Program Directory for
Advanced Communications Function For
Virtual Telecommunications Access Method
(ACF/VTAM)
Version 4
Release 2
Program Number 5654-010
for Use with
VM/ESA

Document Date: March 1995
This program directory, dated March 1995, applies to ACF/VTAM Version 4 Release 2 (VTAM V4R2 for VM/ESA), Program Number 5654-010 for the following:

<table>
<thead>
<tr>
<th>COMPIIDs</th>
<th>Feature Numbers</th>
<th>System Name</th>
</tr>
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<tbody>
<tr>
<td>565401001</td>
<td>5820/5821</td>
<td>VM/ESA</td>
</tr>
</tbody>
</table>

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<th>FFST</th>
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<td>AIX</td>
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1.0 Introduction

This program directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of VTAM V4R2 for VM/ESA. You should read all of this program directory before installing the program and then keep it for future reference.

The program directory contains the following sections:

- **2.0, “Program Materials” on page 2** identifies the basic and optional program materials and documentation for VTAM V4R2 for VM/ESA.
- **3.0, “Program Support” on page 7** describes the IBM support available for VTAM V4R2 for VM/ESA.
- **4.0, “Program and Service Level Information” on page 8** lists the APARs (program level) and PTFs (service level) incorporated into VTAM V4R2 for VM/ESA.
- **5.0, “Product Requirements and Considerations” on page 9** identifies the resources and considerations for installing and using VTAM V4R2 for VM/ESA.
- **6.0, “Installation Instructions” on page 35** provides detailed installation instructions for VTAM V4R2 for VM/ESA.
- **7.0, “Service Instructions” on page 61** provides detailed servicing instructions for VTAM V4R2 for VM/ESA.
- **Appendix A, “VTAM APARs” on page 69** lists the APARs (program level) and PTFs (service level) incorporated into VTAM V4R2 for VM/ESA.
- **Appendix B, “Installing the VTAM VIT Analysis Tool” on page 73** describes the installation procedure for the VTAM VIT Analysis Tool.
- **Appendix C, “Installing the VTAM-provided OS/2 DLUR” on page 82** describes the installation procedure for downloading and unpacking the VTAM-provided OS/2 DLUR for Communications Manager/2 files.
- **Appendix D, “Installing the VTAM Command Set Library” on page 85** describes the installation method and step-by-step procedures to install VTAM V4R2 for VM/ESA Command Set Library.

Before installing VTAM V4R2 for VM/ESA, read **3.1, “Preventive Service Planning” on page 7**. This section tells you how to find any updates to the information and procedures in this program directory.
2.0 Program Materials

This chapter describes the basic material included with VTAM V4R2 for VM/ESA and the optional materials available. This chapter describes the following:

- Basic machine-readable material
- Program publications
- Online View Program Listings (VPL) support
- Publications useful during installation.

An IBM program is identified by a program number and a feature code. The program number for VTAM V4R2 for VM/ESA is 5654-010.

The program announcement material describes the features supported by VTAM V4R2 for VM/ESA. Ask your IBM marketing representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is 9-track magnetic tape written at 6250 BPI, or 3480 cartridge. The tape or cartridge contains all the programs and data needed for installation. VTAM V4R2 for VM/ESA is installed using the instructions provided in 6.0, "Installation Instructions" on page 35. Figure 1 describes the tape or cartridge. Figure 2 on page 3 describes the file content of the program tape or cartridge.

Note: The program tape and cartridge contain “Restricted Materials of IBM.”

<table>
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<tr>
<th>Feature Number</th>
<th>Medium</th>
<th>Physical Volume</th>
<th>Tape Content</th>
<th>External Tape Label</th>
</tr>
</thead>
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<tr>
<td>5820</td>
<td>6250 tape</td>
<td>1</td>
<td>VTAM V4R2 for VM/ESA</td>
<td>VTAM V4R2 VM/ESA</td>
</tr>
<tr>
<td>5821</td>
<td>3480 cart.</td>
<td>1</td>
<td>VTAM V4R2 for VM/ESA</td>
<td>VTAM V4R2 VM/ESA</td>
</tr>
</tbody>
</table>
2.2 Optional Machine-Readable Material

There are no optional machine-readable materials for VTAM V4R2 for VM/ESA.

2.3 Program Publications

The following sections identify the basic and optional publications for VTAM V4R2 for VM/ESA.

2.3.1 Basic Program Publications

Figure 3 identifies the basic program publications for VTAM V4R2 for VM/ESA. One copy of each of these publications is included when you order the basic materials for VTAM V4R2 for VM/ESA. For additional copies, contact your IBM representative.

Figure 3 (Page 1 of 2). Basic Material: Unlicensed Publications

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview of VTAM V4R2 for VM/ESA and VSE/ESA</td>
<td>GC31-8114</td>
</tr>
<tr>
<td>Planning for NetView, NCP, and VTAM</td>
<td>SC31-7122</td>
</tr>
<tr>
<td>Planning for Integrated Networks</td>
<td>SC31-7123</td>
</tr>
<tr>
<td>Planning Aids: Pre-installation Planning Checklist for NetView, NCP, and VTAM</td>
<td>SX75-0092</td>
</tr>
</tbody>
</table>
2.3.2 Optional Program Publications

This section provides a list of the optional unlicensed and licensed program publications available for VTAM V4R2 for VM/ESA.

2.3.2.1 Unlicensed Publications

Figure 4 identifies the optional unlicensed program publications for VTAM V4R2 for VM/ESA. The first copy is available at no charge to licensees of the basic material by ordering the 7xxx feature number. A fee is charged for additional copies.

See Section 2.3.3, “Softcopy Publications” on page 5 for information on the optional unlicensed program publications provided on CD-ROM.

Note: The VTAM Resource Definition Samples and Estimating Storage for VTAM will not be available on the planned availability date for VTAM V4R2 for VM/ESA. They will be automatically shipped to all users of record when available.
2.3.2.2 Licensed Publications

Figure 5 on page 5 identifies the optional licensed program publications for VTAM V4R2 for VM/ESA. The first copy is available at no charge to licensees of the basic material by ordering the 7xxx feature number. Order additional copies using the 8xxx feature number. A fee is charged for additional copies.

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Form No.</th>
<th>First Copy</th>
<th>Add'l Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTAM Customization</td>
<td>LY43-0063</td>
<td>7005</td>
<td>8002</td>
</tr>
<tr>
<td>VTAM Data Areas for VM/ESA</td>
<td>LY43-0103</td>
<td>7006</td>
<td>8003</td>
</tr>
<tr>
<td>VTAM Diagnosis</td>
<td>LY43-0065</td>
<td>7007</td>
<td>8004</td>
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</table>

2.3.3 Softcopy Publications

All VTAM V4R2 for VM/ESA manuals, licensed and unlicensed, except for VTAM Licensed Program Specifications, is offered in displayable softcopy form on the media listed in Figure 6.

<table>
<thead>
<tr>
<th>Title</th>
<th>Form Number</th>
<th>Feature Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Networking Systems Softcopy Collection Kit (CD-ROM)</td>
<td>SK2T-6012</td>
<td>7004</td>
</tr>
</tbody>
</table>

2.4 View Program Listings Support

Microfiche support for VTAM V4R2 for VM/ESA has been replaced by equivalent support through the View Program Listings (VPL) application from ISMC, Boulder, Colorado. VPL is replacing the microfiche by providing this information online. External customers can access this information by using ServiceLink or Dial IBM. Internal users can access VPL by dialing to VPL.

2.5 Publications Useful During Installation

The publications listed in Figure 7 might be useful during the installation of VTAM V4R2 for VM/ESA. To order copies, contact your IBM representative.

<table>
<thead>
<tr>
<th>Publication Title</th>
<th>Form Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTAM Network Implementation Guide</td>
<td>SC31-6494</td>
</tr>
<tr>
<td>VMSES/E Introduction and Reference</td>
<td>SC24-5444</td>
</tr>
<tr>
<td>Publication Title</td>
<td>Form Number</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>VM/ESA CP Planning and Administration</td>
<td>SC24-5521</td>
</tr>
<tr>
<td>VM/ESA Service Guide</td>
<td>SC24-5527</td>
</tr>
<tr>
<td>VM/ESA CMS Command Reference</td>
<td>SC24-5461</td>
</tr>
<tr>
<td>VM/ESA System Messages and Codes</td>
<td>SC24-5529</td>
</tr>
</tbody>
</table>
3.0 Program Support

This section describes the IBM support available for VTAM V4R2 for VM/ESA.

3.1 Preventive Service Planning

Before installing VTAM V4R2 for VM/ESA, check with your IBM Support Center or use either Information/Access or IBMLink * (Service Link) to see whether there is additional Preventive Service Planning (PSP) information. To obtain this information, specify the following UPGRADE and SUBSET values:

Figure 8. PSP Upgrade and Subset ID

<table>
<thead>
<tr>
<th>Retain</th>
<th>Upgrade</th>
<th>Subset</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPID 565401001</td>
<td>Release 420</td>
<td>ACFVTAM420</td>
</tr>
</tbody>
</table>

If you have received VTAM V4R2 for VM/ESA only from IBM Software Distribution, before installing VTAM V4R2 for VM/ESA, you should also check with your IBM Support Center or use SoftwareXcel Extended to see if there is additional PSP information that you should know.

3.2 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 9 identifies the component ID (COMPID), Retain Release and Field Engineering Service Number (FESN) for VTAM V4R2 for VM/ESA.

Figure 9. Component IDs

<table>
<thead>
<tr>
<th>Retain</th>
<th>Component Name</th>
<th>FESN</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPID 565401001</td>
<td>Release 420</td>
<td>VTAM V4R2 for VM/ESA</td>
</tr>
</tbody>
</table>
4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of VTAM V4R2 for VM/ESA. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs shipped with this product. Information about the cumulative service tape is also provided.

4.1 Program Level Information

The program level refers to the APAR fixes incorporated into the program. For a list of the APAR fixes against previous releases of VTAM that have been incorporated into VTAM V4R2 for VM/ESA, see Appendix A, “VTAM APARs” on page 69.

4.2 Service Level Information

The service level refers to the PTFs integrated. No PTFs have been incorporated into VTAM V4R2 for VM/ESA.

4.3 Cumulative Service Tape

A cumulative service tape, containing PTFs not incorporated into this release, might be included with this program. If you received this product as part of a CBPDO+, there is no cumulative service tape.
5.0 Product Requirements and Considerations

The following sections identify the system requirements for installing and activating VTAM V4R2 for VM/ESA.

5.1 Hardware Requirements

VTAM V4R2 for VM/ESA runs in a virtual storage environment in any IBM system configuration that supports the operating systems specified in the Operating System Requirements section.

Certain VTAM functions require the use of appropriate IBM machines. Functions introduced in earlier versions have the same minimum machine requirements as previously announced. The following VTAM functions have these minimum machine requirements:

- **APPN host-to-host channel** for one of the following:
  - Channel-to-channel adapter
  - IBM 3088 Multisystem Channel Communication Unit
  - IBM Enterprise System Connection (ESCON) channel

- **Dependent LU server (DLUS):**
  A dependent LU requester (DLUR), such as the IBM 3174 Establishment Controller Configuration Support C Release 5

- **Estimating Storage for VTAM diskette:**
  A workstation capable of running, at a minimum, OS/2 Extended Edition Version 2.0

- **IBM Command Tree/2 to build VTAM commands:**
  A workstation capable of running, at a minimum, OS/2 Extended Edition Version 1.3 or OS/2 Version 2 with either Extended Services Version 1 or Communications Manager/2 Version 1 (program number 5621-254)

5.2 Program Considerations

The following sections list the programming considerations for installing VTAM V4R2 for VM/ESA and activating its functions.
5.2.1 Operating System Requirements

The minimum operating system required for this product is VM/ESA Version 1 Release 2.1 (5684-112) with the PTFs specified in Section 5.4, "Cross Product Service Considerations" on page 13. RSU9405 service level or above must be applied to VMSES/E on VM/ESA Version 1 Release 2.1 prior to installing VTAM V4R2 for VM/ESA.

Notes:

1. Support for all functions is provided in VM/ESA Version 2 Release 1 (5654-030).
2. VM/ESA Version 1 Release 2.2 may be used; however, it does not support full VSCS network-qualified names.
3. VM/ESA Version 1 Release 2.1 may be used; however, it does not support full buffer trace or full VSCS network-qualified names.

VTAM also operates with later versions, releases, and modifications of these operating systems, unless otherwise stated. Earlier versions, releases, and modifications are not supported.

5.2.2 Other Program Product Requirements

Certain VTAM functions require the use of the appropriate level of associated IBM licensed programs. Functions introduced in earlier versions and releases have the same minimum programming requirements as previously announced. These functions also operate with later versions and releases of these required programs, unless otherwise stated. The following VTAM functions have the following minimum programming requirements.

- APPN multiple network connectivity:
  - NCP Version 7 Release 1 (5648-063), in configurations where NCP provides the boundary function support for the APPN connection between two APPN subnetworks.
  - NetView * Version 2 Release 4 for MVS/ESA (5685-111) with the appropriate PTF, for NetView to properly display APPN routing information. NetView support in multiple network connectivity for Version 4 Release 2 for VM/ESA is provided by and requires a VTAM Version 4 for MVS/ESA within the network running NetView Version 2 Release 4 for MVS/ESA as mentioned above. This is required due to the fact that NetView does not support dependent LU server and expanded addressing pool for VM/ESA. For subarea only support, NetView Version 2 Release 3 for VM/ESA (5756-051) should be used.
  - Appropriate levels of the following products for attachment of these products to a VTAM APPN Border Node:
    - Communications Manager/2 Version 1.11 ServicePak WR06150, or the country equivalent for national language support versions
    - 6611/MPNP with the appropriate PTFs

- Connection network:
- NCP Version 7 Release 1 (5648-063), in configurations where NCP provides the boundary function attachment to the connection network

- Dependent LU server (DLUS):
  - A dependent LU requester (DLUR), such as the VTAM-provided OS/2 DLUR. This DLUR requires:
    - OS/2 Version 2
    - Communications Manager/2 Version 1.11 ServicePak WR06150, or the country equivalent for national language support versions

- Expanded addressing pool:
  - One of the following, for NPM to collect data on resources assigned expanded network addresses:
    - NPM Version 1 Release 6 (5665-333) with PTF UW03386
    - NPM Version 2 Release 1 (5665-043) with PTF UW03989

- Expanded dial information:
  - NCP Version 7 Release 1 (5648-063), for token-ring and frame-relay communication
  - X.25 NCP Packet Switching Interface (NPSI) Version 3 Release 7 (5688-035), for NPSI resources

- Session limits for switched resources:
  - NCP Version 6 Release 3 (5688-231), or later, when the switched devices are attached to VTAM through an NCP

- Estimating Storage for VTAM diskette:
  - OS/2 Extended Edition Version 2

- Full buffer trace:
  - SSP Version 4 Release 1 (5654-009)

- Enhancements for formatted trace (VIT Analysis Tool)
  - ISPF/PDF Version 3 Release 2 for VM (5684-123)

- Frame Relay Over token-ring connections:
  - NCP Version 7 Release 3 (5648-063)

- Spare SDLC Lines:
  - NCP Version 7 Release 2 (5648-063)
  - NTuneMON * Version 1 Release 2 (5648-077)
  - NTuneNCP * Version 1 Release 1 (5648-089)

- NetView Performance Monitor (NPM)
  - NPM Version 2 Release 2 (5654-011) with APAR VM59042

- Displayable softcopy publication enhancements require one of the following BookManager releases:
VTAM V4R2 for VM/ESA supports all releases and modifications of the associated licensed programs listed below for which program services are provided by IBM.

**Note:** You might need to apply program temporary fixes (PTFs) to ensure compatibility for certain functions. Also, compatibility with certain programs is limited. For information about the PTFs you might need to apply, refer to the following sources:

- Preventive service planning (PSP) bucket, available through:
  - Information Access
  - SoftwareXcel Extended
  - IBMLink (ServiceLink)
- IBM Support Center.

For information about compatibility limitations between VTAM V4R2 for VM/ESA and the following programs, refer to *Planning for NetView, NCP, and VTAM* (SC31-7122):

- VTAM Version 4 Release 1 for MVS/ESA (program number 5695-117)
- VTAM Version 3 releases for:
  - MVS/ESA (5685-085)
  - MVS/XA * (5665-289)
  - MVS/370 (5665-313)
  - VM/ESA (5684-095)
  - VM/SP (5664-280)
  - VM/370 (5684-052)
  - VSE/SP (5666-313)
  - VSE/ESA * (5666-363)
- ACF/NCP
  - Version 7 for the IBM 3745 Communication Controller (5648-063)
  - Version 6 for the IBM 3745 Communication Controller (5688-231)
  - Version 5 for the IBM 3720 or 3745 Communication Controllers (5668-738)
  - Version 4 for the IBM 3720 or 3745 Communication Controllers (5668-854)
- NetView
– Version 2 for VM/ESA (5756-051)
• OSI/Communications Subsystem (5685-014)
• ACF/TCAM
  – Version 3 (5665-314)
  – Version 2 (5735-RC3)
• NetView Performance Monitor (NPM)
  – NPM Version 1 Release 6 (5665-333)
  – NPM Version 2 Release 1 (5665-043)

VTAM Version 4 Release 2 APIs are upwardly compatible with the APIs for MVS/ESA VTAM Version 4 Release 1 for MVS/ESA and VTAM Version 3.

For APPN compatibility with other APPN-capable products and programs, the appropriate minimum releases listed below are required. Later releases and versions of these products are also APPN-capable unless otherwise stated:

• IBM 3174 Establishment Controller Configuration Support C Release 4. To exploit a VTAM acting as a central directory server requires the APPN-capable 3174 to be Configuration Support C Release 5
• AS/400 * Version 2 Release 1 with the appropriate PTFs
• Communications Manager/2 Version 1.0
• Extended Services * Version 1 with the appropriate PTFs
• Networking Services/2 Version 1 Release 1 with the appropriate PTFs
• AIX * SNA Services/6000 Version 2.1
• System/36 Release 5.1 with the appropriate PTFs
• DPPX Release 3 with the appropriate PTFs
• IBM 6611 Network Processor with Multiprotocol Networking Program Version 1 Release 2
• IBM 8250 Multiprotocol Intelligent Hub with the Worksation Networking Module.

5.4 Cross Product Service Considerations

To ensure compatibility, all product in your network that are listed in 5.2.2, “Other Program Product Requirements” on page 10 and 5.3, “Compatibility” on page 12, should be maintained at their latest service level.

The following list of APARs and PTFs describes programming service to products which can be affected by the installation of VTAM V4R2 for VM/ESA. Depending on your environment, you might have to install PTFs for the APARs listed below. If additional PTFs are needed, they are listed in this product's Preventative Service Planning Information. In that case, contact the IBM Support Center for the latest PTF information. The Product Involved column lists the product to which the APAR applies.

Product Requirements and Considerations 13
5.4.1 VTAM

5.4.1.1 VTAM V4R2 VM/ESA

The service shown in Figure 10 is required for VTAM V4R2 for VM/ESA.

Figure 10. VTAM V4R2 VM/ESA

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM59197</td>
<td></td>
<td></td>
<td>565401001</td>
<td>VTAM V4R2 VM/ESA</td>
</tr>
<tr>
<td>VM59198</td>
<td></td>
<td></td>
<td>565401001</td>
<td>VTAM V4R2 VM/ESA</td>
</tr>
</tbody>
</table>

5.4.1.2 APPN Connection Network

The service shown in Figure 11 is required for VTAM to communicate with the products shown across an APPN Connection Network.

Figure 11. APPN Connection Network

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>JR07679</td>
<td></td>
<td></td>
<td>562125400</td>
<td>Communication Manager/2 1.0</td>
</tr>
<tr>
<td>WR20412</td>
<td>JR07826</td>
<td></td>
<td>562207800</td>
<td>Communications Manager/2 1.1</td>
</tr>
<tr>
<td>MF06425</td>
<td>MA08208</td>
<td></td>
<td>9400DG3CM</td>
<td>AS/400 V2R3 (APPN Support)</td>
</tr>
</tbody>
</table>

For 3174 communication with VTAM through an APPN Connection Network, VTAM requires the IBM 3174 Establishment Controller Configuration Support C Release 5 or Release 3 with patch PCAE11.
5.4.1.3 APPN Multiple Network Connectivity

The service shown in Figure 12 is required for a MVS/ESA VTAM V4R1 APPN Network Node to communicate with a VTAM V4R2 APPN Border Node. The service shown in Figure 13 is required for 6611/MPNP attachment to a VTAM APPN Border Node.

Figure 12. APPN Multiple Network Connectivity

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UW13300</td>
<td>OW03031</td>
<td>HVT4101</td>
<td>VTAM V4R1 MVS/ESA</td>
<td></td>
</tr>
<tr>
<td>UW09849</td>
<td>OW03032</td>
<td>HVT4101</td>
<td>VTAM V4R1 MVS/ESA</td>
<td></td>
</tr>
<tr>
<td>UY96214</td>
<td>OY63987</td>
<td>HVT4101</td>
<td>VTAM V4R1 MVS/ESA</td>
<td></td>
</tr>
</tbody>
</table>

Figure 13. APPN Border Node attachment

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP00331</td>
<td>NA00908</td>
<td>564801600</td>
<td>6611/MPNP</td>
<td></td>
</tr>
</tbody>
</table>

5.4.1.4 Automatic Logon

The service shown in Figure 14 is required for Automatic Logon.

Figure 14. Automatic Logon

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UW07807</td>
<td>OW03346</td>
<td>HVT4101</td>
<td>VTAM V4R1 MVS/ESA</td>
<td></td>
</tr>
</tbody>
</table>

5.4.1.5 Expanded Dial Information

The service shown in Figure 15 is required for Expanded Dial Information.

Figure 15. Expanded Dial Information

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>OW03346</td>
<td>HVT4101</td>
<td>VTAM V4R1 MVS/ESA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.4.1.6 Resource Discovery Search Reduction

The service shown in Figure 16 is required for MVS/ESA VTAM V4R1 to handle new sense codes associated with the resource discovery search reduction function.
5.4.1.7 Virtual-Route-Based Transmission Groups

The service shown in Figure 17 is required when MVS/ESA VTAM V4R1 acts as a network node server for VTAM APPN nodes using virtual-route-based transmission groups.

5.4.1.8 APPN

The service shown in Figure 18 is required to support APPN and Subarea sessions.

5.4.1.9 Dynamic NETID

The service shown in Figure 19 is required to support Dynamic NETID.
Table 19. Dynamic NETID

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UD47076</td>
<td>N/A</td>
<td>DY40436</td>
<td>566636301</td>
<td>VTAM V3R3 VSE/ESA</td>
</tr>
</tbody>
</table>
5.4.1.10 Casual Connection

The service shown in Figure 20 is required for VTAM V3R2 to own an NCP that is casually connected to another subarea node.

Figure 20. Casual Connection

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UY46395</td>
<td>9003</td>
<td>OY28682</td>
<td>HVT3303</td>
<td>VTAM V3R3 MVS/XA</td>
</tr>
<tr>
<td>UY41496</td>
<td>8908</td>
<td>OY23894</td>
<td>JVT3214</td>
<td>VTAM V3R2 MVS/370</td>
</tr>
<tr>
<td>UY48167</td>
<td>9003</td>
<td>OY29848</td>
<td>HVT3204</td>
<td>VTAM V3R2 MVS/370</td>
</tr>
<tr>
<td>UD44635</td>
<td>N/A</td>
<td>DY38544</td>
<td>566631301</td>
<td>VTAM V3R2 VSE</td>
</tr>
<tr>
<td>UD45516</td>
<td>N/A</td>
<td>DY39140</td>
<td>566631301</td>
<td>VTAM V3R2 VSE</td>
</tr>
</tbody>
</table>

5.4.2 NetView

The service shown in Figure 21 is required for NetView.

Figure 21. NetView

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UY86306</td>
<td>9210</td>
<td>OY58886</td>
<td>568511101</td>
<td>NetView V2R2 MVS/ESA</td>
</tr>
<tr>
<td>UV57645</td>
<td>VM7145</td>
<td>575605101</td>
<td>NetView V2R2 VM/ESA</td>
<td></td>
</tr>
</tbody>
</table>

5.4.2.1 Session Monitor Support

The service shown in Figure 22 is required for NetView V2R4 Session Monitor support of VTAM V4R2 for multiple network connectivity, virtual-route-based transmission groups, and expanded addressing pool.

Figure 22. NetView - Session Monitor Support

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>OW01612</td>
<td></td>
<td></td>
<td>568511101</td>
<td>NetView V2R4</td>
</tr>
</tbody>
</table>

5.4.2.2 Sense Code Support

The service shown in Figure 23 is required for NetView support of VTAM sense codes.
Figure 23. NetView - Sense Code Support

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>OW00072</td>
<td>568511101</td>
<td></td>
<td>NetView V2R3</td>
<td></td>
</tr>
<tr>
<td>OW00072</td>
<td>568511101</td>
<td></td>
<td>NetView V2R4</td>
<td></td>
</tr>
</tbody>
</table>
5.4.2.3 Enhanced Display Command Support
The service shown in Figure 24 is required for NetView V2R4 support of VTAM DISPLAY command enhancements.

Figure 24. NetView - Enhanced DISPLAY Command Support

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>OW03772</td>
<td>568511101</td>
<td>NetView V2R4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.4.3 NPM

5.4.3.1 NPM V2R2
The service shown in Figure 25 is required for NPM V2R2 users.

Figure 25. NPM V2R2

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM59042</td>
<td>565401</td>
<td>NPM V2R2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.4.3.2 Expanded Addressing Pool
The service shown in Figure 26 is required if the Expanded Addressing Pool capability is enabled (ENHADDR=YES in VTAM start options).

Figure 26. Expanded Addressing Pool

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UW03386</td>
<td>OW02263</td>
<td>566533301</td>
<td>NPM V1R6</td>
<td></td>
</tr>
</tbody>
</table>

5.4.3.3 VTAM Statistics Collection Feature
The service shown in Figure 27 is required to use the VTAM Statistics Collection Feature of NPM Version 2 with VTAM V4R2.

Figure 27. VTAM Statistics Collection Feature

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UW03989</td>
<td>OW01766</td>
<td>566504300</td>
<td>NPM V2R1</td>
<td></td>
</tr>
</tbody>
</table>
5.4.4 S/36

The service shown in Figure 28 is required for S/36 network nodes to support VTAM APPN network nodes.

Figure 28. S/36

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>U653395</td>
<td>S344644</td>
<td>5727SS1IL</td>
<td>S/36 R5.1</td>
<td></td>
</tr>
<tr>
<td>U760597</td>
<td>S344645</td>
<td>5727SS6IL</td>
<td>S/36 R6.0</td>
<td></td>
</tr>
</tbody>
</table>

5.4.5 AS/400

5.4.5.1 AS/400 Network Node

The service shown in Figure 29 is required for AS/400 network nodes to support VTAM APPN.

Figure 29. AS/400 Network Node

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF03816</td>
<td>MA06029</td>
<td>9400DG3CM</td>
<td>AS/400 V2R1M0</td>
<td></td>
</tr>
<tr>
<td>MF04664</td>
<td>MA06029</td>
<td>9400DG3CM</td>
<td>AS/400 V2R1M1</td>
<td></td>
</tr>
<tr>
<td>MF03938</td>
<td>MA06029</td>
<td>9400DG3CM</td>
<td>AS/400 V2R2M0</td>
<td></td>
</tr>
<tr>
<td>MF06293</td>
<td>MA06920</td>
<td>9400DG3DB</td>
<td>AS/400 V2R2M0</td>
<td></td>
</tr>
</tbody>
</table>

5.4.5.2 AS/400 Supporting VTAM Connection Network

The service shown in Figure 30 is required for AS/400 to support VTAM Connection Network.

Figure 30. AS/400 supporting VTAM Connection Network

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF04870</td>
<td>MA07777</td>
<td>5738999</td>
<td>AS/400 V2R2M0</td>
<td></td>
</tr>
</tbody>
</table>

5.4.5.3 AS/400 Supporting VTAM Across Switched Connections

The service shown in Figure 31 is required for AS/400 to support VTAM APPN across switched connections.
Figure 31. AS/400 service supporting VTAM across switched connections

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF04871</td>
<td>MA06122</td>
<td>5738999</td>
<td></td>
<td>AS/400 V2R1M0</td>
</tr>
<tr>
<td>MF04869</td>
<td>MA06122</td>
<td>5738999</td>
<td></td>
<td>AS/400 V2R1M1</td>
</tr>
</tbody>
</table>
5.4.6 ES

The service shown in Figure 32 is required for ES to support VTAM APPN.

Figure 32. ES

<table>
<thead>
<tr>
<th>CSD</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR06025</td>
<td>JR06359</td>
<td>562121301</td>
<td>ES 1.0</td>
<td></td>
</tr>
<tr>
<td>WR06025</td>
<td>JR06360</td>
<td>562121301</td>
<td>ES 1.0</td>
<td></td>
</tr>
<tr>
<td>WR06025</td>
<td>JR06361</td>
<td>562121301</td>
<td>ES 1.0</td>
<td></td>
</tr>
<tr>
<td>WR06025</td>
<td>JR06363</td>
<td>562121301</td>
<td>ES 1.0</td>
<td></td>
</tr>
<tr>
<td>WR06025</td>
<td>JR06364</td>
<td>562121301</td>
<td>ES 1.0</td>
<td></td>
</tr>
<tr>
<td>WR06025</td>
<td>JR06643</td>
<td>562121301</td>
<td>ES 1.0</td>
<td></td>
</tr>
<tr>
<td>WR06025</td>
<td>JR06644</td>
<td>562121301</td>
<td>ES 1.0</td>
<td></td>
</tr>
</tbody>
</table>

5.4.7 NS/2

The service shown in Figure 33 is required for NS/2 to support VTAM APPN.

Figure 33. NS/2

<table>
<thead>
<tr>
<th>CSD</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR20147</td>
<td>JR05616</td>
<td>562115500</td>
<td>NS/2 V1R1M0</td>
<td></td>
</tr>
<tr>
<td>WR20147</td>
<td>JR05708</td>
<td>562115500</td>
<td>NS/2 V1R1M0</td>
<td></td>
</tr>
<tr>
<td>WR20147</td>
<td>JR05763</td>
<td>562115500</td>
<td>NS/2 V1R1M0</td>
<td></td>
</tr>
<tr>
<td>WR20147</td>
<td>JR05837</td>
<td>562115500</td>
<td>NS/2 V1R1M0</td>
<td></td>
</tr>
<tr>
<td>WR20147</td>
<td>JR05838</td>
<td>562115500</td>
<td>NS/2 V1R1M0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JR05851</td>
<td>562115500</td>
<td>NS/2 V1R1M0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>JR06291</td>
<td>562115500</td>
<td>NS/2 V1R1M0</td>
<td></td>
</tr>
</tbody>
</table>

5.4.8 ISPF

The service shown in Figure 34 is required for ISPF to support VTAM interactive dump formatting and trace analysis.
### Figure 34. ISPF

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UY79484</td>
<td>9205</td>
<td>OY53592</td>
<td>568505401</td>
<td>ISPF V3R2</td>
</tr>
<tr>
<td>UY61994</td>
<td>9103</td>
<td>OY40082</td>
<td>568505401</td>
<td>ISPF V3R2</td>
</tr>
</tbody>
</table>
5.4.9 DPPX

The service shown in Figure 35 is required for DPPX to support VTAM APPN.

5.4.10 SSP

This section contains the required service for SSP to use Full Buffer Trace, Line Trace, and to prevent wasted storage if no frame relay resources are defined.

5.4.10.1 Full Buffer Trace

The service shown in Figure 36 is required to use Full Buffer Trace.

5.4.10.2 Line Trace

The service shown in Figure 37 is required to use Line Trace.

5.4.10.3 No Frame Relay Resources Defined

The service shown in Figure 38 is required to prevent wasted storage if no frame relay resources are defined.
5.4.11 First Failure Service Technology/Failure Analysis Structure Tables

First Failure Service Technology (FFST) Release 2 is the minimum level required. Refer to the FFST PSP bucket for required maintenance. If you plan to use Failure Analysis Structure Tables (FAST) Services, you must also apply the service listed for FAST.

5.4.12 NCP

5.4.12.1 Route INOP Reduction

The service shown in Figure 39 is required for NCP to use the VTAM ROUTE INOP reduction function.

5.4.12.2 XID Change

The service shown in Figure 40 is required if the largest PIU sent to the NCP is larger than the lowest value of (MAXBFU*UNITSZ) - BFRPAD on a HOST statement. VTAM includes support for LNCTL=CA (D/T 3745).

---

**Figure 38. SSP with No Frame Relay Resource Definitions**

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR39209</td>
<td>9303</td>
<td>IR22322</td>
<td>5665338</td>
<td>SSP V3R8 MVS</td>
</tr>
<tr>
<td>UR38838</td>
<td>9303</td>
<td>IR99730</td>
<td>5664289</td>
<td>SSP V3R8 VM</td>
</tr>
</tbody>
</table>

**Figure 39. NCP**

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR38187</td>
<td>9208</td>
<td>IR97026</td>
<td>566873801</td>
<td>NCP V5R4 MVS</td>
</tr>
<tr>
<td>UR38188</td>
<td>9302</td>
<td>IR97026</td>
<td>566873801</td>
<td>NCP V5R4 VM</td>
</tr>
<tr>
<td>UR38189</td>
<td></td>
<td>IR97026</td>
<td>566873801</td>
<td>NCP V5R4 VSE</td>
</tr>
</tbody>
</table>

**Figure 40. XID Change for VTAM with NCP**

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID, REL, or CLC</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR20157</td>
<td>8708</td>
<td>IR76227</td>
<td>HNC4105</td>
<td>NCP V4R1 MVS</td>
</tr>
<tr>
<td>UR21056</td>
<td>8802</td>
<td>IR76227</td>
<td>HNC4205</td>
<td>NCP V4R2 MVS</td>
</tr>
<tr>
<td>UR21054</td>
<td>N/A</td>
<td>IR76227</td>
<td>A65</td>
<td>NCP V4R1 VSE</td>
</tr>
<tr>
<td>UR21055</td>
<td>8802</td>
<td>IR76227</td>
<td>425</td>
<td>NCP V4R2 VM</td>
</tr>
</tbody>
</table>
5.4.13 VM Operating Environments

The following are the VM operating system considerations.

5.4.13.1 VM/ESA Version 1 Release 2.1

The service shown in Figure 41 is required for VM/ESA Version 1 Release 2.1.

Figure 41. VM/ESA V1R2.1

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM59196</td>
<td>568411204</td>
<td>AVS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UM26881</td>
<td>VM58859</td>
<td>568411202</td>
<td>CP</td>
<td></td>
</tr>
</tbody>
</table>

5.4.13.2 VM/ESA Version 1 Release 2.2

The service shown in Figure 42 is required for VM/ESA Version 1 Release 2.2.

Figure 42. VM/ESA V1R2.2

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>FMID or Comp ID</th>
<th>Product Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM59196</td>
<td>568411204</td>
<td>AVS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UM26835</td>
<td>VM58989</td>
<td>568411202</td>
<td>CP</td>
<td></td>
</tr>
<tr>
<td>UM26882</td>
<td>VM58859</td>
<td>568411202</td>
<td>CP</td>
<td></td>
</tr>
</tbody>
</table>

5.4.14 Connectivity Environments

The devices and programs shown in Figure 43 can require the listed service in order to successfully contact or operate with a VTAM MVS/ESA host system.
5.4.15 Program Installation/Service Considerations

This section describes items that should be considered before you install or service VTAM V4R2 for VM/ESA.

5.4.15.1 Installation

- VMSES/E is required to install and service this product.

- The defaults provided by VTAM for the installation and service processes assume that you are using the new IBM-suggested user ID 5654010A that has a privilege class of EG.

- Throughout the installation and service instructions provided in this program directory, the use of IBM-supplied default minidisk addresses and user ID 5654010A is assumed and recommended. If you use a different user ID or minidisk addresses to install VTAM V4R2 for VM/ESA, adapt these instructions as needed for your environment. A PPF override must be created if you use a different installation user ID or if you use different minidisk addresses.

  **Note:** It is recommended that you make the changes during the installation procedure 6.2.1, “Plan Your Installation” step 6 on page 40 rather than after you have installed this product.

<table>
<thead>
<tr>
<th>PTF</th>
<th>PUT</th>
<th>APAR</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC00329</td>
<td>--</td>
<td>S110206</td>
<td>Series/1 RPS Releases 7.1 and 7.2 Running APPC, SSCP-LU normal flow rejected with expedited and format indicator bits on.</td>
</tr>
<tr>
<td>PC00457</td>
<td>--</td>
<td>S110359</td>
<td>Series/1 RPS Releases 7.1 and 7.2 SSCP-LU session active and another ACTLU received by S/1. S/1 rejects 2nd ACTLU 0815, preventing takeover.</td>
</tr>
<tr>
<td>UR20904</td>
<td>--</td>
<td>IR76161</td>
<td>APPC/PC Hang - Interrupt vector not restored.</td>
</tr>
<tr>
<td>51-801</td>
<td>DK3602</td>
<td>S337080</td>
<td>SYSTEM/36 Release 5.1 Required for T2.1 support.</td>
</tr>
<tr>
<td>--</td>
<td>--</td>
<td>MT05481</td>
<td>SYSTEM/38 Release 8.0 XID exchange fails, contact not achieved.</td>
</tr>
<tr>
<td>UF08194</td>
<td>--</td>
<td>DF18426</td>
<td>DPPX/SP After Host System IPL, unable to re-establish sessions with DPPX.</td>
</tr>
<tr>
<td>Microcode Fix</td>
<td>--</td>
<td>EC Level A58809</td>
<td>3708 Protocol Converter Unable to process UNBIND Type = X'0A'</td>
</tr>
<tr>
<td>MCF05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC Level PTRAD65</td>
<td>All D/T 3174 Configured with Multiple Logical Terminal Support and using VTAM SDDLU.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC Level CHAN3002 OLVH27</td>
<td>All D/T 3737 users with VTAM V3R4 and later.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PTRAE11</td>
<td>Required for all D/T 3737 when attached to the same Connection Network as VTAM V4R2.</td>
</tr>
</tbody>
</table>
For service to products which may be required for the use of VTAM V4R2 for VM/ESA, see "Cross Product Service Considerations" on page 13.

5.4.15.2 VSCS

VSCS is a 31-bit address mode application.

The VSCS data translation exits and the logon exit are required to be written in 31-bit addressing mode.

If DTIUSERx is coded, it must be recompiled using the new DTIGEN macro or VSCS will initialize using defaults and a message will be issued indicating recompile required.

5.4.15.3 VTAM and GCS Virtual Machines

The ES/9000 * Token-Ring adapter must be defined to VM (in HCPRIO) with a device type of ICA and adapter ILAN. Four channel addresses must be defined and attached to the VTAM virtual machine or sense code 081C 0008 or 081C 000C will result when an attempt is made to activate the LAN Major node.

Warning: GCS is capable of supporting only one VTAM segment. While you can save more than one segment for a single GCS, it is not recommended because you cannot activate more than one and you cannot specify which one is loaded.

The virtual machine in the GCS group assigned as the dump receiver must be an authorized machine. Following is the recommended CP command to dump a virtual machine without changing the machine's running environment.

#CP VMDUMP 0-END DSS FORMAT GCS TO userid

5.4.15.4 Initialization

If VTAM V4R2 for VM/ESA is started with the wrong Discontiguous Shared Segment (DCSS), VTAM initialization will fail.

To define your VTAM DCSS, you will need to find enough contiguous space for it. At least 1M is required and the segment range of X'600 - X'6FF' is recommended.

VTAM V4R2 for VM/ESA is available in three separate packages, each offering different levels of function at different prices:

- Client/Server
- MultiDomain
- InterEnterprise.

For complete information about these packages, refer to the Overview of VTAM V4R2 for VM/ESA and VSE/ESA.

If you start VTAM with your own user-written startup EXEC, you must supply the following information in your startup EXEC before you start VTAM:
- Your IBM customer number
- The VTAM password for the package you have installed.

If you start VTAM with the IBM-supplied sample startup EXEC (found on the samples disk), VTAM is initialized as Client/Server. If you have ordered MultiDomain or InterEnterprise, before you start VTAM, you must edit the sample startup EXEC and replace the default customer number and VTAM password (specified on the VTAM START command) with your customer number and VTAM password obtained separately from IBM. If you have ordered Client/Server, IBM recommends that you follow this same procedure so that your unique customer number and VTAM password are contained in your startup EXEC.

For complete information about what to include in your startup EXEC, refer to the VTAM Network Implementation Guide.

### 5.5 System Considerations

It is recommended that all products running with VTAM V4R2 for VM/ESA be at the latest service level.

For a description of the compatibility and coexistence of VTAM V4R2 for VM/ESA with prior releases of VTAM and with other related IBM licensed programs, refer to the Program Announcement Letter and the VTAM Release Guide.

User written command lists that use VTAM commands and wait for the VTAM response messages may never get the expected reply. Refer to the VTAM Release Guide or the VTAM Messages and Codes for a list of all VTAM messages which were either modified or deleted for this release.

VTAM V4R2 for VM/ESA validates the RPLCBID field and the RPLLEN2 field in the RPL to ensure that the RPL is valid. If either field is not correct, the RPL request will be rejected because of an invalid RPL control block.

### 5.6 DASD Storage and User ID Requirements

Figure 44 on page 32 lists the user IDs and minidisks that are used to install and service VTAM V4R2 for VM/ESA.

**Important Installation Notes:**

- User ID(s) and mindisks will be defined in 6.2.1, “Plan Your Installation” on page 37 and are listed here so that you can get an idea of the resources that you need prior to allocating these resources.

- 5654010A is a default user ID and can be changed. It is recommended that the default user ID be used to install and service VTAM V4R2 for VM/ESA. If you choose to change the name of the installation user ID you need to create a Product Parameter Override (PPF) to change the name. This can be done in 6.2.1, “Plan Your Installation” step 6 on page 40.
**Note:** If you choose to install VTAM V4R2 for VM/ESA on a common user ID the default minidisk addresses for VTAM V4R2 for VM/ESA might already be defined. If any of the default minidisks required by VTAM V4R2 for VM/ESA are already in use you will have to create an override to change the default minidisks for VTAM V4R2 for VM/ESA so they are unique.
### Figure 44 (Page 1 of 2). DASD Storage Requirements for Target Minidisks

<table>
<thead>
<tr>
<th>Minidisk owner (user ID)</th>
<th>Default Address</th>
<th>Storage in Cylinders</th>
<th>1K Blocks</th>
<th>4K Blocks</th>
<th>Disk Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5654010A</td>
<td>2B2</td>
<td>3380 3390 9345</td>
<td>75 70 83</td>
<td>34500 11200</td>
<td>BASE1 disk</td>
<td>Contains all the base code shipped with VTAM. Old name: BASE disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>2C2</td>
<td>3380 3390 9345</td>
<td>5 5 5</td>
<td>2000 750</td>
<td>LOCALSAM disk</td>
<td>Contains customization files. This disk may also be used for local modifications. Old name: VTM191 disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>2D2</td>
<td>3380 3390 9345</td>
<td>20 19 22</td>
<td>9000 3000</td>
<td>DELTA disk</td>
<td>Contains serviced files. Old name: DELTA disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>2C4</td>
<td>3380 3390 9345</td>
<td>2 2 2</td>
<td>800 300</td>
<td>LOCALMOD disk</td>
<td>Contains customization files. This disk can also be used for local customer modifications. Old name: ZAP disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>2A6</td>
<td>3380 3390 9345</td>
<td>10 10 11</td>
<td>4500 1500</td>
<td>APPLY TEST/ALTERNATE disk</td>
<td>Contains AUX files and software inventory tables that represent the test service level of VTAM. After testing, copy to the 2A2 disk. Old Name: MERGE disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>2A2</td>
<td>3380 3390 9345</td>
<td>10 10 11</td>
<td>4500 1500</td>
<td>APPLY PRODUCTION disk</td>
<td>Contains AUX files and software inventory tables that represent the service level of VTAM that is currently in production. Old name: MERGE disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>49A</td>
<td>3380 3390 9345</td>
<td>40 37 44</td>
<td>18200 6000</td>
<td>BUILD0 TEST/ALTERNATE disk</td>
<td>Test build disk for VTAM server. Contains load libraries and execs. After testing, copy to the 29A disk. Old name: RUN disk.</td>
</tr>
<tr>
<td>5654010A</td>
<td>29A</td>
<td>3380 3390 9345</td>
<td>40 37 44</td>
<td>18200 6000</td>
<td>BUILD0 PRODUCTION disk</td>
<td>Production build disk for VTAM server. Old name: RUN disk.</td>
</tr>
</tbody>
</table>

**Note:** Cylinder values defined in this table are based on a 1k block size. Block values are derived from the 3380 cylinder values in this table.
Figure 44 (Page 2 of 2). DASD Storage Requirements for Target Minidisks

<table>
<thead>
<tr>
<th>Minidisk owner (user ID)</th>
<th>Default Address</th>
<th>Storage in Cylinders</th>
<th>1K Blocks</th>
<th>4K Blocks</th>
<th>Disk Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5654010A</td>
<td>402</td>
<td>3380 3390 9345</td>
<td>3 3 3</td>
<td>1000 400</td>
<td>BUILD4 TEST/ALTERNATE disk</td>
<td>Test build disk for Online OS/2 tools files. After testing, copy to the 401 disk. Old name: Files were on RUN disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>401</td>
<td>3380 3390 9345</td>
<td>3 3 3</td>
<td>1000 400</td>
<td>BUILD4 PRODUCTION disk</td>
<td>Production build disk for Online OS/2 tools files. Old name: Files were on RUN disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>493</td>
<td>3380 3390 9345</td>
<td>4 4 4</td>
<td>1500 500</td>
<td>BUILD2 TEST/ALTERNATE disk</td>
<td>Test build disk for DVF, Tracered, and Formatted Trace. After testing, copy to the 193 disk. Old name: TRACERED/DVF disk</td>
</tr>
<tr>
<td>MAINT</td>
<td>193</td>
<td>3380 3390 9345</td>
<td>4 4 4</td>
<td>1500 500</td>
<td>BUILD2 PRODUCTION disk</td>
<td>Production build disk for DVF, Tracered, and Formatted Trace. Old name: TRACERED/DVF disk</td>
</tr>
<tr>
<td>5654010A</td>
<td>191</td>
<td>3380 3390 9345</td>
<td>20 19 22</td>
<td>9000 3000</td>
<td>5654010A user ID's 191 minidisk.</td>
<td></td>
</tr>
<tr>
<td>VTAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The VTAM user ID will link to the 5654010A user ID's 2C2 disk as its 191 disk.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Cylinder values defined in this table are based on a 1k block size. Block values are derived from the 3380 cylinder values in this table.

Notes:

1. Though the cylinder values in the chart above are based on a 1K blocksize, you may allocate your DASD with any optimal blocksize you prefer.

2. In the chart above, all minidisks owned by the installation user ID (5654010A) should be linked with write access. All other minidisks only require read access.

3. The space requirements for the APPLY, DELTA, and LOCALMOD disks are initial recommended sizes. You may need to increase the disk space according to your service needs.

4. The space allocation for the MAINT 193 disk is necessary only for installing VTAM V4R2 for VM/ESA. This allocation should not be used as the maximum minidisk size because other products might also require space on the same minidisk.

5. The 193 disk is used for TRACERED/DVF files. The PLANINFO file created during the installation process lists the 193 disk as being owned by user ID 5654010A. If you have multiple products that
use a common disk for TRACERED/DVF files, then you may want to use that common disk (a 193 disk owned by user ID MAINT as shown in the chart above) rather than using a 193 disk owned by user ID 5654010A.
6.0 Installation Instructions

This chapter describes the installation methods and the step-by-step procedures to install and activate VTAM V4R2 for VM/ESA.

The step-by-step procedures are in two column format. The steps to be performed are in bold large numbers. Commands for these steps are on the left side of the page in bold print. Additional information for a command exist to the right of the command. For more information about the two column format, refer to “Understanding Dialogs with the System” in VM/ESA Installation (SC24-5526).

Each step of the installation instructions must be followed. Do not skip any step unless directed otherwise.

Throughout these instructions, the use of IBM-supplied default minidisk addresses and installation user ID 5654010A is assumed. If you use a different user ID or minidisk addresses to install VTAM V4R2 for VM/ESA, adapt these instructions as needed for your environment.

Refer to VMSES/E Introduction and Reference for details on the use and syntax of the VMSES/E commands you use to install VTAM V4R2 for VM/ESA.

Note:

The sample console output presented throughout these instructions was produced on a VM/ESA Version 1 Release 2.2 system. If you are installing VTAM V4R2 for VM/ESA on a different VM/ESA system, the results obtained for some commands might differ from those depicted here.

6.1 Installation of VTAM V4R2 for VM/ESA with VMSES/E (VMFINS)

You use VMFINS to install VTAM V4R2 for VM/ESA. VMFINS is an installation aid supplied as part of VMSES/E to make installation of VM and Licensed Program Products (LPs) consistent.

For a complete description of all VMFINS installation options refer to VMSES/E Introduction and Reference (SC24-5444).

6.2 VMSES/E Installation Process Overview

The following is a brief description of the main steps in installing VTAM V4R2 for VM/ESA using VMSES/E:

- Plan Your Installation for VTAM V4R2 for VM/ESA

  Use the VMFINS command to load several VMSES/E files from the product tape to obtain VTAM V4R2 for VM/ESA resource requirements. For more information, see 6.2.1, “Plan Your Installation” on page 37.
Allocate Resources for Installing VTAM V4R2 for VM/ESA

Use the information obtained from the previous step to allocate the appropriate minidisks and user IDs needed to install and use VTAM V4R2 for VM/ESA. For more information, see 6.2.2, "Allocate Resources for Installing VTAM V4R2 for VM/ESA" on page 41.

Install the VTAM V4R2 for VM/ESA Product

Use the VMFINS command to load the VTAM V4R2 for VM/ESA product files from tape to the test BUILD and BASE minidisks/directories. For more information, see 6.2.3, "Install VTAM V4R2 for VM/ESA" on page 42.

Update the Build Status Table

Use VMFINS to update the VM SYSBLDS file used by VMSES/E for software inventory management. For more information, see 6.2.4, "Update Build Status Table for VTAM V4R2 for VM/ESA" on page 45.

Activate VTAM V4R2 for VM/ESA

For information about initial activation of VTAM V4R2 for VM/ESA, see 6.3.2, "Activate the Program" on page 54.

Copy VTAM V4R2 for VM/ESA Files Into Production

Once the product files have been tailored and the operation of VTAM V4R2 for VM/ESA is satisfactory, the product files are copied from the test BUILD disk(s) to production BUILD. For more information, see 6.3.3, "Copy VTAM Files Into Production" on page 55.

Install VTAM VIT Analysis Tool

If you will be using the VTAM VIT Analysis Tool, see Appendix B, "Installing the VTAM VIT Analysis Tool" on page 73 for the steps to complete the installation of this tool.

Install OS/2 Code provided by VTAM

Once VTAM V4R2 for VM/ESA has been installed, you need to download and unpack the VTAM-provided OS/2 DLUR and the VTAM Command Set Library. For more information, see Appendix C, "Installing the VTAM-provided OS/2 DLUR" on page 82 and Appendix D, "Installing the VTAM Command Set Library" on page 85 respectively.

Install Tables and Local/User Modules

See section 6.3.6, "Install Tables and Local/User Modules" on page 57 for information on making local modifications to your system.

For a complete description of all VMSES/E installation options refer to VMSES/E Introduction and Reference (SC24-5444).
6.2.1 Plan Your Installation

You use the VMFINS command to plan the installation. This is a two step process that:

- Loads the first tape file, containing installation files
- Generates a “PLANINFO” file listing containing:
  - All user ID and minidisk requirements
  - All the required products
To obtain planning information for your environment:

1 Log on as the installer/planner.
   This user ID can be any ID that has read access to MAINT's 5E5 minidisk and write access to MAINT 51D minidisk.

2 Mount the VTAM V4R2 for VM/ESA installation tape and attach it to the user ID at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

3 Establish read access to the VMSES/E code.

   link maint 5e5 5e5 rr
   access 5e5 b

   VMSES/E resides on the 5E5 disk.

4 Establish write access to the Software Inventory disk.

   link maint 51d 51d mr
   access 51d d

   The VMSES/E system-level Software Inventory and other dependent files reside on the MAINT 51D disk.

Note: If another user is currently linked to the MAINT 51D minidisk in write mode (R/W), you will obtain only read access (R/O). If this occurs, you need to have that user re-link to the 51D in read-only mode (RR), and then re-issue the above LINK and ACCESS commands. Do not continue with these procedures until you establish a R/W link to the 51D minidisk.
Load the VTAM V4R2 for VM/ESA product control files to the 51D minidisk.

vmfins install info (nomemo)

The NOMEMO option loads the memo from the tape but does not issue a prompt to send the memo to the system printer. Specify the MEMO option if you want to be prompted to print the memo.

The INSTALL INFO command performs the following:

- Loads the Memo-to-Users (contains a pointer to this Program Directory and the VTAM Network Implementation Guide)
- Loads various product control files, including the Product Parameter File (PPF) and the PRODPART files
- Creates VMFINS PRODLIST on your A-disk. The VMFINS PRODLIST contains a list of products on the installation tape.

When complete, VMFINS returns the following:

```
vmfins install info (nomemo)
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS1909I VMFINS PRODLIST created on your A-disk
VMFINS2760I VMFINS processing completed successfully
Ready;
```

Figure 45. Sample console output - Load product control files
Obtain resource planning information for VTAM V4R2 for VM/ESA.

vmfins install pff 5654010A VTAM (plan nomemo)

The PLAN option specifies that VMFINS performs requisite checking, plans system resources, and provides an opportunity to override the defaults in the product parameter file (PPF). VTAM will not be loaded at this time using this form of the VMFINS command.

You can override any of the following:
- The name of the product parameter file (PPF)
- The default user IDs
- The minidisk/directory definitions

Note:
- If you change the PPF name, a default user ID, or any other parameters via a PPF override, you need to use your changed values instead of those indicated (when appropriate), throughout the rest of these installation instructions, as well as the instructions provided for servicing VTAM V4R2 for VM/ESA. For example, you will need to specify your PPF override file name instead of 5654010A for certain VMSES/E commands.
- If you are not familiar with creating PPF overrides using VMFINS, see “Using the Make Override Panel” section in Chapter 3 of the VMSES/E Introduction and Reference before you continue.
Review the install message log ($VMFINS $MSGLOG). All install message logs are written to the installation user ID's A-disk. If necessary, correct any problems before going on. For information about handling specific error messages, see VM/ESA: System Messages and Codes, or use online HELP.

vmfview install

6.2.2 Allocate Resources for Installing VTAM V4R2 for VM/ESA

Use the planning information in the 5654010A PLANINFO file, created in the PLAN step (section 6.2.1, "Plan Your Installation" on page 37) to create the 5654010A user directory for minidisk install.

Obtain the user directory from the 5654010A PLANINFO file.

Notes:

a. The 5654010A user directory entry is located at the bottom of the PLANINFO file of the resource section; these entries will contain all of the links and privilege classes necessary for the 5654010A user ID. Use the directory entry found in PLANINFO as a model as input to your system directory.

b. Add the following statements to the VTAM user directory entry (in addition to the statements already in the PLANINFO file for the VTAM user directory entry):

```plaintext
NAMESAVE gcssystem
IPL gcssystem
```
Replace gcssystem with the name of your GCS system.

c. The PLANINFO file shows the 193 disk as being owned by user ID 5654010A. The 193 disk is used for TRACERED/DVF files. If you have multiple products that use a common disk for TRACERED/DVF files, then you may want to use that common disk (a 193 disk owned by user ID MAINT) rather than using a 193 disk owned by user ID 5654010A.

2 Add the MDISK statements to the directory entry for 5654010A. Use Figure 44 on page 32 to obtain the minidisk requirements.

3 Add the 5654010A directory to the system directory. Change the passwords for 5654010A from xxxxx to a valid password, in accordance with your security guidelines.

4 Place the new directories online using VM/Directory Maintenance (DIRMAINT) or an equivalent CP directory maintenance method.

Note
All minidisks for the 5654010A user ID must be formatted before installing VTAM V4R2 for VM/ESA.

6.2.3 Install VTAM V4R2 for VM/ESA

1 Logon to the installation user ID 5654010A.

2 Create a PROFILE EXEC that contains the ACCESS commands for MAINT 5E5 and 51D minidisks.

```
xedit profile exec a
====> input /**/
====> input 'access 5e5 b'
====> input 'access 51d d'
====> file
```

3 Execute the profile to access MAINT's minidisks.

```
profile
```

4 Establish write access to the Software Inventory disk, if it is not already linked R/W.

Note: If the MAINT 51D minidisk was accessed R/O, you need to have the user who has it linked R/W re-access the disk as R/O. You then can issue the following commands to establish R/W access.
link maint 51d 51d mr
access 51d d

5 Have the VTAM V4R2 for VM/ESA installation tape mounted and attached to 5654010A at virtual address 181. The VMFINS EXEC requires the tape drive to be at virtual address 181.

6 Install VTAM V4R2 for VM/ESA.

Notes:
If you have already created a PPF override file, you should specify your override file name after the `ppf` keyword for the following VMFINS command.

You might be prompted for additional information during VMFINS INSTALL processing depending on your installation environment. If you are unsure how to respond to a prompt, refer to the “Installing Products with VMFINS” and “Install Scenarios” chapters in the VMSES/E Introduction and Reference to decide how to proceed.

vmfins install ppf 5654010A VTAM  (nomemo nolink)

The NOLINK option indicates that VMFINS is not to link to the appropriate minidisks, only access them if not accessed.
vmfins install ppf 5654010a vtam (nomemo nolink)
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2601R Do you want to create an override for :PPF 5654010A VTAM :PRODID 5654010A%VTAM?
Enter 0 (No), 1 (Yes) or 2 (Exit)
0
VMFINS2603I Processing product :PPF 5654010A VTAM :PRODID 5654010A%VTAM
VMFREQ2805I Product :PPF 5654010A VTAM :PRODID 5654010A%VTAM has passed requisite checking
VMFINT2603I Installing product :PPF 5654010A VTAM :PRODID 5654010A%VTAM
VMFSET2760I VMFSETUP processing started for 5654010A VTAM
VMFUTL2205I Minidisk|Directory Assignments:
<table>
<thead>
<tr>
<th>String</th>
<th>Mode</th>
<th>Stat</th>
<th>Vdev</th>
<th>Label/Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCALSAM</td>
<td>E</td>
<td>R/W</td>
<td>2C2</td>
<td>DMR2C2</td>
</tr>
<tr>
<td>LOCALMOD</td>
<td>F</td>
<td>R/W</td>
<td>2C4</td>
<td>DMR2C4</td>
</tr>
<tr>
<td>APPLY</td>
<td>G</td>
<td>R/W</td>
<td>2A6</td>
<td>DMR2A6</td>
</tr>
<tr>
<td>H</td>
<td>R/W</td>
<td>2A2</td>
<td>DMR2A2</td>
<td></td>
</tr>
<tr>
<td>DELTA</td>
<td>I</td>
<td>R/W</td>
<td>2D2</td>
<td>DMR2D2</td>
</tr>
<tr>
<td>BUILD0</td>
<td>J</td>
<td>R/W</td>
<td>49A</td>
<td>DMR49A</td>
</tr>
<tr>
<td>BUILD2</td>
<td>K</td>
<td>R/W</td>
<td>493</td>
<td>DMR493</td>
</tr>
<tr>
<td>BUILD4</td>
<td>L</td>
<td>R/W</td>
<td>402</td>
<td>DMR402</td>
</tr>
<tr>
<td>BASE1</td>
<td>M</td>
<td>R/W</td>
<td>2B2</td>
<td>DMR2B2</td>
</tr>
<tr>
<td>-----</td>
<td>A</td>
<td>R/W</td>
<td>191</td>
<td>USR191</td>
</tr>
<tr>
<td>-----</td>
<td>B</td>
<td>R/O</td>
<td>5E5</td>
<td>MNT5E5</td>
</tr>
<tr>
<td>-----</td>
<td>C</td>
<td>R/O</td>
<td>292</td>
<td>ISP192</td>
</tr>
<tr>
<td>-----</td>
<td>D</td>
<td>R/W</td>
<td>51D</td>
<td>MNT51D</td>
</tr>
<tr>
<td>-----</td>
<td>S</td>
<td>R/O</td>
<td>190</td>
<td>MNT190</td>
</tr>
<tr>
<td>-----</td>
<td>Y/S</td>
<td>R/O</td>
<td>19E</td>
<td>MNT19E</td>
</tr>
</tbody>
</table>
VMFSET2760I VMFSETUP processing completed successfully
VMFREC2760I VMFREC processing started
VMFREC1852I Volume 1 of 1 of INS TAPE 9500
VMFREC1851I (1 of 9) VMFRCAXL processing AXLIST
VMFRCX2159I Loading 0 part(s) to DELTA 2D2 (I)
VMFREC1851I (2 of 9) VMFRCPTF processing PARTLST
VMFRCP2159I Loading 0 part(s) to DELTA 2D2 (I)
VMFREC1851I (3 of 9) VMFRCCOM processing DELTA
VMFRC2159I Loading 0 part(s) to DELTA 2D2 (I)
VMFREC1851I (4 of 9) VMFRCALL processing APPLY
VMFRCAL2159I Loading part(s) to APPLY 2A6 (G)
VMFRCAL2159I Loaded 1 part(s) to APPLY 2A6 (G)
VMFREC1851I (5 of 9) VMFRCALL processing BASE
VMFRCAL2159I Loading part(s) to BASE1 2B2 (M)
VMFRCAL2159I Loaded 3339 part(s) to BASE1 2B2 (M)

Figure 47 (Part 1 of 2). Sample console output - Install VTAM V4R2 for VM/ESA

44 VTAM V4R2 for VM/ESA Program Directory
Review the install message log ($VMFINS $MSGLOG). All install message logs are written to the installation user ID's A-disk. If necessary, correct any problems before going on. For information about handling specific error messages, refer to VM/ESA: System Messages and Codes, or use online HELP.

vmfview install

6.2.4 Update Build Status Table for VTAM V4R2 for VM/ESA

1 Update the VM SYSBLDS software inventory file for VTAM V4R2 for VM/ESA.

vmfins build ppf 5654010A VTAM (serviced nolink)

The SERVICED option builds any parts that were not built on the installation tape (if any) and updates the Software Inventory build status table showing that the product 5654010A has been built.
vmfins build pff 5654010a vtam (serviced nolink)
VMFINS2767I Reading VMFINS DEFAULTS B for additional options
VMFINS2760I VMFINS processing started
VMFINS2603I Processing product :PPF 5654010A VTAM :PRODID 5654010A%VTAM
VMFREQ2805I Product :PPF 5654010A VTAM :PRODID 5654010A%VTAM
   has passed requisite checking
VMFINB2603I Building product :PPF 5654010A VTAM :PRODID 5654010A%VTAM
VMFSET2760I VMFSETUP processing started for 5654010A VTAM
VMFUTL2205I Minidisk|Directory Assignments:
   String Mode Stat Vdev Label/Directory
VMFUTL2205I LOCALSAM E R/W 2C2 DMR2C2
VMFUTL2205I LOCALMOD F R/W 2C4 DMR2C4
VMFUTL2205I APPLY G R/W 2A6 DMR2A6
VMFUTL2205I H R/W 2A2 DMR2A2
VMFUTL2205I DELTA I R/W 2D2 DMR2D2
VMFUTL2205I BUILD0 J R/W 49A DMR49A
VMFUTL2205I BUILD2 K R/W 493 DMR493
VMFUTL2205I BUILD4 L R/W 402 DMR402
VMFUTL2205I BASE1 M R/W 2B2 DMR2B2
VMFUTL2205I ------- A R/W 191 USR191
VMFUTL2205I ------- B R/O 5E5 MNT5E5
VMFUTL2205I ------- C R/O 292 ISP192
VMFUTL2205I ------- D R/W 51D MNT51D
VMFUTL2205I ------- S R/O 190 MNT190
VMFUTL2205I ------- Y/S R/O 19E MNT19E
VMFSET2760I VMFSETUP processing completed successfully
VMFBLD2760I VMFBLD processing started
VMFBLD1851I Reading build lists
VMFBLD2182I Identifying new build requirements
VMFBLD2182I No new build requirements identified
VMFBLD2179I There are no build requirements matching your request
   at this time.
   No objects will be built
VMFBLD2180I There are 0 build requirements remaining
VMFBLD2760I VMFBLD processing completed successfully
VMFINB2603I Product built
VMFINB2173I No verification exec found for this product
VMFINS2760I VMFINS processing completed successfully
Ready;

Figure 48. Sample console output - Update software inventory file
2 Review the install message log ($VMFINS $MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, refer to VM/ESA: System Messages and Codes, or use online HELP.
6.3 Place VTAM Into Production

6.3.1 Define and Build the VTAM V4R2 for VM/ESA Saved Segments Using VMSES/E

You should build segments for VTAM V4R2 for VM/ESA. First, you define the segments to the system using the segment mapping tool VMFSGMAP. Once the segments are defined, use VMFBLD to build them.

For more information on using VMSES/E for saved segments, review the chapter, “Using VMSES/E to Define, Build, and Manage Saved Segments” in VM/ESA Planning and Administration.

Notes:
1. The defining and building of the VTAM V4R2 for VM/ESA saved segments should be performed from the installation user ID. If you move any segments that are currently defined on your system, you must ensure that they are rebuilt from the user ID that maintains them.
2. To define your VTAM DCSS, you will need to find enough contiguous space for it. At least 1M is required and the segment range of X'600 - X'6FF' is recommended.

1. Logon to the installation user ID 5654010A.

2. Establish write access to the Software Inventory disk.

   link maint 51d 51d mr
   access 51d d

3. Add VTAM V4R2 for VM/ESA segment object definitions to the SEGBLIST EXC00000 build list.

   vmfsgmap segbld esasegs segblist

   This command displays a panel for making segment updates. See Figure 49 on page 49 for an example of the Segment Map panel.
4 Select the Add Object panel by pressing PF10.

F10 takes you from the Segment Map panel to the Add Segment Definition panel. See Figure 50 on page 50 to see an example of the Add Segment Definition panel.
### Add Segment Definition

<table>
<thead>
<tr>
<th>OBJNAME...:</th>
<th>VTAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFPARMS...:</td>
<td></td>
</tr>
<tr>
<td>SPACE......:</td>
<td></td>
</tr>
<tr>
<td>TYPE.......:</td>
<td>SEG</td>
</tr>
<tr>
<td>OBJDESC.....:</td>
<td></td>
</tr>
<tr>
<td>OBJINFO.....:</td>
<td></td>
</tr>
<tr>
<td>GT_16MB.....:</td>
<td>NO</td>
</tr>
<tr>
<td>DISKS......:</td>
<td></td>
</tr>
<tr>
<td>SEGREQ.....:</td>
<td></td>
</tr>
<tr>
<td>PRODID.....:</td>
<td>5654010A</td>
</tr>
<tr>
<td>BLDPARMS...:</td>
<td>UNKNOWN</td>
</tr>
</tbody>
</table>

*F1=Help  F2=Get Obj  F3=Exit  F4=Add Line  F5=Map  F6=Chk MEM  F7=Bkwd  F8=Fwd  F9=Retrieve  F10=Seginfo  F11=Adj MEM  F12=Cancel*

---

> **Figure 50. Add Segment Definition panel example**

---

5 Obtain the VTAM V4R2 for VM/ESA segment definitions from the PRODPART file by pressing F10.

**OBJNAME....: VTAM**

**PRODID.....: 5654010A**

**F10** obtains the VTAM V4R2 for VM/ESA segment information from the 5654010A PRODPART file.

If you have created your own PPF override, then use your PPF name instead of 5654010A in the BLDPARMS field.

See **Figure 51 on page 51** for the refreshed Add Segment definition panel that will be displayed.
Add Segment Definition

More: +

Lines 1 to nn of nn

OBJNAME....: VTAM
DEFPARMS....: 600-6FF SR
SPACE.......:
TYPE........: SEG
OBJDESC.....: VTAM TEST SEGMENT
OBJINFO.....: MUST BE BELOW 16M LINE....
GT_16MB.....: NO
DISKS.......:
SEGREQ......:
PRODID......: 5654010A VTAM
BLDPARMS....: PPF(5654010A VTAM ISTSBSEG)

VMFSMD2760I SEGINFO processing completed SUCCESSFULLY
F1=Help    F2=Get Obj    F3=Exit    F4=Add Line    F5=Map    F6=Chk MEM
F7=Bkwd    F8=Fwd    F9=Retrieve    F10=Seginfo    F11=Adj MEM    F12=Cancel
====>

Figure 51. Add Segment Definition panel showing the segments

6 Return to the Segment Map panel by pressing F5.

F5 returns you to the Segment Map panel. See Figure 52 on page 52 for an example of the refreshed Segment Map panel.
Save the new information and exit from the Segment Map panel by pressing F5.

F5 saves all changed information and exits the map panel.
Prepare to build the segments. This is a three step process.

**a** IPL CMS to clear the virtual storage

```
ipl cms parm clear nosprof instseg no
```

**DO NOT press ENTER at the VMREAD!**

This command allows you to bypass the execution of the system profile (SYSPROF EXEC) without loading the installation saved segment (CMSINST).

access (noprof) Bypass the execution of the PROFILE EXEC.

**b** Access the VMSES/E code

```
access 5e5 b
```

**c** Establish write access to the Software Inventory disk

```
link maint 51d 51d mr
access 51d d
```

Issue VMFBLD command to build the VTAM V4R2 for VM/ESA segments.

```
vmfbld ppf segbld esasegs segblist VTAM (all)
```
6.3.2 Activate the Program

Perform the following steps to ensure that VTAM V4R2 for VM/ESA was installed properly:

1. Prepare your operating system.
   Refer to the VTAM Network Implementation Guide to prepare your operating system prior to activating VTAM.

2. Modify the startup EXEC you will be using, if necessary.
   Refer to "Initialization" in 5.4.15, “Program Installation/Service Considerations”, on page 28 for information on changes you might need to make to your startup EXEC prior to starting VTAM at the Client/Server, MultiDomain, or InterEnterprise functional level.

3. Logon to your VTAM user ID VTAM.
4 Detach the PRODUCTION (29A) disk and link to the installation user ID's RUN TEST/ALTERNATE (49A) disk.

```
detach 29a
link 5654010a 49a 29a rr
```

User ID 5654010A's 2C2 disk should be automatically linked as VTAM's 191 disk. The LINK statement to do this was defined in the VTAM user directory entry in the 5654010A PLANINFO file created in the PLAN step (section 6.2.1, "Plan Your Installation" on page 37).

5 IPL GCSXA. If your GCS system is not named ‘gcsxa’, then IPL using your GCS system name.

```
i gcsxa
```

6 Bring up VTAM using the sample VMVTAM startup EXEC.

```
vmvtam
```

Message IST020I tells you that VTAM is operational.

7 To end VTAM, enter VTAM HALT.

```
vtam halt
```

### 6.3.3 Copy VTAM Files Into Production

1 Logon to the installation user ID 5654010A.

```
```

2 Access the BUILD0 TEST/ALTERNATE (49A) disk and the BUILD0 PRODUCTION (29A) disk.

```
access 49a e
access 29a f
```

3 Issue the VMFCOPY command to copy all the files from the BUILD0 TEST/ALTERNATE (49A) disk to the BUILD0 PRODUCTION (29A) disk. Note that message VMFCOP2866I will be received indicating that file VMSES PARTCAT will not be copied.

```
vmfcopy ** e = = f (prodid 5654010A%VTAM olddate replace
```
4 Access the BUILD4 TEST/ALTERNATE (402) disk and the BUILD4 PRODUCTION (401) disk.

`access 402 e`

`access 401 g`

5 Issue the VMFCOPY command to copy all the files from the BUILD4 TEST/ALTERNATE (402) disk to the BUILD4 PRODUCTION (401) disk.

`vmfcopy * * e = = g (prodid 5654010A%VTAM olddate replace`

6 Access the BUILD2 TEST/ALTERNATE (493) disk and MAINT's 193 disk.

`link maint 193 193 mr`

`access 493 e`

`access 193 h`

7 Issue the VMFCOPY command to copy all the files from the BUILD2 TEST/ALTERNATE (493) disk to MAINT's 193 disk.

`vmfcopy * * e = = h (prodid 5654010A%VTAM olddate replace`

8 Now that you have copied the contents of the test/alternate disks to their corresponding production disks you will need to have the VTAM user ID link to the 5654010A user ID's BUILD0 PRODUCTION (29A) disk that contains the production-level VTAM load libraries and EXECs.

If you logged off the VTAM user ID after completing the steps in [6.3.2, "Activate the Program" on page 54], then when you log that ID back on it will automatically link to the 5654010A user ID's 29A disk.

If you have not logged off the VTAM user ID after completing the steps in 6.3.2, "Activate the Program" on page 54, then from the VTAM user ID issue the following commands to link to the 5654010A user ID's 29A disk.

`detach 29a`

`link 5654010a 29a 29a rr`

**VTAM V4R2 for VM/ESA is now installed and built on your system.**
6.3.4 Install VTAM VIT Analysis Tool
If you will be using the VTAM VIT Analysis Tool you will need to perform some additional steps to complete the installation of this function. For more information, see Appendix B, “Installing the VTAM VIT Analysis Tool” on page 73.

6.3.5 Install OS/2 Code
Once you have installed VTAM V4R2 for VM/ESA, you need to download and unpack the VTAM-provided OS/2 DLUR and the VTAM Command Set Library. For more information, see Appendix C, “Installing the VTAM-provided OS/2 DLUR” on page 82 and Appendix D, “Installing the VTAM Command Set Library” on page 85.

6.3.6 Install Tables and Local/User Modules
When making local modifications to your system, use VMSES/E commands and execs in place of VMFLKED as in prior releases. Complete instructions are available in the VM/ESA: VMSES/E Introduction and Reference and the VM/ESA: Service Guide.

6.3.6.1 VTAM User Modifications during Installation
To make local modifications to your system during installation, follow the steps below:

1. Log on to the installation user ID 5654010A.

2. Create or copy the IBM-supplied assemble file needed for your local modification. See Figure 54 on page 60 for the appropriate part and member name. This is required in rebuilding any local modifications you have put on your system.

3. Copy the assemble file to the 2C4 (E-disk). Make your local modification to the copy on your LOCALMOD 2C4 disk.

4. Issue the following command:

   global maclib vt ambld vt amac
5 Issue the assemble command for the file:

```
vmfasm fn 5654010a vtam (ppf)
```

**Notes:**

1. Other options are available for the assemble commands. Consult the *VM/ESA: VMSES/E Introduction and Reference* for additional information.

2. We recommend that you use the VMFHASM assemble exec supplied by VMSES/E. Also available is the VMFHLASM assemble exec.

3. If the assemble function is successful, the file *fn TXT00000* will be placed on the A-disk.

6 Copy the *fn TXT00000* file from the A-disk to the 2C4 E-disk as *fn TXTLnnnn*.

```
copyfile fn txt00000 a fn txtlnnnn e
```

**Note:** TXTL is a required filetype for local modified text. The *nnnn* is a user-defined number assigned to this fix, usually starting with 0001.

7 Erase the TXT00000 from your A-disk.

```
erase fn txt00000 a
```

8 Rename the assemble file on the 2C4 E-disk as *fn ASMLnnnn E*.

9 Update the VVT tables for both the TXT and ASM files by issuing the following VMFSIM against both the text and the assemble files:

```
vmfsim logmod 5654010a vvticl e tdata :mod lc1nnnn :part fn txt
vmfsim logmod 5654010a vvticl e tdata :mod lc1nnnn :part fn asm
```

10 Relink your new local modification into the appropriate loadlib by issuing the following command. See [Figure 54 on page 60](#) for the appropriate *blist* and *memname*.

```
vmfbld ppf 5654010a vtam blist memname (all)
```
11 Copy the updated file(s) to the appropriate production disk. Refer to section 6.3.3, “Copy VTAM Files Into Production” on page 55 for examples using the VMFCOPY command to copy files onto a production disk.

12 Log on to your VTAM user id VTAM.

13 Issue the following command after GCS has been IPLed but before VTAM is started. Refer to section 6.3.2, “Activate the Program” on page 54 for the steps used to activate VTAM.

global loadlib vscsuser vtamuser vscs vtam
<table>
<thead>
<tr>
<th>FILENAME (fn)</th>
<th>Buildlist (blist)</th>
<th>Member name (memname)</th>
<th>LOADLIB Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISTINCNO</td>
<td>ISTBLVL1</td>
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7.0 Service Instructions

This section of the Program Directory contains the procedure to install CORrective service to VTAM V4R2 for VM/ESA. VMSES/E is used to install service for VTAM V4R2 for VM/ESA.

To become more familiar with service using VMSES/E, you should read the introductory chapters in VMSES/E Introduction and Reference (SC24-5444). This manual also contains the command syntax for the VMSES/E commands listed in the procedure.

Note: Each step of the servicing instructions must be followed. Do not skip any step unless otherwise directed to. All instructions showing accessing of disks assume the use of default minidisk addresses. If different minidisk addresses are used, change the instructions appropriately.

7.1 VMSES/E Service Process Overview

The following is a brief description of the main steps in servicing VTAM V4R2 for VM/ESA using VMSES/E:

- **Merging Service**
  
  Use the VMFMRDSK command to clear the alternate apply disk before receiving new service. This allows you to easily remove the new service if a serious problem is found.

- **Receiving Service**
  
  The VMFREC command receives service from the delivery media and places it on the Delta disk.

- **Applying Service**
  
  The VMFAPPLY command updates the version vector table (VVT), which identifies the service level of all the serviced parts. In addition, AUX files are generated from the VVT for parts that require them.

- **Reapplying Local Service (if applicable)**
  
  All local service (mods) must be entered into the software inventory to allow VMSES/E to track the changes and build them into the system. See Chapter 7 in the VM/ESA Service Guide (SC24-5527) for this procedure.

- **Building New Levels**
  
  The build task generates the serviced level of an object and places the new object on a test BUILD disk.

- **Placing the New Service into Production**
  
  Once the service is satisfactorily tested it should be put into production by copying the new service to the production disk, re-saving the NSS (Named Saved System) or DCSS (Discontiguous Saved Segments), etc.
7.2 Servicing VTAM V4R2 for VM/ESA

7.2.1 Prepare to Receive Service

1 Log on to the VTAM V4R2 for VM/ESA service user ID 5654010A

2 Establish access to the software inventory disk.

   Note: If the MAINT 51D minidisk was accessed R/O, you will need to have the user that has it accessed R/W link it R/O. You can then issue the following commands to obtain R/W access to it:

   link maint 51d 51d mr
   access 51d d

   The 51D minidisk is where the VMSES/E Software Inventory files and other product dependent files reside.

3 Have the VTAM V4R2 for VM/ESA CORrective service tape mounted and attached to 5654010A.

4 Establish the correct minidisk access order.

   vmfsetup 5654010A VTAM

   5654010A is the PPF that was shipped with the product. If you have your own PPF override you should substitute your PPF name for 5654010A.

   Electronic Service

   If you are receiving service from Service Link (electronic service) see Appendix A, 'Receiving COR Service from ServiceLink', in the VM/ESA Service Guide for the steps to receive service documentation. Return to step 7 below to continue the service process.

5 Receive the documentation. VMFREC with the INFO option loads the documentation and displays a list of all the products on the tape.

   vmfrec info

6 Check the receive message log ($VMFREC $MSGLOG) for warning and error messages.

   vmfview receive
Also make note of which products and components have service on the tape. To do this, use the PF5 key to show all status messages which identify the products on the tape.

7 Clear the alternate APPLY disk to ensure that you have a clean disk for new service.

```
vmfmrdsk 5654010A VTAM apply
```

This command clears the alternate APPLY disk. 5654010A is the PPF that was shipped with the product. If you have your own PPF override you should substitute your PPF name for 5654010A.

8 Review the merge message log ($VMFMRD $MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see VM/ESA: System Messages and Codes, or use online HELP.

```
vmfview mrd
```

7.2.2 Receive the Service

1 Receive the service.

```
vmfrec ppf 5654010A VTAM
```

This command receives service from your service tape. All new service is loaded to the alternate DELTA disk.

```
vmfrec ppf 5654010A VTAM (env vptf nnnn)
```

This command receives service from Service Link that now resides on disk.

This command maps the envelope file (verifies that all the necessary files exist), creates a SERVICE DISKMAP file, and receives service from your PTF envelope VPTFnnnn SERVLINK.

2 Review the receive message log ($VMFREC $MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see VM/ESA: System Messages and Codes, or use online HELP.

```
vmfview receive
```

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7.2.3 Apply the Service

1 Apply the new service.

vmfapply ppf 5654010A VTAM

This command applies the service that you just received. The version vector table (VVT) is updated with all serviced parts and all necessary AUX files are generated.

2 Review the apply message log ($VMFAPP $MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see VM/ESA: System Messages and Codes, or use online HELP.

vmfview apply

Note

If you get the message VMFAPP2120W then re-apply any local modifications before building the new VTAM V4R2 for VM/ESA. Refer to section 6.3.6, “Install Tables and Local/User Modules” on page 57 for the steps to use when servicing local modifiable assemble files. If the file has been previously serviced, the latest service level of that file will be located on the 2D2 (DELTA) disk.

For additional service information, refer to chapter 7 in the VM/ESA Service Guide, SC24-5527. Follow the steps that are applicable to your local modification.

The following substitutions need to be made:

- esalcl should be 5654010A
- esa should be 5654010A
- compname should be VTAM
- appid should be 5654010A
- fm-local should be the fm of 2C2
- fm-applyalt should be the fm of 2A6

If you have changed any of the installation parameters via a PPF override, you need to substitute your changed values where applicable.

Keep in mind that when you get to the “Rebuilding Objects” step in the Service Guide you should return back to this program directory at 7.2.4, “Update the Build Status Table.”

7.2.4 Update the Build Status Table

1 Update the Build Status Table with serviced parts.

vmfbld ppf 5654010A VTAM (status

This command updates the Build Status Table.
Note (part 1 of 2)

If the $ppf files have been changed by the service you have applied, you will get the following prompt:

VMFBLD2185R The following source product parameter files have been serviced:
VMFBLD2185R 5654010A $PPF
VMFBLD2185R When source product parameter files are serviced, all product parameter files built from them must be recompiled using VMFPFF before VMFBLD can be run.
VMFBLD2185R Enter zero (0) to have the latest levels of the source product parameter files copied to your A-disk and exit VMFBLD so you can recompile your product parameter files with VMFPFF
VMFBLD2185R Enter one (1) to continue only if you have already recompiled your product parameter files with VMFPFF

0 Enter a 0 and complete the following steps before you continue.

VMFBLD2188I Building 5654010A $PPF on 191 (A) from level $PFnnnnnn
VMFBLD2760I VMFBLD processing completed
Ready(00500);

vmppf 5654010A VTAM Note: If you have created your own PPF override then use your PPF name instead of 5654010A.

copyfile 5654010A $ppf a = = d (olddate replace erase 5654010A $ppf a

Note: Do not use your own PPF name in place of 5654010A for the COPYFILE and ERASE commands.
Re-issue VMFBLD to complete updating the build status table.

**Note:** If you have created your own PPF override then use your PPF name instead of 5654010A.

When you receive the prompt that was previously displayed, enter a 1 to continue.

2 Use VMFVIEW to review the build status messages, and see what objects need to be built.

vmfview build

### 7.2.5 Build Serviced Objects

1 Rebuild VTAM V4R2 for VM/ESA serviced parts.

vmfbld ppf 5654010A VTAM (serviced)

2 Review the build message log ($VMFBLD $MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see VM/ESA: System Messages and Codes, or use online HELP.

vmfview build
7.3 Place the New VTAM Service into Production

7.3.1 Rebuild the Saved Segments

1 Re-save the VTAM V4R2 for VM/ESA segments.

vmfbld pff segbld esasegs segblist VTAM (serviced)

2 Review the build message log ($VMFBLD $MSGLOG). If necessary, correct any problems before going on. For information about handling specific error messages, see VM/ESA: System Messages and Codes, or use online HELP.

vmfview build

7.3.2 Copy the New VTAM Serviced Files Into Production

1 Logon to the installation user ID 5654010A.

2 Access the BUILD0 TEST/ALTERNATE (49A) disk and the BUILD0 PRODUCTION (29A) disk.

access 49a e
access 29a f

3 Issue the VMFCOPY command to copy all the files from the BUILD0 TEST/ALTERNATE (49A) disk to the BUILD0 PRODUCTION (29A) disk. Note that message VMFCOP2866I will be received indicating that file VMSES PARTCAT will not be copied.

vmfcopy * * e = = f (prodid 5654010A%VTAM olddate replace

4 Access the BUILD4 TEST/ALTERNATE (402) disk and the BUILD4 PRODUCTION (401) disk.

access 402 e
access 401 g
5 Issue the VMFCOPY command to copy all the files from the BUILD4 TEST/ALTERNATE (402) disk to the BUILD4 PRODUCTION (401) disk.

```
vmfcopy * * e = = g (prodid 5654010A%VTAM olldate replace
```

6 Access the BUILD2 TEST/ALTERNATE (493) disk and MAINT's 193 disk.

```
link maint 193 193 mr
access 493 e
access 193 h
```

7 Issue the VMFCOPY command to copy all the files from the BUILD2 TEST/ALTERNATE (493) disk to MAINT's 193 disk.

```
vmfcopy * * e = = h (prodid 5654010A%VTAM olldate replace
```

You now have finished servicing VTAM V4R2 for VM/ESA.
Appendix A. VTAM APARs

This appendix contains the APAR fixes incorporated into VTAM V4R2 for VM/ESA.

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| VM55593 | VM55844 | VM56132 | VM56342 | VM56535 | VM56740 |
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| VM55598 | VM55870 | VM56136 | VM56344 | VM56550 | VM56742 |
| VM55599 | VM55871 | VM56148 | VM56345 | VM56577 | VM56744 |
| VM55624 | VM55872 | VM56149 | VM56346 | VM56578 | VM56745 |
| VM55659 | VM55873 | VM56150 | VM56349 | VM56579 | VM56746 |
| VM55662 | VM55874 | VM56195 | VM56370 | VM56580 | VM56747 |
| VM55664 | VM55875 | VM56196 | VM56371 | VM56582 | VM56749 |
| VM55666 | VM55876 | VM56205 | VM56375 | VM56583 | VM56774 |
| VM55667 | VM55891 | VM56206 | VM56387 | VM56584 | VM56775 |
| VM55668 | VM55892 | VM56207 | VM56388 | VM56585 | VM56776 |
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| VM55671 | VM55979 | VM56212 | VM56393 | VM56592 | VM56779 |
| VM55673 | VM55980 | VM56213 | VM56394 | VM56606 | VM56780 |
| VM55674 | VM55981 | VM56214 | VM56395 | VM56607 | VM56781 |
| VM55675 | VM55982 | VM56215 | VM56396 | VM56608 | VM56782 |

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| VM56783 | VM57218 | VM57490 | VM57667 | VM57910 | VM58162 |
| VM56784 | VM57228 | VM57503 | VM57668 | VM57912 | VM58176 |
| VM56785 | VM57229 | VM57504 | VM57698 | VM57940 | VM58177 |
| VM56791 | VM57238 | VM57505 | VM57699 | VM57942 | VM58178 |
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| VM57082 | VM57325 | VM57512 | VM57705 | VM57948 | VM58212 |
| VM57083 | VM57342 | VM57513 | VM57714 | VM57969 | VM58213 |
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| VM57085 | VM57382 | VM57553 | VM57740 | VM57988 | VM58215 |
| VM57086 | VM57388 | VM57557 | VM57741 | VM57989 | VM58216 |
| VM57087 | VM57389 | VM57559 | VM57765 | VM57990 | VM58239 |
| VM57088 | VM57390 | VM57560 | VM57766 | VM57991 | VM58243 |
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| VM57135 | VM57411 | VM57581 | VM57813 | VM58010 | VM58255 |
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| VM57158 | VM57415 | VM57591 | VM57838 | VM58040 | VM58259 |
| VM57159 | VM57416 | VM57592 | VM57839 | VM58041 | VM58260 |
| VM57160 | VM57417 | VM57604 | VM57840 | VM58042 | VM58261 |
| VM57161 | VM57418 | VM57608 | VM57841 | VM58043 | VM58262 |
| VM57162 | VM57419 | VM57637 | VM57842 | VM58044 | VM58263 |
| VM57163 | VM57420 | VM57642 | VM57843 | VM58065 | VM58264 |
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| VM57168 | VM57433 | VM57654 | VM57860 | VM58107 | VM58301 |
| VM57182 | VM57449 | VM57655 | VM57861 | VM58108 | VM58308 |
| VM57207 | VM57450 | VM57656 | VM57862 | VM58109 | VM58326 |
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| VM57209 | VM57457 | VM57658 | VM57882 | VM58111 | VM58328 |
| VM57210 | VM57458 | VM57659 | VM57891 | VM58112 | VM58329 |
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| VM57216 | VM57478 | VM57685 | VM57899 | VM58153 | VM58335 |
| VM57217 | VM57489 | VM57666 | VM57900 | VM58161 | VM58336 |

Appendix A. VTAM APARs 71
<table>
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Appendix B. Installing the VTAM VIT Analysis Tool

To install the VTAM VIT analysis tool, complete the following steps as described in this section (ISPF V3R2 is required to install this tool):

1. Access the appropriate disks
2. Update and run the ISPF EXEC
3. Install the ISPF trace tables
4. Invoke the ISPF Dialog Tag Language Utility
5. Compile the help panels, creating multiple help panels
6. Verify that the trace formatter panels have been set up correctly
7. Optionally customize the ISPF interface.

If problems are encountered, see "VTAM Internal Trace (VIT) Analysis Tool Problems (VM)" in VTAM Diagnosis for further information.

B.1 Accessing the Appropriate Disks

The following loadlibs or maclibs contain the necessary data to set up the VTAM VIT Analysis Tool. You need to concatenate the maclibs into the ISPF EXEC, as shown below.

<table>
<thead>
<tr>
<th>Target Loadlib or Maclib</th>
<th>Action</th>
<th>Mini Disk</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Accessed as A</td>
<td>493 Test 193 Prod</td>
<td>Contains REXX EXECs</td>
</tr>
<tr>
<td>ISTPLIB</td>
<td>Accessed as A</td>
<td>493 Test 193 Prod</td>
<td>Contains compiled panels</td>
</tr>
<tr>
<td>ISTMLIB</td>
<td>Accessed as A</td>
<td>493 Test 193 Prod</td>
<td>Contains compiled ISPF messages</td>
</tr>
<tr>
<td>user-defined maclib</td>
<td>Accessed as A</td>
<td>493 Test 193 Prod</td>
<td>This maclib can be a new or existing one and needs to be the same maclib used for ISPTABL.</td>
</tr>
<tr>
<td>ISTTLIB (same as used for ISPTLIB)</td>
<td>Accessed as A</td>
<td>493 Test 193 Prod</td>
<td>Because ISPTABL can only point to one maclib, this maclib needs to replace any previous maclib set up for ISPTLIB.</td>
</tr>
<tr>
<td>ISTDEBUG</td>
<td>Accessed as B</td>
<td>49A Test 29A Prod</td>
<td>Contains ISTRAFT1 load module</td>
</tr>
<tr>
<td>N/A</td>
<td>Accessed as C</td>
<td>2B2 BASE1</td>
<td>Contains input GML files</td>
</tr>
</tbody>
</table>
**B.2 Updating and Running the ISPF EXEC**

Update the ISPF EXEC with the appropriate maclib names and then run it. See Figure 55 on page 74 for an example. Note that the highlighted FILEDEF statements in Figure 55 on page 74 are required, and they must be placed after the ISRNULL FILEDEF statements.

```
/*********************************************************************/
/* PERFORM FILEDEFS */
/* NOTE: PRIVATE PANELS, MSGS, SKELS, TABLES AND PROFILE FILES */
/* SHOULD BE PLACED AHEAD OF THE PDF AND ISPF SUPPLIED FILES. */
/* THE FILEMODE MAY NEED TO BE CHANGED DEPENDING ON HOW DISK */
/* WAS ACCESSED. */
 /*********************************************************************/
'SET CMSTYPE HT' /* VM29458*/
'FILEDEF ISPPROF CLEAR'
'FILEDEF ISPPLIB CLEAR'
'FILEDEF ISPMLIB CLEAR'
'FILEDEF ISPSLIB CLEAR'
'FILEDEF ISPLLIB CLEAR' /* @P2A */
'FILEDEF ISPTLIB CLEAR'
'FILEDEF ISPTLIB CLEAR'
'FILEDEF ISPXLIB CLEAR'
'FILEDEF ISPTABL CLEAR'
'SET CMSTYPE RT' /* VM29458*/
'FILEDEF ISPPROF DISK TABLES MACLIB A (PERM '

/* Filemode 'T' has been replaced by 'A' */

'FILEDEF ISPPLIB DISK INSPECT MACLIB Y (PERM CONCAT'
'FILEDEF ISPPLIB DISK SERRLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPPLIB DISK ISRNULL PANEL Y (PERM CONCAT'
'FILEDEF ISPPLIB DISK ISTPLIB MACLIB A (PERM CONCAT'
'FILEDEF ISPPLIB DISK VSF2PLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPPLIB DISK ISRPLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPPLIB DISK ISPPLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISRNULL MESSAGE Y (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISTMLIB MACLIB A (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISRMLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISPMLIB MACLIB Y (PERM CONCAT'

'FILEDEF ISPMLIB DISK ISRNULL SKELETON Y (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISRSLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISRTLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISPTLIB MACLIB A (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISPTLIB MACLIB A (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISTTLIB MACLIB A (PERM CONCAT'
'FILEDEF ISPMLIB DISK TABLES MACLIB A (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISRTLIB MACLIB Y (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISPTLIB MACLIB Y (PERM CONCAT'

'FILEDEF ISPTABL DISK ISTTLIB MACLIB A (PERM'

'FILEDEF ISPXLIB DISK IBMLIB TXTLIB Y (PERM CONCAT'
'FILEDEF ISPXLIB DISK VSC2LTXT TXTLIB Y (PERM CONCAT'

Figure 55. Sample ISPF EXEC modified for IST maclibs

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### B.3 Installing the ISPF Trace Tables

After the installation maclibs have been concatenated and the mini disk for the table EXEC is accessed, you can install the ISPF tables. To do this, select option 7 from the ISPF/PDF PRIMARY OPTION MENU, and then option 1 from the Dialog Test menu to go to the ISPF INVOKE DIALOG FUNCTION/SELECTION PANEL shown in Figure 56 on page 75.

![Invoke Dialog Function/Selection Panel](image)

*Figure 56. ISPF Panel Used to Run the Table EXECs*

To run all the table EXECs for the formatted trace, enter the EXEC name ISTTTABL in the INVOKE COMMAND: CMD ===> field and press Enter.

The individual table EXECs for formatted trace are:

- ISTTT007
- ISTTT012
- ISTTTT017
- ISTTT024.

Each table EXEC should complete with a return code of 0. RC=0 will appear in the upper right corner of the screen.

The output of the table EXECs is placed in the maclib pointed to by the ISPTABL statement, the user-defined ISPTLIB maclib.
B.4 Invoking the ISPF Dialog Tag Language Utility

To complete the panel setup, you must compile all of the help panels that expand into multiple panels. All other panels, help panels, keylists, and commands have been compiled and placed in the appropriate maclib. The ISPF Dialog Tag Language Utility, ISPDTLC, is used for the compile. ISPDTLC is a REXX EXEC provided by ISPF that generates panels, help panels, messages, keylists and commands from Dialog Tag Language source files. For more information about the Dialog Tag Language Utility, see the ISPF Dialog Tag Language and Reference Guide. You can enter ISPDTLC from the COMMAND ===> line or from the COMMAND AND EXEC PROCESSING panel, shown in Figure 57 on page 76.

![ISRCMS---------------- COMMAND AND EXEC PROCESSING --------------------------](image)

After ISPDTLC has been invoked, the ISPF Dialog Tag Language Conversion Utility panel is displayed.

B.5 Compiling the Help Panels, Keylists, and Commands

The following section describes how to compile the help panels, keylists, and commands using the ISPF Dialog Tag Language Conversion Utility.

To compile the help panels, keylist, and commands, enter the following on the “ISPF Dialog Tag Language Conversion Utility” panel:

- The GML source file. ISTTTWO contains a compile list of all the help panels that expand into multiple help panels.
• The output panel maclib for the panels.
• The output log for the messages.
• The four-character prefix of the trace application to be used as the keylist application ID. For formatted trace, enter ISTT.
• Whether old files are replaced with the new compiled output. Enter YES.
• Whether you want the ISPDTLC compiler messages displayed on the screen or written to a file.
   If you indicate that you want the messages written to an output file, you can specify a filename in the OUTPUT LOG field. Otherwise, the output is written to the ISPF log.
   Writing the messages to the ISPF log will not cause any messages to be overwritten. It is recommended that you have the messages written to a file.
• Whether you want ISPF messages suppressed. It is recommended that you not suppress messages.
• Your national language.

Examples of the completed ISPF V3R2 panels follow.

To compile the help panels, keylists, and commands for formatted trace, enter the information as provided on the screen shown in Figure 58.

![ISPF Dialog Tag Language Conversion Utility](image)

Figure 58. Compiling the Help Panels, Keylists, and Commands for Formatted Trace

After compiling the help panels and tables have been generated and/or moved to the correct maclibs, the VTAM VIT analysis tool is ready for use or testing. No additional steps are necessary.
B.6 Verifying the Trace Formatter Panels

To verify that the Trace Formatter panels are set up correctly, return to the ISPF 7.1 function "INVOKE DIALOG FUNCTION/SELECTION PANEL" and enter the REXX EXEC as shown in Figure 59 on page 78.

```
------------------- INVOKE DIALOG FUNCTION/SELECTION FUNCTION RC = 0

INVOKER SELECTION PANEL:
    PANEL ===>
    OPT ===>

INVOKER COMMAND:
    CMD ===>
    ISTTE01

    LANG ===>
    (APL or blank)

INVOKER PROGRAM/SHARED SEGMENT:
    PGM ===>
    DCSS ===>

    PARM ===>
    EXTENDED PLIST ===>
    NO

    NEWAPPL ===>
    YES

    ID ===>
    ISTT

    NEWPOOL ===>
    NO

    PASSLIB ===>
    NO

COMMAND ===>
    F1=HELP
    F2=SPLIT
    F3=END
    F4=RETURN
    F5=RFIND
    F6=RCHANGE
    F7=UP
    F8=DOWN
    F9=SWAP
    F10=LEFT
    F11=RIGHT
    F12=CURSOR
```

*Figure 59. Verifying the Trace Formatter Panels*

The first ISPF panel you should see is shown in Figure 60 on page 79.
VTAM Internal Trace Analysis

Select one of the following. Then press Enter.

   1. Storage Analysis
   2. Request/response unit counting
   3. VIT extraction
   4. Input complete

(C) Copyright IBM Corporation 1992. All rights reserved.
Command ===> _____________________________________________________________
F1=Help         F2=Split        F3=Exit         F9=Swap        F11=Retrieve F12=Cancel

Figure 60. Main Menu for Selecting Trace Parameters

Press the PF1 key to verify that the appropriate help panel is displayed.

Note: It is recommended that you position the command line at the bottom of the screen using ISPF PARMS option DISPLAY and changing the 'COMMAND LINE PLACEMENT ===> ASIS' to BOTTOM to improve readability.

B.7 Customizing the ISPF Interface

If you want a customized interface to be active to select the VTAM trace analysis commands, customize the ISPF panel ISR@PRIM by adding the highlighted lines shown in Figure 61 on page 80 to create and activate option V on the ISPF/PDF Primary Option Menu as shown in Figure 62 on page 81. When this option is selected, control is passed to the ISTTE01 EXEC. This EXEC controls the ISPF panels for the trace formatter.
--- SAMPLE ISPF/PDF PRIMARY OPTION MENU "---

%OPTION ===>_ZCMD +
%
% +USERID - &ZUSER
% ;zerodot +ISPF PARMS - Specify terminal and user parameters +TIME - &ZTIME
% 1 +BROWSE - Display source data or output listings +TERMINAL - &ZTERM
% 2 +EDIT - Create or change source data +PF KEYS - &ZKEYS
% 3 +UTILITIES - Perform utility functions
% 4 +FOREGROUND - Invoke language processors in foreground
% 5 +BATCH - Submit to batch for language processing
% 6 +COMMAND - Enter CMS command or EXEC
% 7 +DIALOG TEST - Perform dialog testing
% 8 +LM UTILITIES - Perform library administrator utility functions
% 9 +IBM PRODUCTS - Additional IBM program development products
% 10 +CHANGES - Display summary of changes for this release
% C +VTAM - VTAM trace analysis commands
% T +TUTORIAL - Display information about ISPF/PDF
% X +EXIT - Terminate using console, log, and list defaults
%
+Enter%END+command to terminate ISPF.
%
)INIT

.HELP = ISR00003
&ZPRIM = YES /* ALWAYS A PRIMARY OPTION MENU */
&ZHTOP = ISR00003 /* TUTORIAL TABLE OF CONTENTS */
&ZHINDEX = ISR91000 /* TUTORIAL INDEX - 1ST PAGE */
&ZSCLMPRJ = &Z
VPUT (ZHTOP,ZHINDEX,ZSCLMPRJ) PROFILE

)PROC

&ZQ = &Z
IF (&ZCMD ¬= ' ')
 &ZQ = TRUNC (&ZCMD,.',.'
IF (&ZQ = ' ')
 .MSG = ISRU000
&ZSEL = TRANS( &ZQ
 0,'PANEL(ISPOPTA)' 1,'PGM(ISRBRD) PARM(ISRBRO001)'
 2,'PGM(ISREDIT) PARM(P,ISREDM01)'
 3,'PANEL(ISRUTIL)'
 4,'PANEL(ISRSFPA)'
 5,'PGE(ISRJBI) PARM(ISRJPA) NOCHECK'
 6,'PGE(ISRPCT)'
 7,'PGE(ISPYXDR) PARM(ISR) NOCHECK'
 8,'PANEL(ISRLPRIM)'
 9,'PANEL(ISRDII5)'
10,'PGE(ISRSLM) NOCHECK'
C,'PGE(ISPTUTOR) PARM(ISRO0005)'
V,'CMD(ISSTTE01) NEWAPPL(ISST)'
T,'PGE(ISPTUTOR) PARM(ISRO0000)'
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Figure 62. Addition of Option V on the ISPF/PDF Primary Option Menu
Appendix C. Installing the VTAM-provided OS/2 DLUR

The dependent LU server function provides dependent secondary logical unit (SLU) support by establishing an LU6.2 session pipe between a dependent LU requester node (DLUR), and a dependent LU server node (DLUS). A DLUR is an APPN end node or an APPN network node that owns dependent LUs, but requests that a DLUS provide the SSCP services for those dependent LUs.

The VTAM-provided OS/2 DLUR for Communications Manager/2 provides full DLUR support, with the following exceptions:

- Downstream PUs
- SSCP takeover/giveback (ANS=CONT)
- DLUR/DLUS cross-subnetwork support
- DDDL
- XRF and XRF/Crypto.

This appendix describes downloading and unpacking the DLUR files.

C.1 Downloading the DLUR Files

Install the DLUR files by downloading the following files from the host to the root directory of the drive where Communications Manager/2 is installed.

1. Download files ISTIPDLR AISTDAT1 and ISTLDRM2 AISTDAT1 from the 401 disk on the host.
2. Download file ISTIPRDM AISTDAT1 from the 401 disk on the host. This is a README file containing DLUR installation and configuration information.

You can use any installed communication facility that enables you to transfer files from a VM/ESA host to OS/2. Following are two examples of how you can download these files:

- Use the receive function of a Communications Manager/2 3270 emulation session. For example:
  
  RECEIVE ISTIPDLR.RAM id:ISTIPDLR AISTDAT1 fm
  RECEIVE LOADRAM2.EXE id:ISTLDRM2 AISTDAT1 fm
  RECEIVE README.DLR id:ISTIPRDM AISTDAT1 fm (ASCII CRLF

  where id is the emulator session and fm is the filemode from which you are downloading.

  For information on transferring files using 3270 sessions, refer to your IBM Communications Manager/2 User's Guide.

- If TCP/IP is installed on the VM/ESA host and on your workstation, you can use FTP to download ISTIPDLR, ISTLDRM2, and ISTIPRDM. For information on setting up and using FTP on OS/2, refer to your IBM TCP/IP for OS/2: User's Guide.
Do the following when you download the DLUR files:

- Make sure you specify that files ISTIPDLR and ISTLDRM2 are in binary format before you run the download command. The README file, ISTIPRDM, is in EBCDIC format, not binary.
- Rename the following files after they are downloaded to OS/2:
  - Rename ISTIPDLR to ISTIPDLR.RAM.
  - Rename ISTLDRM2 to LOADRAM2.EXE.
  - Rename ISTIPRDM to README.DLR.

The following section refers to the DLUR files by their OS/2 names: ISTIPDLR.RAM and LOADRAM2.EXE. The README.DLR is DLUR information file and is not exploded.

### C.2 Unpacking the DLUR Files into Communications Manager/2 Subdirectories

Make sure FFST * and Communications Manager/2 and all associated processes are not active.

The following procedure explains how to use LOADRAM2.EXE to unpack ISTIPDLR.RAM into individual DLUR files.

1. Back up and store both files. If any of the files are lost or damaged, you can restore them by running LOADRAM2 against ISTIPDLR again.
2. Make sure you are on the drive and in the subdirectory (if applicable) where LOADRAM2.EXE and ISTIPDLR.RAM reside.
3. Unpack ISTIPDLR.RAM into individual files using the following command:
   ```command
   LOADRAM2 ISTIPDLR.RAM target [/d]
   ```
   where:
   - **LOADRAM2**
     name of the command that explodes ISTIPDLR.RAM into individual files.
   - **ISTIPDLR.RAM**
     name of the file containing all packed files associated with DLUR Communications Manager/2.
   - **target**
     drive where the individual DLUR files are stored when they are unpacked from ISTIPDLR.RAM.
   - **/d**
     instructs LOADRAM2 to display files as they are unloaded. This parameter is optional.
4. Verify the following file names are on the same drive as **target** drive:
   ```plaintext
   DLUR.DLL
   DLR.MSG
   DLRH.MSG
   ```
If LOADRAM2 ran successfully, a return code of 0 should be displayed on your terminal. If a problem occurred while LOADRAM2 was exploding ISTIPDLR into individual files, one of the following error codes might be displayed on your terminal:

2     No files were found.
8     Insufficient memory.
15    An invalid drive was specified.
87    An invalid parameter was specified or incorrect syntax was used.
112   The target disk is full.
220   The present DOS version is not supported.
221   No files were found in the list file.
222   The macro file has the wrong format.
224   The macro file is too short.
225   Generally successful but no files were found to match at least one specification.

The following errors can also occur:

An error occurred while opening xxx
A file could not be transferred to the target directory. This error causes OS/2 to report Path not found. Ensure that the correct drive was specified.

Not transferred
A file could not be transferred to the target directory. This error can occur when reinstalling DLUR Communications Manager/2 if Communications Manager/2 is active. Stop Communications Manager/2 and all associated processes, for example, subsystem management and message log formatters, and repeat the installation procedure.

Destination conflict
The target drive might not be specified correctly in the LOADRAM2 command.

5. Copy the following exploded files into the associated directory or subdirectories:
   - DLUR.DLL into C:\CMLIB\DLL\  
   - DLR.MSG into C:\CMLIB\DLR.MSG  
   - DLRH.MSG into C:\CMLIB\DLRH.MSG

   Note: C:\ is the same directory in which Communications Manager/2 has been installed.

6. Restart Communications Manager/2 and all associated processes.

   For more information on using Communication Manager/2's DLUR, see the VTAM Network Implementation Guide.
Appendix D. Installing the VTAM Command Set Library

This section describes the installation method and step-by-step procedures to install VTAM V4R2 for VM/ESA Command Set Library.

The IBM Command Tree/2 program is an IBM OS/2 application program that guides you through the process of building a command. After you select the command options that you want, the IBM Command Tree/2 program generates a command string that you can send to a specified destination. You need not remember details such as option names, the order of options, or punctuation to build a command. VTAM V4R2 for VM/ESA Command Set Library supplies a command set library for IBM Command Tree/2.

D.1.1 Downloading the VTAM Command Set Library

To download the VTAM command set library for IBM Command Tree/2 and install it on a workstation, follow these steps:

- Logon to the installation user ID 5654010A or any other id that has read access to the Online OS/2 Files (401) disk. Make sure you have the 401 disk accessed in read mode. The command set library (ISTC420V) and the ISTLDRM2 unpacking utility reside on the Online OS/2 Files (401) disk.

- Download the VTAM command set library files to your workstation.

Use the OS/2 RECEIVE command to download the files from the host. Enter the following commands on an OS/2 command line (where id is the emulator session and fm is the filemode from which you are downloading):

```
RECEIVE ISTC420V.RAM id:ISTC420V AISTDAT1 fm
RECEIVE ISTLDRM2.EXE id:ISTLDRM2 AISTDAT1 fm
```

OS/2 downloads the ISTLDRM2 unpacking utility and the packed version of the VTAM command set library and stores them on your workstation. For more information on the RECEIVE command, enter HELP RECEIVE on the OS/2 command line.

For example, if you are downloading from your A emulator session, the 401 disk is accessed as filemode G, and you want to store the VTAM V4R2 for VM/ESA command set library for IBM Command Tree/2 on your D: drive in directory IBMFKB\RUNTIME\ISTC420V for VM/ESA enter the RECEIVE command show below. This RECEIVE command is shown split across two lines, but the command should be entered as a single line command.

```
RECEIVE D:IBMFKB\RUNTIME\ISTC420V\ISTC420V.RAM
A:ISTC420V AISTDAT1 G
```

IBMFKB is the directory that contains the IBM Command Tree/2 program files. It is recommended (but not required) that you install each command set library in a separate subdirectory of IBMFKB\RUNTIME to avoid overlaying any existing files. For example, you could store the VTAM V4R2 for VM/ESA command set library in IBMFKB\RUNTIME\ISTC420V, and a user-written command set library in IBMFKB\RUNTIME\MYCMDSDS.
• Unpack the VTAM command set library files.

After the packed command set library is on your workstation, you need to unpack the files before you can build VTAM commands. To unpack the files, go to an OS/2 command line and be sure the prompt is set for the directory to which you downloaded the command set library (for example, D:\IBMFKB\RUNTIME\ISTC420V for VM/ESA). Now enter:

```
ISTLDRM2 ISTC420V.RAM /D
```

This unpacks the files and stores them in the current directory. The ISTLDRM2 utility does not erase the packed command set library file. For backup purposes, it is recommended that you keep a copy of this packed command set library file on the workstation or on the host.

D.1.2 For More Information

For more information on the IBM Command Tree/2 program, including how to create user profiles to start the program with the VTAM command set library, see Using IBM Command Tree/2. This book is also available on the IBM Networking Softcopy Collection Kit CD-ROM.

D.1.3 Installation Considerations

When upgrading from a previous release of VTAM, and you are using the same disks for your current release, ensure all old text decks are removed from disks.
Reader's Comments

ACF/VTAM Version 4 Release 2 for VM/ESA

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<th>Satisfaction</th>
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<td>Time required to install the product</td>
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<td>Contents of program directory</td>
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  - Package
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  □ No

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