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Appendix E: Supplementary Gen Information

VSE ASIPROC Details

DOS/VSE and MVT/VSE (Software Pursuits, Inc.) operating systems require changes to the ASIPROC for new device addresses.

Define *HYDRA 3000* using the ADD statement. ADD statements are normally located in the Automatic System Initialization procedure named \$IPLxxx, where xxx varies depending upon the mode in which the machine is running. Normally the ASI procedure is named \$IPLE if you are running with ECPS microcode loaded on the CPU or \$IPL370 if your CPU is running in 370 mode. A *HYDRA 3000* address for an SNA PU must be defined as a 3791L controller; this applies to local PUs as well as to SDLC and Token Ring DSPUs. The general form is:

```
ADD cuu/cuu-range, 3791L
```

A single address assignment would appear as follows:

```
ADD 2C0, 3791L
```

A range assignment for eight addresses might look like this:

```
ADD 2C0:2C7, 3791L
```

For Bisync addresses, use the following:

```
ADD cuu/cuu-range, 2703, EML
```

With DOS/VSE the user must insure that enough space exists in the I/O table area for all devices that will be attached to *HYDRA 3000*. The table named PUBS (Physical Unit Blocks) is defined in the Supervisor I/O Gen Map. For each *HYDRA 3000* SNA PU there must be one ADD 3791L statement. In a native VSE environment, this statement specifies the cuu address of the unit as specified in the Channel Interface Board Definition, as well as the channel on which it resides.

When VSE is operating under VM, *HYDRA 3000* can be routed to a virtual address defined by this statement that is different than the actual physical cuu address as defined within VM. For example, *HYDRA 3000* is defined to VM as real address 4C0, then is routed to VSE virtual address 0C0.

VSE/ESA Gen using the Hardware Configuration Dialogue (HCD)

NOTE: When using VM/ESA 1.2.0 AUTOSENSE, specify NOTSENSED to *HYDRA 3000* addresses, then hard code the HYDRA addresses and device types. This problem is corrected in VM/ESA 1.2.1. (Refer to JDS Product Support Technical Bulletins 102 and 105.)

After completing the initial installation, display the VSE/ESA Online panel. Sign on to the Interactive Interface with the **SYSA** user ID:

```
USER ID ==> sysa  
PASSWORD ==> sysa
```

During the initial installation procedure, the IPL program defined the devices on your system and created hardware configuration tables. If information is missing for these devices, such as for *HYDRA 3000*, the system asks you to define these devices. Define them using the Configure Hardware Dialog.

Start with the Function Selection panel and select 2 Resource Definition, 4 Hardware Configuration and IPL, and 1 Configure Hardware:

You will be presented with a current Unidentified Device List. If you want to delete a device from the list of unidentified devices, enter **5** in the option column. If you want to keep a device, you must define it by entering **1** in the option column. You can directly enter the device name on this panel, or you may choose to use some selection menus which the system will display.

- Position the table where you want to add *HYDRA 3000* and enter the starting cuu using **PF6**.
- Put a **?** in the device name field.

Use the selection menus to select the device name.

- Enter **3 Telecommunication Devices**.
- Place a **1** by **3791**.
- Enter a **PF5** to process your changes.

The system displays the Hardware Configuration: Unit Address List screen.

Check carefully to make sure the hardware configuration is complete. Press **PF5** to display the Hardware Configuration: Catalog Startup Members screen.

Press **Enter** to build a job which will make the added information known to the system. You will get the Job Disposition Panel displayed. Submit that job.

VTAM Resource Definition

Defining the *HYDRA 3000* SNA Major Node, PU, and LUs

The first step when defining *HYDRA 3000* to VTAM is to define the Major Node for the unit using the VBUILD statement.

NOTE: *HYDRA 3000* supports multiple Physical Units (PUs) -- refer to the Data Link Control record (CDC Key) and the Channel Interface Module Board Definition (CBD Key) configuration parameters. For every Physical Unit there should be one VTAM Resource Definition.

```
HV1SNA          VBUILD TYPE=LOCAL
```

The VBUILD statement builds the resource definitions and identifies the unit by the name assigned to the VBUILD Statement. The VBUILD statement has only one argument, TYPE=LOCAL, which defines *HYDRA 3000* as a Local SNA Major Node using the name assigned to the VBUILD statement. *HYDRA 3000* cannot function as anything other than a Local Node. It will not work as a Switched Major Node, a Remote Major Node, NCP Major Node, etc.

HYDRA 3000 does not support the warm restart capability of VTAM, so the following two options should not be used: **CONFGDS** and **CONFGPW**.

Defining the Physical Unit to VTAM

The next step when defining *HYDRA 3000* to VTAM is to identify the name of the Physical Unit (PU).

Physical Unit Statement

```
          HV1SNAPU      PU      CUADDR=2C0
                               PUTYPE=2,
                               ISTATUS=ACTIVE,
                               DISCNT=NO,
                               MAXBFRU=8,
                               PACING=0,
                               VPACING=0
```

Define one PU entry per *HYDRA 3000* Local Major Node, regardless of the number of ports each unit has or the number of Physical Units your *HYDRA 3000* will support. This is done with the PU Statement whose parameters are defined below.

CUADDR

CUADDR is the first and primary parameter. **CUADDR** is assigned the Control Unit Address (cuu) selected for *HYDRA 3000*. This address may not be a duplicate of any other address defined to VTAM as a Local Major Node unless the duplicates will never be active to VTAM at the same time. It is possible to define several images for the same *HYDRA 3000* unit to VTAM using the same cuu address. Only one definition may be active at any given time.

PUTYPE

For *HYDRA 3000*, this is set to 2, and specifies this unit as a PU Type 2.0 Cluster Controller. This is also the default value.

ISTATUS

This parameter specifies the initial status for this PU when VTAM is brought up. It may be set to **ACTIVE** or **INACTIVE**. If **ACTIVE** is selected, a VARY NET,ACT command to the major node will automatically activate the PU. If **INACTIVE** is selected, a separate vary command is required to activate the Physical Unit.

MAXBFRU

Do not exceed **8** or Contact/Bind will fail.

This parameter is very important for *HYDRA 3000*. **MAXBFRU=n** specifies to VTAM how many buffers to assign in its channel program to issue a chained READ from the Local SNA Major Node.

Within *HYDRA 3000* Local Services SYSTEM CONFIGURATION, a Physical Unit record is specified to select a maximum size for Inbound Path Information Units (IPIUs). *HYDRA 3000* then determines how many buffers it has available for IPIUs using that specified size.

PACING

For use with terminals, this parameter determines how the flow of Basic Information Units (BIUs) is to be controlled by VTAM between nodes in different domains. When PACING is not being used, if multiple BIUs are to be sent to a terminal VTAM will send all of them at once without awaiting a "Ready" response from the terminal. When PACING is in use, each time a BIU is sent VTAM will wait for a response from the terminal acknowledging receipt and ready state for the next BIU. When set to "0", PACING is turned off. If PACING is set to "1" or "2", PACING is turned on and VTAM will send one or two BIUs then await a response from the terminal.

Because HYDRA 3000 is capable of very high speeds of information processing, PACING is normally not required and setting this parameter to 0 is recommended.

VPACING

Use Virtual Pacing when communication takes place between two local nodes, normally an application and an LU (terminal). This parameter functions in the same fashion as PACING. In general, specify this value as 0 for the reasons provided earlier in PACING.

Defining the Logical Units to VTAM

The Logical Unit statement is used to define to VTAM the name of the Logical Units (LUs) associated with the Physical Unit.

NOTE: HYDRA 3000 supports up to four LUs per physical asynchronous interface. Therefore, a 32-port HYDRA 3000 could support up to 128 LUs.

Logical Unit Statement

```
LTHYDR02          LU      LOCADDR=02,
                   DLOGMOD=D4A32772,
                   ENCR=NONE,
                   ISTATUS=ACTIVE,
                   LOGAPPL=CICS,
                   LOGTAB=USRTAB,
                   MODETAB=ISTRUSRLM,
                   SSCPFM=USSCS,
                   USSTAB=USST3270
```

The parameters and definitions for the LU statements follow. Only LOCADDR is a required parameter. All other parameters listed are optional.

LOCADDR

This parameter specifies the Network Addressable Unit (NAU) address of the Logical Unit which it is defining. The NAU or LOCADDR value will always be at least 2 units greater than the LU. (Recall that SNA reserves LOCADDR 00 for communicating directly with the PU and LOCADDR 01 for communicating with the Control Point (CP) within a PU.) When you look at the Copyright screen displayed by HYDRA 3000 after selecting a terminal definition, you will notice the NAU address is always at least two units greater than the Port Address.

DLOGMOD

This parameter is used to provide the name of an entry in a specified logon mode table defined by the MODETAB operand (described following page). This entry specifies the Bind image for this LU. The Bind Image specifies things such as LUTYPE, screen sizes, page sizes for printers, etc. It is important that an appropriate logon mode or Bind Image be defined for *HYDRA 3000*; otherwise, Binds will be rejected.

ENCR

This parameter determines whether cryptography will be supported for this LU. *HYDRA 3000* does not support this parameter so it should always be set to NONE.

ISTATUS

This parameter specifies what the initial status of this LU will be when VTAM activates the PU. If set to ACTIVE, a VARY NET,ACT command to the Physical Unit (PU) will automatically activate the LU. If INACTIVE is specified, a separate Vary command is required to activate the Logical Unit.

LOGAPPL

This parameter allows the user to specify that a BIND be automatically initiated with an application at the time an LU is activated. The name of an application such as CICS or TSO would be specified here.

LOGTAB

This parameter specifies a command interpret table is to be used instead of the IBM default command table. If you have modified your command structures, VTAM needs to be directed to a table to interpret these commands.

MODETAB

This parameter specifies the name of the core image library module which contains the default logon mode or BIND Image entry as specified in the DLOGMOD parameter. If none is specified, the default IBM logon mode table ISTUSRLM is used. An example of this default table is provided later in this chapter.

SSCPFM

Set this parameter to USSSCS if used. It specifies this LU supports character encoded messages and not formatted commands.

USSTAB

This parameter points to a USS table definition name. The USS table specifies the various communications and messages VTAM issues to the LU when it is in the SSCP LU session.