for your system-to-be.

Worksheets

Table 6: Traditional installation worksheet 6 (3390 SSI Only).

After installation is complete, SSI will be IPLed:

- ☐ First-Level
☒ Second-Level

SSI Member Name(s) / IPL LPAR Name(s) or User ID Name(s):

Slot Number	Member Name*	IPL LPAR/User ID
1	TGREERA AAC400	TGREERA
2	TGREERB BLBLVG	TGREERB
3		
4		

* The member names you select should be considered *permanent* names. Changing a member name after installation is a complicated process.

Table 7: Traditional installation worksheet 7 (3390 SSI Only).

Volume Type	Default Label	New Label	Address				
COMMON	VMCOM1	TGC590	C590				
RELVOL	710RL1	TGC591	C591				
Volume Type	Default Label	New Label	Address	Volume Type	Default Label	New Label	Address
Member 1:				Member 2:			
RES	M01RES	TGC592	C592	RES	M02RES	TGC595	C595
SPOOL	M01S01	TGC593	C593	SPOOL	M02S01	TGC596	C596
PAGE	M01P01	TGC594	C594	PAGE	M02P01	TGC597	C597
Member 3:				Member 4:			
RES	M03RES			RES	M04RES		
SPOOL	M03S01			SPOOL	M04S01		
PAGE	M03P01			PAGE	M04P01		

Note: You must not use any of IBM's default volume labels for a volume other than the volume for which it is originally defined.

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Worksheets (example for if this was 1st-level install)			
Table 8: Traditional installation worksheet 8 (SSI First-Level Configuration Only).			
Real addresses for the COMMON volume on each member LPAR:			
Member 1 Address	Member 2 Address	Member 3 Address	Member 4 Address
C590	C590		
CTC device addresses:			
From: Member 1		From: Member 2	
To: Member 1	N/A	To: Member 1	B2A1 B2A2
To: Member 2	A2B1 A2B2	To: Member 2	N/A
To: Member 3		To: Member 3	
To: Member 4		To: Member 4	
From: Member 3		From: Member 4	
To: Member 1		To: Member 1	
To: Member 2		To: Member 2	
To: Member 3	N/A	To: Member 3	
To: Member 4		To: Member 4	N/A

PDVOL For SAPL Screen

For ISFC connections

14

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For a 2nd-level install, we don't need Table 8, but this is what it would look like if we were installing 1st-level. The "Member n Address" is for specifying the PDVOL on the SAPL screen. The CTCs are for the required ISFC communication between each pair of SSI members.

IBM Hardware Management Console

Home SEARCH FAVORITES pedbug

Systems Management > M24

Filter

Name	Status	Activation Profile	Last Used Profile	OS Name	OS Type	OS Level
M24-01	Not starting	M24-01	M24-01			
M24-02	Starting	M24-02	M24-02	OS/390	z/OS	7.1.0
M24-03	Starting	M24-03	M24-03	OS/390	z/OS	7.1.0
M24-04	Starting	M24-04	M24-04	OS/390	z/OS	7.1.0
M24-05	Not starting	M24-05	M24-05			
M24-06	Starting	M24-06	M24-06	OS/390	z/OS	7.1.0
M24-07	Starting	M24-07	M24-07	OS/390	z/OS	7.1.0
M24-08	Starting	M24-08	M24-08	OS/390	z/OS	7.1.0
M24-09	Starting	M24-09	M24-09	OS/390	z/OS	7.1.0
M24-10	Starting	M24-10	M24-10	OS/390	z/OS	7.1.0
M24-11	Starting	M24-11	M24-11	OS/390	z/OS	7.1.0
M24-12	Starting	M24-12	M24-12	OS/390	z/OS	7.1.0
M24-13	Starting	M24-13	M24-13	OS/390	z/OS	7.1.0
M24-14	Starting	M24-14	M24-14	OS/390	z/OS	7.1.0
M24-15	Starting	M24-15	M24-15	OS/390	z/OS	7.1.0
M24-16	Starting	M24-16	M24-16	OS/390	z/OS	7.1.0
M24-17	Starting	M24-17	M24-17	OS/390	z/OS	7.1.0
M24-18	Starting	M24-18	M24-18	OS/390	z/OS	7.1.0
M24-19	Starting	M24-19	M24-19	OS/390	z/OS	7.1.0
M24-20	Starting	M24-20	M24-20	OS/390	z/OS	7.1.0

Recovery

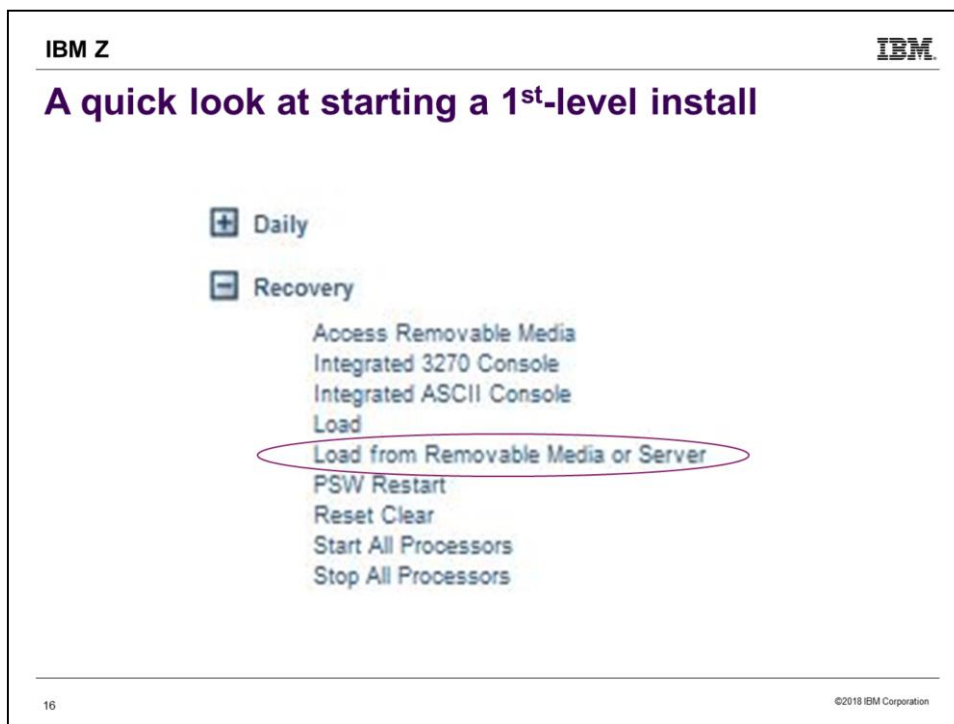
Image Details

Operational Configuration

Build

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Here is a view of a Systems Management panel on the Hardware Management Console (HMC). The small section that has been circled is displayed bigger on the next slide.



This is a zoom-in of the previous picture. To install from a DVD, choose “Load from Removable Media or Server”.

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A quick look at starting a 1st-level install

IBM Hardware Management Console

Home

Load from Removable Me... >

▼

Load from Removable Media or Server - M34:MSTR1

Use this task to load operating system software or utility programs from a CD / DVD-ROM or a server that can be accessed using FTP.

Select the source of the software:

☒ Hardware Management Console CD / DVD-ROM

☐ Hardware Management Console CD / DVD-ROM and assign for operating system use

☐ FTP Server

Host name:

User name:

Password:

Protocol: ▼

File path:

17

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...And here is the panel you then get. Select “Hardware Management Console CD/DVD-ROM” as shown if installing from DVD. If installing from an FTP server, select “FTP Server” and fill in the information.

Setting up the user for 2nd-level install

sp cons start to *

Ready; T=0.01/0.01

q v stor

STORAGE = 512M

Ready; T=0.01/0.01

def t3390 2222 cyl 10

DASD 2222 DEFINED

Ready; T=0.01/0.01

Temporary disks work fine for 2222, 24CC, and 2CF0. Do note, however, that the type (3390 or FBA) must be the same as the type of DASD you are ultimately installing to.

Setting up the user for 2nd-level install

```
def t3390 24cc cyl 10
```

```
DASD 24CC DEFINED
```

```
Ready; T=0.01/0.01 15:00:38
```

```
def t3390 2cf0 cyl 120
```

```
DASD 2CF0 DEFINED
```

```
Ready; T=0.01/0.01 15:00:52
```

Setting up the user for 2nd-level install

```
listfile instpipe module *  
DMSLST002E File not found  
Ready(00028); T=0.01/0.01  
link maint 193 193 rr  
Ready; T=0.01/0.01  
acc 193 t  
DMSACP723I T (193) R/O  
Ready; T=0.01/0.01  
instpipe  
Ready; T=0.01/0.01
```

Install set up

Ready; T=0.06/0.08 14:31:37

```
pipe ftpget -h 9.60.14.91 -u installaccess -p ??? -d 710/ckd_ga_7101/CPDVD -v BEF  
-DVDEOF -f CKD222* |UNPACK| eckdrest 2222
```

DMSRXS1408W File TCPIP DATA * not found

ECKDREST: WROTE 150 TRACKS ON 2222, RC=0

Ready; T=0.47/0.68 14:38:51

This step always trips me up because I cut-and-paste from the book. I remember to fill in the host, userid, password and directory, but I usually forget to update the word after “-f” and the word before “2222”.

Notice also the timestamps. It doesn’t always take this long – I immediately re-ran it and it took only 73 seconds. So there is a lesson here: if it hasn’t reported failure, let it keep going.

You may see the “TCPIP DATA * not found” message, which means exactly what it says. Since the FTP works fine taking the defaults, lacking a TCPIP DATA file is not a problem. (What could possibly be a problem is if there was a TCPIP DATA file and it was in some way bad.) The important message here is the last one “ECKDREST: WROTE ..., RC=0”.

Install set up (continued)

ipl cms

z/VM V7.1.0 2018-07-20 16:09

Ready; T=0.01/0.01

acc 2222 c

Ready; T=0.01/0.01

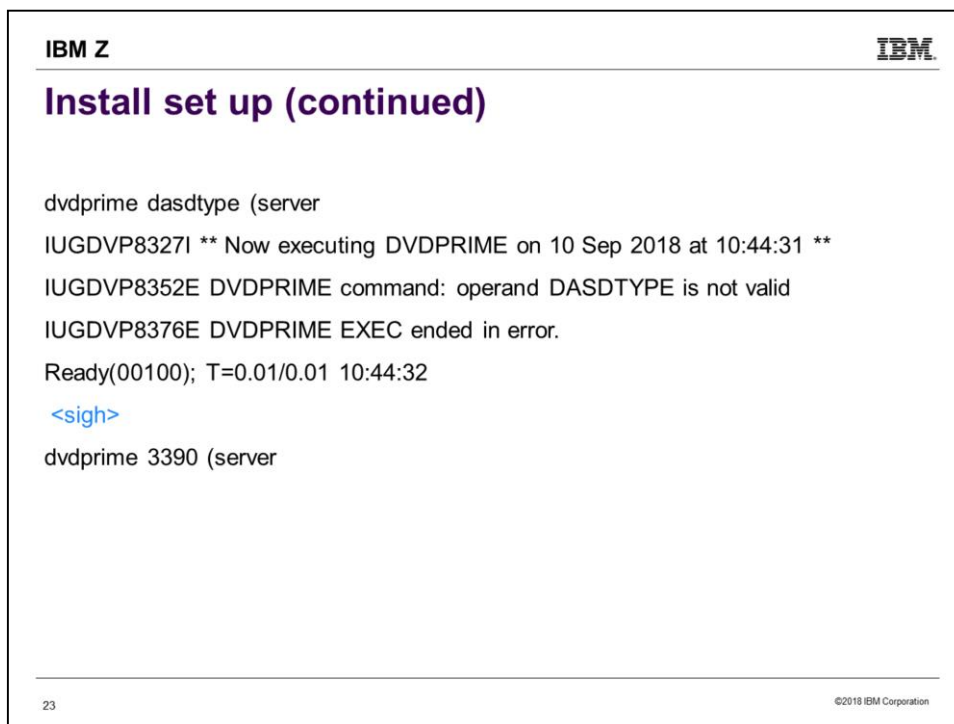
listfile instpipe module *

INSTPIPE MODULE C1

Ready; T=0.01/0.01

dvdprime dasdtype (server

<Uh-oh. That last command was incorrect.>



Even if you have done many installs, you are likely to make little mistakes like this. Don't get rattled by an error. The first things to check if you have been using cut-and-paste are, maybe the paste failed to include everything, or maybe you forgot to fill in some parameter. In this case, I forgot to fill in the "dasdtype".

Install set up (continued) – DVDPRIME panel

```
*** DVDPRIME PANEL ***  
Enter information in empty fields and press F5 to process.  
HOSTNAME OR IP ADDRESS:  9.60.14.91_____  
FTP USERID:              installaccess_____  
FTP PASSWORD:            ???_____  
DVD PATHNAME:            710/ckd_ga_7101/cpdvd_____  
PORT NUMBER:             21_____
```

Notice again that these are the credentials for the FTP server, not your prospective VM system. Press F5 when you have filled in everything correctly.

Install set up (continued)

▪ Having pressed F5, we see...

IUGDVP8440I Now loading 24CC disk

CKD222*

ECKDREST: WROTE 150 TRACKS ON 24CC, RC=0

IUGDVP8440I Now loading 2CF0 disk

CKDCF0*

ECKDREST: WROTE 1800 TRACKS ON 2CF0, RC=0

IUGDVP8392I DVDPRIME EXEC ended successfully

Ready; T=0.53/0.76

Having mashed F5, wait a few minutes for the 24CC disk to be populated.

INSTPLAN – finally time to define new system

pipe cms q disk | chop 45 | cons

LABEL	VDEV	M	STAT	CYL	TYPE	BLKSZ	FILES
TGR191	191	A	R/W	10	3390	4096	38
MNT4CC	24CC	C	R/W	10	3390	4096	93
MNT190	190	S	R/O	207	3390	4096	695
MNT19E	19E	Y/S	R/O	500	3390	4096	1156

Ready; T=0.01/0.01 15:38:11

instplan traditional

INSTPLAN – Panel 1

```

*** z/VM INSTALLATION PLANNING ***

Mark the product(s) selected to be installed into the filepool with an "F"
and those selected to be installed to minidisks with an "M"
  M      VM      F      DIRM      F      ICKDSF
  F      PERFTK   F      RACF      F      RSCS
  M      TCP/IP   F      VMHCD

Select a System Default Language.
  X AMENG      _ UCENG

Select a System DASD type. DASD size can be changed.
  X 3390  10016  _ FBA DASD  6.0

Enter the name of common service filepool.
  Filepool Name:  TGVMPDFS

Select a System Type: Non-SSI or SSI
  _ Non-SSI Install:  System Name _____
  X SSI Install:      Number of Members 2      SSI Cluster Name TDGAB

```

This panel is a straightforward copy from worksheet Table 1. The only difference is I decided to use the given value for the DASD size.

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INSTPLAN – Panel 2

*** z/VM INSTALLATION PLANNING PANEL 2 ***

N Would you like to have your system automatically configured to be managed by a SMAPI client for system management? Enter Y or N

IBM Z

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INSTPLAN – Panel 3

*** z/VM INSTALLATION PLANNING PANEL 3 ***

SSI Cluster Name: TDGAB

After installation is complete, the SSI cluster will be IPLed:

X

First-Level

Second-Level

SSI Member Name(s):

SLOT #	MEMBER NAME	IPL LPAR/USERID
=====	=====	=====
1	AACHOO	TGREERA
2	BLBLUB_	TGREERB

29

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This is a straightforward copy of worksheet Table 6.

INSTPLAN – final verification

```

LUGIPX8475I Final selections display
The products you selected to load to minidisk are:
VM TCP/IP

The products you selected to load to SFS are:
DIRM ICKDSF PERFTK RACF RSCS VMHCD

The system default language selected:
AMENG

The common service filepool name is:
TGVMPDFS

The install type you selected is:
SSI

The SSI cluster name is:
TDGAB

The number of members is:
2
  MEMBER NAME 1: AACH00          IPL LPAR/USERID 1: TGREERA
  MEMBER NAME 2: BLBLUB          IPL LPAR/USERID 2: TGREERB

After installation is complete, members will be IPLed from:
Second-Level

The DASD type you selected to load on is:
3390 - 10016 cylinders

The volumes needed to load z/VM are:
COMMON:  VMCOM1
RELEASE: 710RL1
MEMBER1: M01RES M01S01 M01P01
MEMBER2: M02RES M02S01 M02P01

Do you want to continue ? (Y/N)

```

If it doesn't look right, don't be afraid to press N. When you re-run INSTPLAN TRADITIONAL, it will remember the answers you previously gave.

*** Z/VM INSTALLATION VOLUME DEFINITION ***						
TYPE	LABEL	ADDRESS		TYPE	LABEL	ADDRESS
COMMON	TGC590	C590				
REL VOL	TGC591	C591				
CH00			BLBLUB			
RES	TGC592	C592		RES	TGC595	C595
SP00L	TGC593	C593		SP00L	TGC596	C596
PAGE	TGC594	C594		PAGE	TGC597	C597

This is a straightforward copy of worksheet Table 7. If the DASD is all already CPFMTXA formatted, you can save some install time by not having it re-done. But formatting doesn't take that long nowadays, so if in doubt, choose to format.

INSTPLAN – finish

IUGIIX8377I You have selected to format the following volumes:

TGC590 C590

TGC591 C591

TGC592 C592

TGC593 C593

TGC594 C594

TGC595 C595

TGC596 C596

TGC597 C597

IUGINP8392I INSTPLAN EXEC ended successfully

Ready; T=0.05/0.06

Yay! We are all set up.

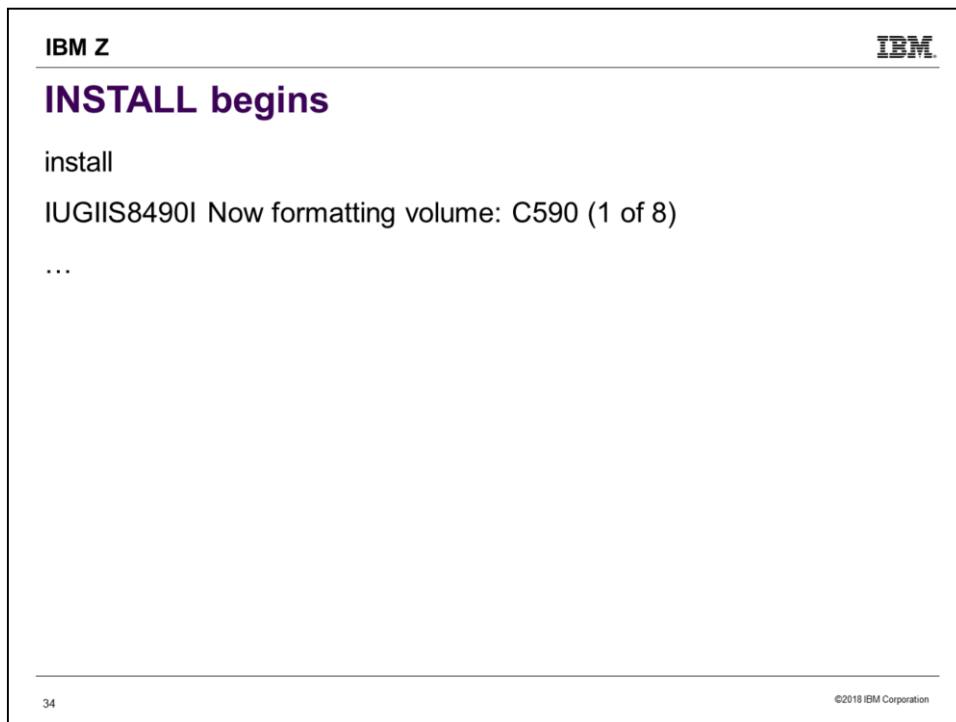
INSTPLAN – verify we have the DASD

q v dasd

DASD 0190 3390 K4SRES R/O	214 CYL ON DASD C830
DASD 0191 3390 K4E50C R/W	10 CYL ON DASD 4752
DASD 0193 3390 K4SRES R/O	500 CYL ON DASD C830
DASD 019E 3390 K4SRES R/O	500 CYL ON DASD C830
DASD 019F 3390 K44EC3 R/O	100 CYL ON DASD CCC1
DASD 2222 3390 (TEMP) R/W	10 CYL ON DASD 0C42
DASD 24CC 3390 (TEMP) R/W	10 CYL ON DASD 0C40
DASD 2CF0 3390 (TEMP) R/W	120 CYL ON DASD 4721
DASD C590 3390 TGC590 R/W	10017 CYL ON DASD C590
DASD C591 3390 TGC591 R/W	10017 CYL ON DASD C591
DASD C592 3390 TGC592 R/W	10017 CYL ON DASD C592
DASD C593 3390 TGC593 R/W	10017 CYL ON DASD C593
DASD C594 3390 TGC594 R/W	10017 CYL ON DASD C594
DASD C595 3390 TGC595 R/W	10017 CYL ON DASD C595
DASD C596 3390 TGC596 R/W	10017 CYL ON DASD C596
DASD C597 3390 TGC597 R/W	10017 CYL ON DASD C597

Ready; T=0.01/0.01 16:16:23

Check to verify that we have write access to the DASD we will be installing to.
In this case, that is C590-C597.



Type INSTALL, press ENTER, and we're off and running!

INSTALL continues

This concludes the first session.

There will now be a long intermission while INSTALL does its thing.
The time required depends greatly on communication speed, but allow
for several hours.

...

The fastest install would be if you were using the CMS minidisk based procedure, and the DASD you are installing to did not need formatting.

This slide intentionally left blank.

INSTALL continues...

install

IUGIIS8490I Now formatting volume: C590 (1 of 8)

IUGIIS8490I Now formatting volume: C591 (2 of 8)

IUGIIS8490I Now formatting volume: C592 (3 of 8)

IUGIIS8490I Now formatting volume: C593 (4 of 8)

IUGIIS8490I Now formatting volume: C594 (5 of 8)

IUGIIS8490I Now formatting volume: C595 (6 of 8)

IUGIIS8490I Now formatting volume: C596 (7 of 8)

IUGIIS8490I Now formatting volume: C597 (8 of 8)

...

Here is what has been happening while we were at intermission.

IBM Z

IBM

INSTALL continues...

...

IUGIIS8380I Restoring IIS to TGC590, TGC591, TGC592, and TGC593

IUGIIS8341I Load of the system IIS to COMMON volume has completed successfully

IUGIIS8341I Load of the system IIS to RELEASE volume has completed successfully

IUGIIS8341I Load of the system IIS to MEMBER RES volume has completed successfully

...

38

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Here is more of what was happening while we were at intermission.

IBM Z

IBM

INSTALL continues...

...

IUGIIS8344I Restore command failed with RC=-111 - reissuing command:

```
FTPGET -h 9.60.14.91 -u installaccess -p ??? -d
710/ckd_ga_7101/cpdvd -v BEF -DVDEOF -f CKDSPL* |UNPACK|
ECKDREST C593 0 200 0
```

CKDSPL*

DMSRXS1408W File TCPIP DATA * not found

PROCESSING CKDSPL00

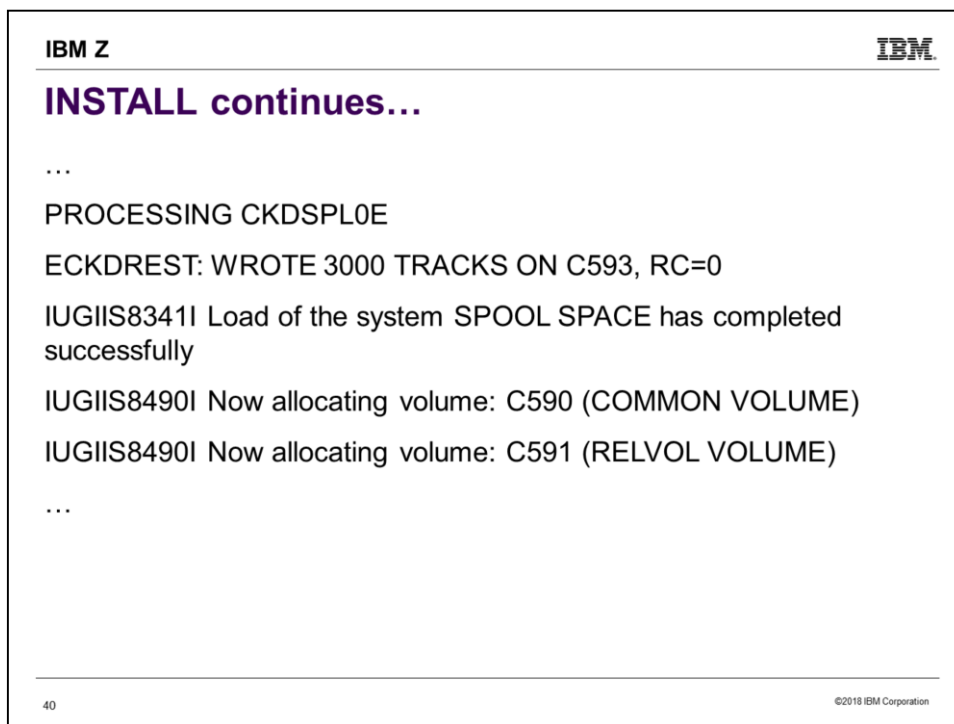
PROCESSING CKDSPL01

...

39

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Whoa! We had an error! What apparently happened is we have a noisy FTP connection. INSTALL reacts by restarting from its latest milestone. INSTALL keeps track of how far it has progressed, so restarts don't have to go all the way back to the beginning. If there are too many errors and it gives up, you can still restart by again reissuing INSTALL.



Despite the reported error, we recovered and are still going. Note that we haven't needed to type anything since typing "INSTALL".

INSTALL continues...

...

IUGIIS8490I Now allocating volume: C597 (PAGING)

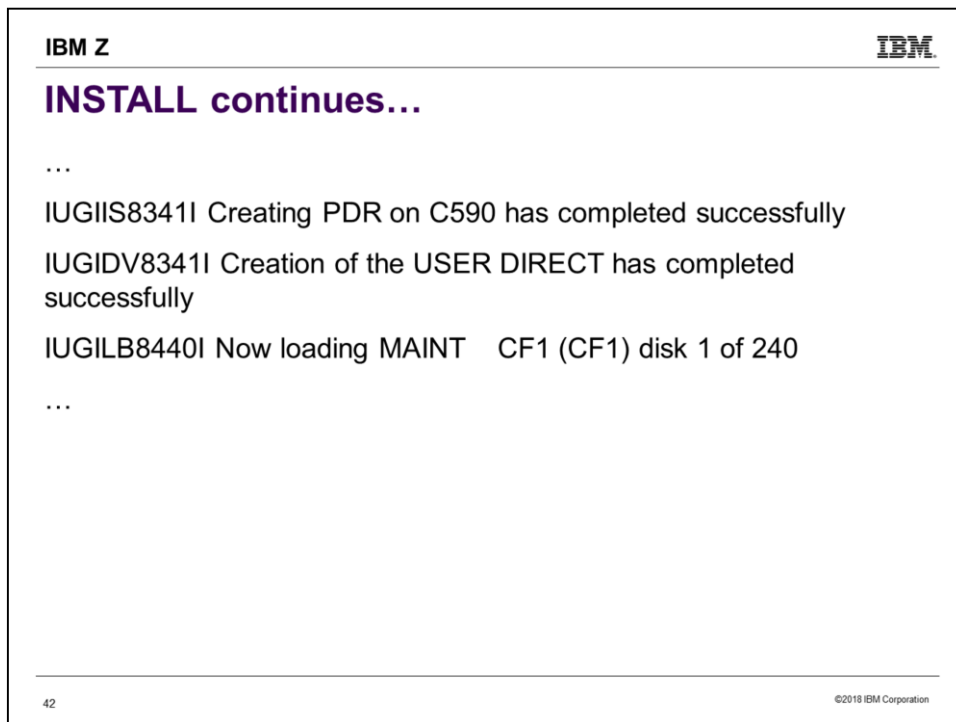
IUGIIS8341I Writing ownership TDGAB NOSYS to C590 TGC590 has completed successfully

IUGIIS8341I Writing ownership TDGAB AACHOO to C592 TGC592 has completed successfully

IUGIIS8341I Writing ownership TDGAB AACHOO to C593 TGC593 has completed successfully

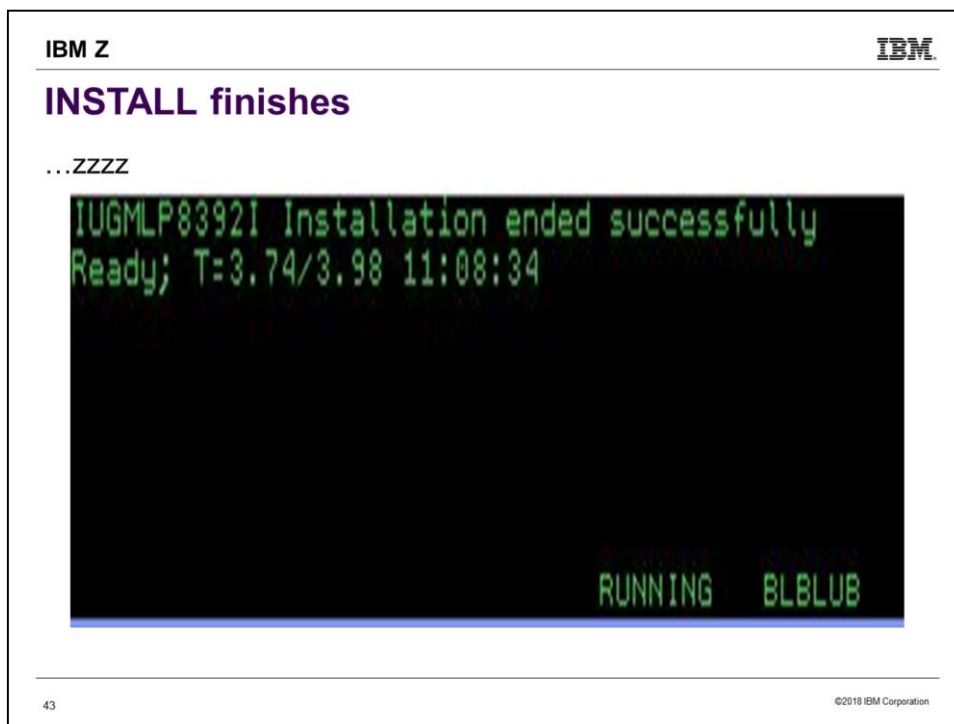
IUGIIS8341I Writing ownership TDGAB AACHOO to C594 TGC594 has completed successfully

...



Hmm... We saw ownership writing complete successfully for the COMMON volume and member 1's volumes, but no mention of member 2's volumes. What is going on? INSTALL is going to completely install to member 1, then take care of member 2.

The loading of just disk 1 may take many minutes, but don't worry. MAINT CF1 is one of the bigger minidisks to be loaded, so the total time will not be 240 times the time required for it. But still, loading 240 minidisks takes some time. Don't expect to sit there watching – find something else to do while you wait.



Wake up! The install has finished. If you were watching, the things that happened after 240 minidisks were loaded included IPLing the first SSI member, creating some NSSes on it, setting up the service filepool, shutting down member 1, then IPLing member 2 and also building the NSSes.

Notice that we are left logged on to member 2. We will need to SHUTDOWN to get back to 1st-level. INSTALL has to leave you somewhere, this is just where they chose to. If installing to non-SSI or installing 1st-level, you will find yourself in slightly different circumstances. So it is important to be following the *Installation Guide* section applicable to your circumstances.

Post-INSTALL

- Update SYSTEM CONFIG
- Update USER DIRECT
- Set up TCPIP
- RSCS, DIRMAINT, PERFSVM, RACF ...
- See Part 3 of the *Installation Guide*

We will take a quick look at configuring.

Post-Install

- SYSTEM CONFIG has a tweak to ignore the LPAR/UserID we are on and IPL a specific SSI member. Remove it by running INSTSCID EXEC. (Below is an excerpt from SYSTEM CONFIG.)

```
System_Identifier LPAR TGREERA AACHOO
```

```
System_Identifier LPAR TGREERB BLBLUB
```

```
/* System_Identifier LPAR @@LU-3 @@MEMSLOT3 */
```

```
/* System_Identifier LPAR @@LU-4 @@MEMSLOT4 */
```

```
System_Identifier * * BLBLUB
```

Post-Install

- Here is the SYSTEM CONFIG excerpt after invoking INSTSCID REMOVE:

```
System_Identifier LPAR TGREERA AACHOO
System_Identifier LPAR TGREERB BLBLUB
/* System_Identifier LPAR @@LU-3 @@MEMSLOT3 */
/* System_Identifier LPAR @@LU-4 @@MEMSLOT4 */

/* System_Identifier * * BLBLUB */
```

We're Done! Well, sort of...

- **Now is a good time to take a stroll through SYSTEM CONFIG.**
- Before making any changes, make a backup copy.
- Features – Are some disabled that you will want enabled?
- Devices – Do you need to make some Offline_at_IPL to avoid picking up the wrong DASD?
- Timezone_Definition – Do you want to define some other than for U.S.?
- PRODUCT – If you are licensed to use any of these, they will need to be changed to ENABLED before you can use them.
- Other stuff – Are you upgrading from a previous system?
- Remember to run CPSYNTAX EXEC (on MAINT 193 disk).

Remember that, when IPLing a system from the SAPL screen, you can choose which SYSTEM CONFIG you will use. So making a backup copy is especially useful.

USER DIRECT

- The USER DIRECTory is on PMAINT 2CC, but both MAINT and MAINT710 have MR link to it.
- So from MAINT710 we can edit and make changes.
- MAINT710 also has MR link to MAINT 123, which is the system RES pack where the DRCT space is.
- So from MAINT710, after changing USER DIRECT we can issue DIRECTXA to put the changes into effect.
- It's always a good idea to save a backup before changing USER DIRECT.

Running IPWIZARD

- Logon to MAINT710
- Access 193 E
- Run IPWIZARD

Running IPWIZARD

```
*** z/VM TCP/IP Configuration Wizard ***

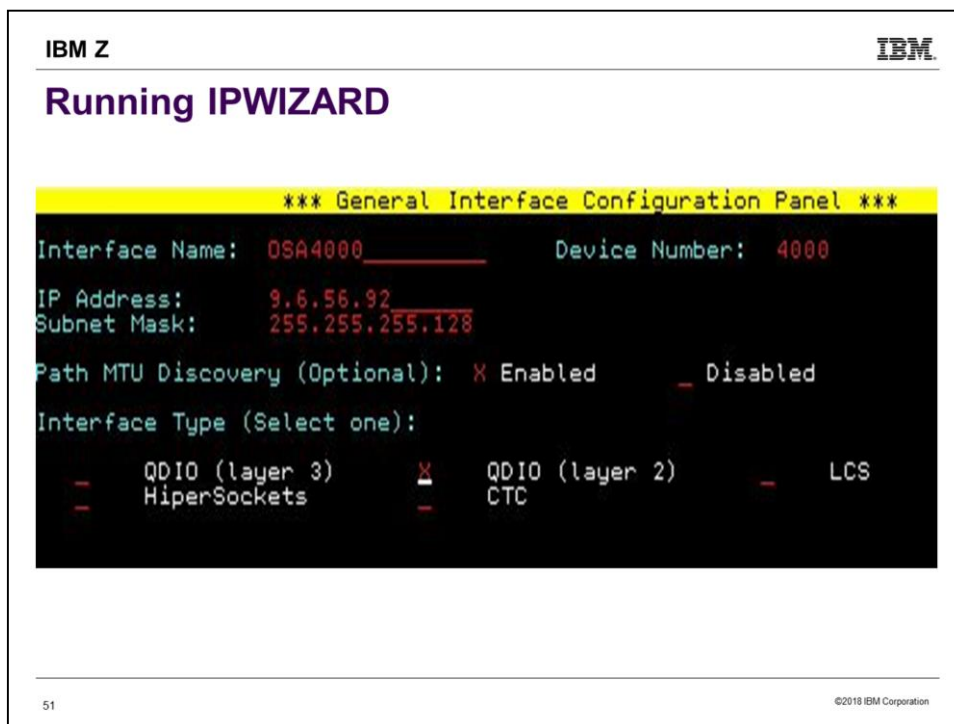
The items that follow describe your z/VM host

User ID of VM TCP/IP Stack Virtual Machine:  TCP/IP__

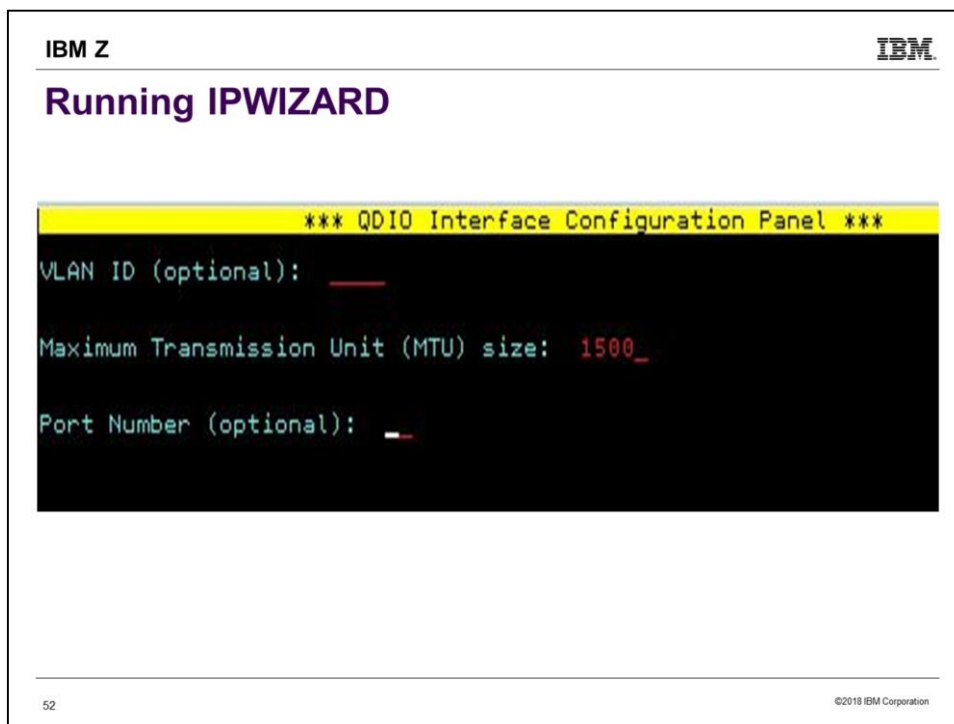
Host Name:      AACHOO_____
Domain Name:    ENDICOTT.IBM.COM_____

Gateway IP Address:  9.6.56.1_____

DNS Addresses:
1) 9.0.130.50_____
2) 9.0.128.50_____
3) _____
```



To get this to work as shown, we're going to have to DEF NIC 4000 TYPE QDIO on our 1st-level session. Presumably we would eventually couple 4000 to a VSWITCH.



1500 is maybe a little small for MTU, but it will work to get you started.

Running IPWIZARD

- On last panel, PF5 brings us to

DTCIPW2508I DTCIPWIZ EXEC is attempting to create the necessary
DTCIPW2508I configuration files

The TCP/IP stack (TCPIP) must be restarted as part of this procedure.
Would

you like to restart TCPIP and continue?

Enter 0 (No), 1 (Yes)

- What happens if we say 0 (No)?

Running IPWIZARD

DTCIPW2502I Configuration files not created; operation cancelled by MAINT710

DTCIPW2502I TCP/IP has not been restarted

- And we return to the first panel, with the message

DTCIPW2512I Operation cancelled; configuration incomplete

- You can PF3 to quit. When you restart IPWIZARD, your input data will still be there.

Running IPWIZARD

- When we say YES, IPWIZARD creates PROFILE TCPIP and SYSTEM DTCPARMS on TCPMAINT 198.

- Based on our input, PROFILE TCPIP includes

DEVICE DEV@4000 OSD 4000

LINK OSA4000 QDIOETHERNET DEV@4000 PATHMTU MTU 1500
ETHERNET

HOME

9.6.56.92 255.255.255.128 OSA4000

DEFAULTNET 9.6.56.1 OSA4000 1500

START DEV@4000

Running IPWIZARD

- Based on our input, SYSTEM DTCPARMS consists of

```
:nick.TCPIP      :type.server  
                  :class.stack  
                  :attach.4000-4002
```

1st-level directory information

- If you installed 2nd-level, as we have, you will want to update the 1st-level directory so that your SSI works properly.
- SHUTDOWN the 2nd-level system and then IPL CMS 1st-level.
- INSTALL put the file SSI2ND DIR-PROF on your A disk.
- SSI2ND DIR-PROF contains sample directory entries to be used 1st-level, as well as sample PROFILE EXECs.

For More Information ...

Web sites:

- <http://www.vm.ibm.com/> -- zVM on the Web
- <http://www.vm.ibm.com/library> -- the online zVM Library
- <http://www.vm.ibm.com/education> -- presentations, classes and information

Via mailing lists:

- IBMTCP-L@VM.MARIST.EDU
- IBMVM@LISTSERV.UARK.EDU
- LINUX-390@VM.MARIST.EDU

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