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# z/VM Installation -- From **Cardboard Box** to **IPL**

Session 9119  
15:00 Tuesday, August 12, 2008  
SHARE – San Jose, CA

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# Disclaimer

(you expected something else?)



- **Assumptions:**
  - You are installing z/VM for the purposes of Linux, perhaps with little or no z/VM experience.
  - You may be installing z/VM in a new LPAR, or on an existing VM system as a 2<sup>nd</sup> level virtual machine while preparing to run it 1<sup>st</sup> level (on the bare metal).
- How *THIS* customer does it.
  - After years of learning from others.
  - Your mileage may vary.
- This session will probably re-appear with significant improvements at the next SHARE.
  - After other “old timers”, **and YOU**, chip in ideas, tell me what I’ve done wrong (still), what I should do differently, and what else I should be doing!
  - “**SHARE** -- it’s not an acronym – it’s what we **DO!**”

# Mandatory “Brag Sheet”

or: “Why should we listen to *him*?”



- Started as a “Teleprocessing Operator” in Feb. 1972
  - Thus, in Data Processing for over 37 years.
- VM-exclusive (mostly) since 1978 (30+ years of VM experience)
  - (VM 370 Release 5 Program Level Change 6)
- Installed VM at Hewitt Associates in early 1985
- Chaired CAVMEN for 6+ years
- Member of SHARE VM Technical Steering Committee since August 1997
- According to envelopes of various mailings: CIO; Partner-In-Charge; and Chief Cook; Manager of VoiceMail Systems.

# Agenda

- Where can I look for help?
- Pre-installation preparation and planning.
- Preventative Service Planning (PSP) buckets.
- Damage prevention.
- Installation walk-through.
- Service application.
- Initial configuration.
- “Good” practices. (Marked as *Tip:*)
- Maybe... Placing a z/VM order with IBM.

# Where do I look for (more) help?

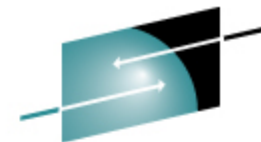
- Obviously: IBMLink (leverage your support dollars):
  - <https://www-304.ibm.com/usrvvc/account/userservices/jsp/login.jsp?persistPage=true>
- IBM Publications (review them yourself back at the shop):
  - <http://www.vm.ibm.com/library/> (The VM library), which points to...
  - [http://publibz.boulder.ibm.com/bookmgr\\_OS390/libraryserver/zvmv5r3/](http://publibz.boulder.ibm.com/bookmgr_OS390/libraryserver/zvmv5r3/) (The z/VM LibraryCenter)
  - [http://publibz.boulder.ibm.com/cgi-bin/bookmgr\\_OS390/Shelves/hcsh2a90](http://publibz.boulder.ibm.com/cgi-bin/bookmgr_OS390/Shelves/hcsh2a90) (The z/VM Bookshelf)
  - <http://www-03.ibm.com/systems/z/os/zos/bkserv/zvm.html> (The z/VM Collection" bookshelf – Discs)
  - <http://www-03.ibm.com/systems/z/os/zos/bkserv/zvmpdf/> (The z/VM PDF Library)
    - Program Directories, data areas, control blocks, monitor records, tri-fold Installation Summaries, redbooks, whitepapers, reports, spec sheets, brochures, reference guides, and lots more
  - <http://www.elink.ibm.com/publications/servlet/pbi.wss?CTY=US> (the IBM Publications Center)
  - <http://www-03.ibm.com/systems/z/os/zos/bkserv/lookat/> (“LookAt” messages)
- Informal but VERY prompt, helpful, and flameless discussion lists:
  - Send email text to: [LISTSERV@LISTSERV.UARK.EDU](mailto:LISTSERV@LISTSERV.UARK.EDU)
    - **SUBSCRIBE IBMVM** firstname lastname
  - Send email text to: [LISTSERV@VM.MARIST.EDU](mailto:LISTSERV@VM.MARIST.EDU)
    - **SUBSCRIBE CMS-PIPELINES** firstname lastname
  - Send email text to: [LISTSERV@VM.MARIST.EDU](mailto:LISTSERV@VM.MARIST.EDU)
    - **SUBSCRIBE LINUX-390** firstname lastname

# Where else can I look IMMEDIATELY?

You are in luck, you are attending *the best interactive training value* by being right here ...  
*at SHARE.*

- This page used to contain a list of 25 or so good SHARE sessions for those new to z/VM or Linux
- Good news/Bad news: When preparing the slide for this presentation the list accumulated to over 108 sessions.

Summary: You're getting lots for your money.



**SHARE**

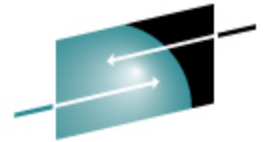
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## Pre-installation preparation and planning; Where to get IBM manuals

- “Nowadays” few hardcopy manuals are shipped with Operating System orders.

*Download and print PDF manuals from:*

- <http://www.vm.ibm.com/library/index.html> - a general pub URL) which points to:  
<http://www.vm.ibm.com/pubs/> - where you should download:
- z/VM Summary for Automated Installation and Service (Tape Installation)  
(the 2-sided tri-fold single sheet of paper), or
- z/VM Summary for Automated Installation and Service (DVD Installation)  
(the 2-sided tri-fold single sheet of paper)
- z/VM Guide for Automated Installation and Service  
The personally recommended, full step-by-step manual
- Program Directory for z/VM System Delivery Offering (SDO)
- z/VM Program Directory
- z/VM RSU Information Memo



## Pre-installation preparation and planning

- Those should get you through the installation, but during and just after installation, the following are good to have on hand (along with many, MANY others):
  - <http://publibz.boulder.ibm.com/epubs/pdf/hcsb4b10.pdf>  
GC24-6119-02 CP Messages and Codes
  - <http://publibz.boulder.ibm.com/epubs/pdf/hcsg0b10.pdf>  
SC24-6083-02 CP Planning and Administration (the VM systems programmer bible)
  - <http://publibz.boulder.ibm.com/epubs/pdf/hcsc6b10.pdf>  
GC24-6130-01 VMSES/E Introduction and Reference



# Pre-installation preparation and planning

## Read Those Fine Manuals



- Scan the “Program Directory for z/VM SDO”
  - Pay attention to item “1.1.4 z/VM SDO Web Site” to see if there’s an even more current copy of this manual, or other critical SDO install doc.
  - Follow the steps through 2.4.4.4 – mark the date, and place a prominent tab there as a “breadcrumb” to find your way back when done with the “z/VM Guide for Automated Installation and Service”.
- Scan the “z/VM Guide for Automated Installation and Service”.
  - Understand that *even when using a 1-sheet installation Summary*, **this manual** is the detailed documentation of those brief steps.
- Familiarity with “z/VM Planning and Administration”, VMSES/E, etc. is assumed.



- Scan the “Program Directory for z/VM” (not the SDO ProgDir )
  - Pay particular attention to the section: Chapter 3.1 “Preventative Service Planning” (PSP).
  - Check the specified “PSP ***buckets***” on IBMLink for ***installation documentation updates***, and tips.  
You’ll get to actual product service in the buckets later.
  - Order any updated documentation, and make any suggested changes to the installation doc you have.
  - Check for more recent RSU.
  - The rest is just reference, no installation tasks.

# Damage prevention: What did I already do?

- It is all too easy to get interrupted during the installation, sometimes for long periods.
- It is even easier to forget what was done -- and *when*.
  - Knowing *when* something was done can help you find the console log documenting the forgotten/interrupted activity.
- **Tip:** Write the date of each step to the left as you complete it (provides better historical info than just a check mark).

# Shipment Arrives



- “Verify Your Order”
  - The “Program Directory for z/VM System Delivery Offering” (SDO ProgDir) does a good job of touching the ‘first bases’. Open all the boxes, comparing what arrived against the “Software Order Packing List”.
    - **Tip:** Check off everything that did arrive (usually everything)
      - *We login all tapes in the same shipment with the volsers **VnnnA**, **VnnnB**, ... **Vnnnx**, where 'nnn' is that particular "shipment number".*
      - *We write the same Vnnn on all documents and most manuals.*
    - Contact IBM immediately regarding anything missing but not marked as “Back-ordered”.

# Installation Walk-through.

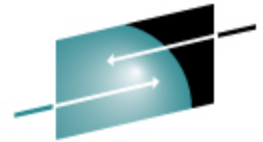
## Step 1. Understand the Requirements.



- From various places in: “z/VM Guide for Automated Installation and Service Version 5 Release 3.0”
  - Know your processor and LPAR number.
  - Know your tape drive and DASD device addresses.
  - Locate the local non-SNA 3270 terminal or equivalent that you’ll use as your console -- don’t miss:  
“Appendix I. Using a 3270 Integrated Console for Installation”
    - Be sure your full-screen terminal has at least 20 lines
  - If you are upgrading from a previous VM system, see the “z/VM Migration Guide”
  - You should already have reviewed the z/VM ProgDir and PSP buckets (which may change the installation procedure).

# Installation Walk-through.

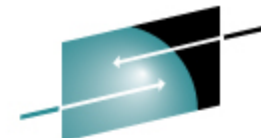
## Step 2. Choose Your Installation Method.



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- **First-Level**
  - Right on the bare machine, IPLing from a restore tape.
  - Requires direct access to the HMC, and an idle machine or idle LPAR, and perhaps access to the machine room.
- **Second-level**
  - From an existing VM system using a privilege class “G” (general user privileges), and usually privclass “B” (to attach hardware devices).
  - Requires an existing 64-bit z/VM operating system, but no access to the HMC or machine room.



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# Installation Walk-through.

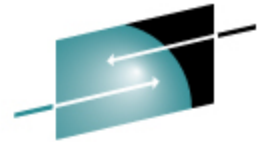
## Step 3. Choose the Document to Use for Installation.

- z/VM: **Summary** for Automated Installation and Service
  - Only the commands, great for seeing the “Big picture” from a high-altitude 50,000-foot view.
- z/VM: **Guide** for Automated Installation and Service
  - Contains commands, parameter descriptions, messages received, suggestions, and recommendations.
  - Used for this presentation.

# Installation Walk-through.

## Damage prevention...

(1<sup>st</sup> and 2<sup>nd</sup> level)



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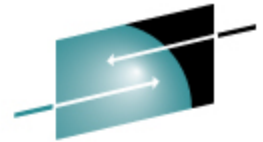
- On **all** “Other Systems” disable or VARY OFF (on external systems) all VM-specific hardware (especially TAPE and DASD!).
  - Other systems can allocate devices you will use, and may get upset with re-labeled and re-formatted DASD.
  - Can lead to another system re-positioning your tapes, your system repositioning *another system's tapes*, or other painful experiences.



# Installation Walk-through.

"Guide for Automated Installation and Service"

Step 4. Complete the Installation and Basic IP Connectivity Worksheet.



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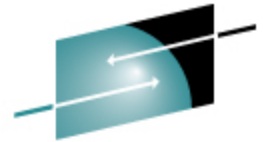
We'll run briefly through both 1<sup>st</sup> and 2<sup>nd</sup> level installation.

- Five system installation specifications:
- 1st level (bare metal) or 2<sup>nd</sup> level (using a VM userid on a running 64-bit Z/VM system)?
- Install which products into SFS (Shared File System) and which to minidisks?
- System Default Language? In the United States, "Mixed Case English" (AMENG) is generally a good language choice.
- Install to 3390-3 or 3390-9?
- What are the DASD addresses to be used?
- Get your network folks involved to fill in the "Basic IP Connectivity" worksheet.
  - You don't get to just make up your own IP addresses, Host name, Domain name, etc. Network folks get very upset when you try.

# Installation Walk-through.

"Guide for Automated Installation and Service"

Step 4. Complete the Installation and Basic IP Connectivity Worksheet.



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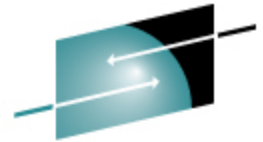
## Choosing minidisks or SFS for Product placement.

- SFS saves DASD space and makes future service moderately easier to apply (easy to extend a filespace limit instead of increasing a minidisk size, formatting it, and copying files).
- SFS is moderately harder to backup than minidisks, and can be very confusing to administer. OTOH, if you won't have real live CMS users, you won't have much SFS administration to do.
- Minidisks do not require a virtual "service machine" for I/O (MVS terms: directly supported by CMS without a "started task" doing I/O).
- Summary: it's a toss-up. I've been choosing minidisks, but reserve the right to change my mind without notice.

# Installation Walk-through.

"Guide for Automated Installation and Service"

## Chapter 2: What is an "Initial Installation System"?



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- **A:** Another acronym:

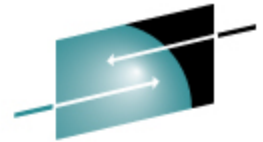
## Initial Installation System

- A base IPL-able VM system (at SLU 0000) which contains all the IBM installation execs and programs.
  - SLU=Service Level Update
- A ***subtle reminder*** that this is the ***IIS***, **NOT: *your system***.
  - `"hh:mm:ss z/VM V5 R3.0 SERVICE LEVEL 0000 (64-BIT)"`
- Used to provide a stable, tested system from which one can run the installation procedures which were installed thereon by IBM and DDRed to tape **for you** as the IIS.
- Plain and simple: *a Starter System*

# Installation Walk-through.

"Guide for Automated Installation and Service"

Chapter 2: First-Level Installation Method



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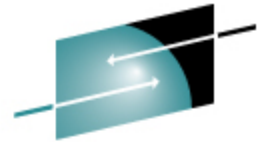
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- After varying off the devices you'll be using on all other systems (yes, it's repetitive ... and absolutely critical) ...
- **Step 1. Restore the Initial Installation System (IIS)**
  - IPL the **ICKDSF** tape to relabel DASD used for restore and system use.
    - **Only needed if** you have DASD with the same volsers as those used by IBM during the installation.
  - IPL the tape again (a 2<sup>nd</sup> time) to load the **DDR program**
    - Restore the Initial Installation System (IIS)
    - Note: ***this is the IIS***, not the mdisks or SFS spaces as you want them installed – it is ***NOT intended for production use!***
    - You build your actual production z/VM system *from*, and overlaying, the z/VM IIS.

# Installation Walk-through.

"Guide for Automated Installation and Service"

Chapter 2: **First-Level** Installation Method



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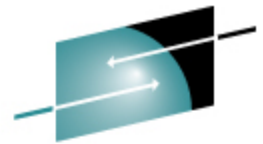
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- Step 2: ***IPL the z/VM IIS*** (**I**nitial **I**nstallation **S**ystem)
  - Well, that was quick – you now have a z/VM system up and running!
  - But it's really NOT what you want – no products, no source, no service.
- Step 3: **Run the INSTPLAN EXEC**  
Select which z/VM features and products you want to install to minidisks, or SFS
  - Select your System Default Language
  - Select the DASD model onto which to restore
- INSTPLAN presents a screen to be filled in with answers from the previously-completed worksheets.

# Installation Walk-through.

"Guide for Automated Installation and Service"

## Chapter 2: First-Level Installation Method



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### 1. Run INSTPLAN.

```
instplan
```

```
*** z/VM INSTALLATION PLANNING ***
```

Mark the product(s) selected to be installed into the VMSYS filepool with an "F" and those selected to be installed to minidisks with an "M"

| Install To | Product | Install To | Product | Install To | Product |
|------------|---------|------------|---------|------------|---------|
| H          | VM      | H          | RSCS    | M          | TCP/IP  |
| H          | OSA     | H          | ICKDSF  | M          | DIRM    |
| H          | RACF    | H          | PERFTK  | M          | VNHCD   |

Place a nonblank character in front of the System Default Language you would like for your system.

```
_ AMENG      _ UCENG      _ KANJI      _ GERMAN
```

Place a nonblank character in front of the DASD model onto which your z/VM system will be loaded. Only one model may be selected.

```
_ 3390 Mod 3      _ 3390 Mod 9
```

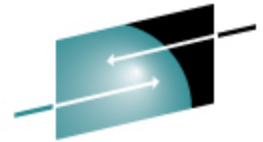
```
PF1 - HELP  PF3/PF12 - QUIT  PF5 - Process  ENTER - Refresh
```

Figure 2. Installation Planning Panel

# Installation Walk-through.

”Guide for Automated Installation and Service”

## Chapter 3: Second-level Installation Method



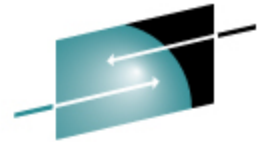
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- **Step 1: Load the Installation tools from the z/VM System DDR.**
  - Define a new 1<sup>st</sup> level VM userid with privclasses G, and B (see notes) with a small 191 mdisk.
    - In the attached examples it is defined as userid: **VM520**
  - May briefly need privclass ‘A’ and directory ‘OPTION DEVMAINT’.
    - Only if you want to install to DASD with non-IBM volsers, and only during that step.
  - Logon to that userid (e.g. VM520) and load various utility EXECs (commands) for the installation.
- **Step 2: Run the INSTPLAN EXEC**
  - **Different from the 1st installation only in that there was an existing VM system upon which to run INSTPLAN. It is the same EXEC.**
  - Requires that the userid running INSTPLAN be the one from which you IPL the installation system (i.e. don’t do some work on one system and then copy the files – see notes below).

# Installation Walk-through.

”Guide for Automated Installation and Service”

## Chapter 3: **Second-level** Installation Method



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- **Step 3: Restore the Initial Installation Systems (IIS).**
  - Attach all the DASD to be restored (why you need privclass ‘B’).
  - Run **INSTIIS EXEC** (not performed during a 1<sup>st</sup> level install)
    - Formats (optionally), labels, and restores all required DASD for the IIS system.
    - If your DASD was already formatted for VM (CPFORMAT, no filler records) you can save time by placing a non-blank character in the “DO NOT FORMAT DASD” column.

2. Run INSTIIS to format and label your installation DASD and to restore the IIS.

1nst11s

\*\*\* z/VM INSTALLATION DASD FORMAT/RESTORE \*\*\*

| PACK TYPE | DASD LABEL | DASD ADDRESS | VIRTUAL TAPE ADDRESS | DO NOT FORMAT DASD |
|-----------|------------|--------------|----------------------|--------------------|
| RES       | 530RES     | _____        | _____                | _____              |
| SPOOL     | 530SPL     | _____        |                      |                    |
| PAGE      | 530PAG     | _____        |                      |                    |
| USER      | 530W01     | _____        |                      |                    |
| USER      | 530W02     | _____        |                      |                    |
| USER      | 530W03     | _____        |                      |                    |

PF1 - HELP    PF3/PF12 - QUIT    PF5 - Process    ENTER - Refresh

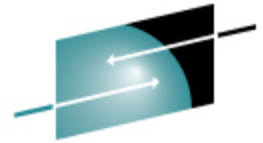
Figure 3. Installation DASD Format and Restore Panel (3390 Model Layout)



# Installation Walk-through.

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Chapter 3: **Second-level** Installation Method



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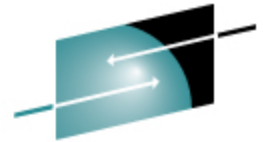
- Step 4: **IPL the z/VM IIS** (**Initial Installation System**)
  - Same as for 1<sup>st</sup> Level installation, watch for that first message confirming that you are running the IIS (**Service Level 0000**), rather than some other system for which you happen to have a disk LINKed.

# Installation Walk-through.

"Guide for Automated Installation and Service"

Chapter 4: Load the System DDR

Finally - Loading your production system from tape



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Or: "We now rejoin our regular programming" ...

Level 1 and Level 2 together again

***Now that you have a z/VM system running (the IIS) with current tools upon which IBM can rely ...***

- **Step 1: Run INSTVM**

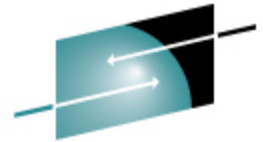
- Supports from 1 up to 14 concurrent tape drives (separate process for installation from DVD).
  - This permits pre-loading tapes into older 3480 or 3490 drives without Automatic Cartridge Loaders.
  - A single 3480, 3490, or 3590 drive with an ACL would be fine.
- Builds and places online the system directory.
  - "USER DIRECT" file wherein all virtual machines are defined.
- Loads the selected items from the z/VM System DDR.
  - Once the directory has been placed online, there are defined places onto which the selected items can be loaded. (Mdisks or SFS spaces)

# Installation Walk-through.

"Guide for Automated Installation and Service"

Chapter 4: Load the System DDR

Finally - Loading your *production* system from tape



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The LOAD DEVICE MENU panel displays after issuing the INSTVM command.

```
LOAD DEVICE MENU

MEDIA SELECTED IS: media

MOUNT VOLUME      VADDR
  2                -----
  3                -----
  4                -----
  5                -----
  6                -----
  7                -----
  8                -----
  9                -----
 10               -----
 11               -----
 12               -----
 13               -----
 14               -----

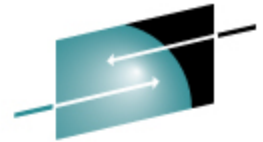
PF1 = HELP      PF3 = QUIT      PF5 = LOAD
```

# Installation Walk-through.

"Guide for Automated Installation and Service"

## Chapter 4: Load the System DDR

Applying the latest service



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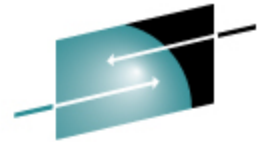
- Step 2: **Run SERVICE EXEC** (maybe later?)
  - Loads serviced files from the Recommended Service Upgrade (RSU) tapes.
  - **Tip:** WAIT ...not yet!
  - If it has been “a while” since your order was shipped, check to see if there is a more current RSU available
    - See: **APAR UM97vrm** for the latest z/VM RSU (e.g. 5.3.0 = UM97530)
  - But ... *what's an RSU?*

# Installation Walk-through.

”Guide for Automated Installation and Service”

## Chapter 4: Load the System DDR

Applying the latest service – RSU



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## RSU defined – Recommended Service Upgrade

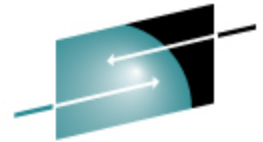
- “A tape containing preventative service for upgrading the current release of a z/VM system once it has been installed.”  
(source: z/VM Service Guide 5.1.0)
  - Not always a tape; can be FTPed from IBM.
- An RSU does not contain ALL closed fixes (PTFs).  
Instead, PTFs included on an RSU include:
  - All HIPERs
  - All fixes to PEs previously shipped on an RSU (flagged PE after the RSU shipped).
  - Developer recommendations, after review.
  - PTF order volumes.
- RSU’s are applied and tested by IBM before shipping.
- Cumulative back to that z/VM **Release** “base”.

# Installation Walk-through.

"Guide for Automated Installation and Service"

## Chapter 4: Load the System DDR

### Applying the latest service



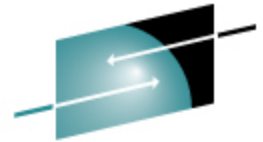
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- Step 2: (continued...) **Run SERVICE EXEC**
  - Loads serviced files from the Recommended Service Upgrade (RSU) tapes.
  - Your system is already installed, now apply the latest “common, well-tested” maintenance.
  - Oooohh, nice!: **service all tapeaddr1 tapeaddr2**
- Step 3: **Run PUT2PROD EXEC**
  - Moves serviced, pre-built objects to production locations.
- Step 4: **Shutdown and Re-IPL Your System**
  - Simple as the command: CP SHUTDOWN REIPL
    - No HMC access required, just Privclass “A” (Operator)
  - Watch for the updated “Service Level nnnn” message at IPL.

# Installation Walk-through.

Chapter 4: Load the System DDR  
Configuring TCP/IP



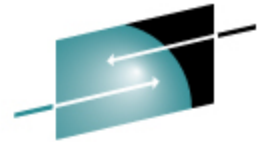
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- **Step 5: Configure TCP/IP for an Initial Network Connection.**
  - Using the answers to that earlier worksheet, run: **IPWIZARD**
  - Couldn't hurt to have the network folks present when you do this.

# Installation Walk-through.

## Chapter 4: Load the System DDR

Backing up your new system (before changes)



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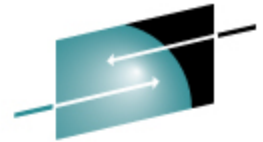
- **Step 6: Back Up the Named Save Systems and Segments**
  - Part of the “System Data Files” (SDF) stored on SPOOL. Similar to z/OS LPALIB.
  - Always good to have on hand in case of error, or to compare with your own if something looks “strange”.
  - Should be part of your normal backup process.
  - It gets very awkward trying to logon and IPL to restore System Data Files when CMS has been purged or damaged for some reason (trust me on this).
  - **Review: “Appendix G. Restore Your Named Save Systems and Segments”**



# Installation Walk-through.

## Chapter 4: Load the System DDR

Backing up your new system (before changes)



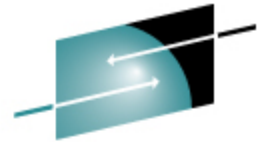
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- **Step 7: Store a Backup Copy of the z/VM system on Tape**
  - Creates a Stand-alone DDRXA Utility tape for use if -- no make that “WHEN”, things go very badly on some “dark and stormy night”.
  - Backs up what IBM installed before you start mucking with things.
  - Always good to have on hand in case of error, or to compare with your own if something looks “strange”.
  - Should be part of your normal backup process.
  - Review: “**Appendix E. Restore the z/VM System Backup Copy**”
- Technically, your z/VM system installation is complete. **But...**

# Installation Walk-through.

## Chapter 4: Load the System DDR Create an IPLable DDR Utility Tape



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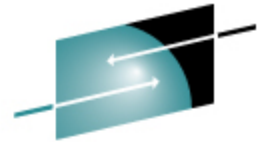
- **Step 8: Create an IPLable DDR Utility Tape**

Create a Stand-alone DDR Utility tape for use if -- no make that “WHEN”, things go very badly on some “dark and stormy night”.

- Used to restore that backup tape you just made when the system won't IPL and you can't find that systems programmer that the manual says you should contact.
- Can backup DASD to tape before you restore or change it – all while the system is down.
- Permits you to copy all or just some DASD cylinders to new locations.
- Technically, your z/VM system installation is complete. **But...**

# Installation Walk-through.

Chapter 4: Load the System DDR  
Create an IPLable ICKDSF Utility Tape



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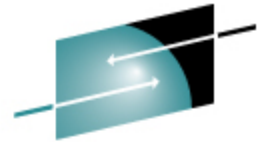
- **Step 9: Create an IPLable ICKDSF Utility Tape**

Create a Stand-alone ICKDSF Utility tape for use if -- no make that “WHEN”, things go very badly on some “dark and stormy night”.

- Used to format DASD, or change the Allocation Bit Map on DASD when your system won't IPL.

# Installation Walk-through.

## Chapter 4: Load the System DDR Create an Stand-Alone Dump Tape



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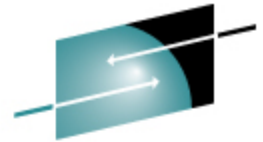
- **Step 10: Create an IPLable Stand-alone DUMP Tape**

Create a Stand-alone DUMP tape for use if -- no make that “WHEN”, things go very badly on some “dark and stormy night”.

- Cannot user SADUMP tapes from previous releases.
  - Not often used.
  - If you do have a problem requiring it’s use, do you want to have to re-create it because you failed to prepare now?
- Technically, your z/VM system installation is complete. **But...**

# Installation Walk-through.

## Chapter 5: Review Contents of Your z/VM System Additional configuration...

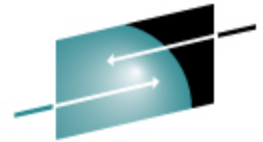


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- At this point it seems like you are all done, but there's more to do...
  - Products Loaded from the z/VM System DDR
    - Compare the products you ordered with those installed as part of the SDO. Any missing products will need to be installed following their own procedures.
  - CMS Defaults
    - Maybe update DMSNGP to change the Installation Name (when CMS is IPLed, on printout), etc. (If you really use CMS for applications). See Appendix E.
  - CP Defaults
    - You may wish to change the LOGO CONFIG and SYSTEM CONFIG files. See next session:  
9120 z/VM Installation – It's Installed, NOW What?
    - You probably want to add new users (virtual machines) to the system.

# Installation Walk-through.

## Chapter 5: Review Contents of Your z/VM System Additional configuration...

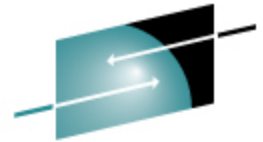


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- GCS Defaults
  - You may wish to move GCS to a different storage area, or change its size.
- Saved Segments on the z/VM System
  - Review response to the command: CP Query NSS ALL MAP
  - Just good to become familiar with “what’s out there”.
- VMSESVS, VMSESVU, and VMSESVR File Pool Defaults
  - You may want to change the Shared Files System service machine defaults, perhaps adding space or more file pools of your own.

# Installation Walk-through.

## Chapter 6: Pre-installed Licensed Products and Features



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- Evaluate which preinstalled products are enabled.
  - Maybe some should **not** be enabled, maybe others should be.
  - Be careful to only **ENABLE** those products and features for which you are **licensed**.
- **“Some of the preinstalled products and features require additional installation steps. You must complete these steps for the product or feature to be completely installed.”**

# A “Manual” Process

## Manual #1: z/VM SDO Program Directory



- When done with the “z/VM Installation Guide”, **return to the “Program Directory for z/VM SDO”**
  - **Step 2.4.4.4 to get to:**  
**Install the Optional Products Enabling Aid (Optional)**
    - Consists of information files with sample directory entries, saved segment definitions, and information about service and PUT/RSU/ESO levels.
    - Files are placed on MAINT’s 2C2 (samples and Install Tools disk), and 319 (SDO disk).
- If you ordered Licensed Products (perhaps HLASM?), there are more SDO steps to complete.
- Complete the SDO Program Directory for ordered Licensed Products.
  - Remember after completing each Licensed Product: return to the SDO ProgDir to install the next ordered Licensed Product until they are all installed. (Definition of “Loop”, see: “Loop”)



## User testing now? Maybe...



- Be sure ALL the NSSes have been built on your 2<sup>nd</sup> level system (or your new VM system if a new customer).
  - Copy application userids/mdisks from production to the new test system for their testing.
- If testing takes very long, check for more a recent SDO, RSU, and product maintenance.
- **At a minimum** (unless you and your testers were VERY fast), check for **HIPER APARs** against the new system and any maintained products.

# VM520 directory entry:

USER VM520 xxxxxxxx 64M 2047M G 60

ACCOUNT OVERHEAD 93S0

MACH XA

AUTOLOG VM520IPL

<===== Permit VM520IPL to XAUTOLOG this userid (VM520)

IPL CMS PARM AUTO CR

OPTION MAXCONN 2048 TODENABLE

OPTION SVM QUICKDSP

OPTION SVC76VM

IUCV ANY

CONSOLE 6A0 3215 C VM520IPL

<===== Permit VM520IPL to enter commands for this userid

SPOOL 00C 2540 READER \*

Requires "SYSTEM\_CONSOLE" included in "SYSTEM CONFIG" statement

SPOOL 00D 2540 PUNCH B

"Operator\_Consoles"

SPOOL 00E 3211 P

\*

LINK MAINT 190 190 RR

LINK MAINT 19D 19D RR

LINK MAINT 19E 19E RR

LINK -VMT52A- F00 280 MR

LINK -VMT52B- F00 288 MR

LINK -VMR52A- F00 28C RR

LINK -VMR52A- F00 28D RR

\* R/O link to PP volumes

LINK -VMPP01- F00 301 RR

...

LINK -VMPP06- F00 306 RR

\* TEST VM system volumes

LINK -VMPPX1- F00 307 MR

LINK -VMPPX2- F00 308 MR

LINK -VMUDX1- F00 309 MR

LINK -VMUDX2- F00 310 MR

LINK -VMUDX3- F00 311 MR

\*LINK -VMSPX1- F00 310 MR

\*LINK -VMTDX1- F00 311 MR

\*LINK -VMPGX1- F00 312 MR

# Placing a z/VM order with IBM.



- Follow the purchasing policies where you work.
- Some choices:
  - IBM Business Partner
  - [www.shopzseries.com](http://www.shopzseries.com)

IBM Software ShopzSeries - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp> Go



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→ Select a country

# ShopzSeries

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- Questions?
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