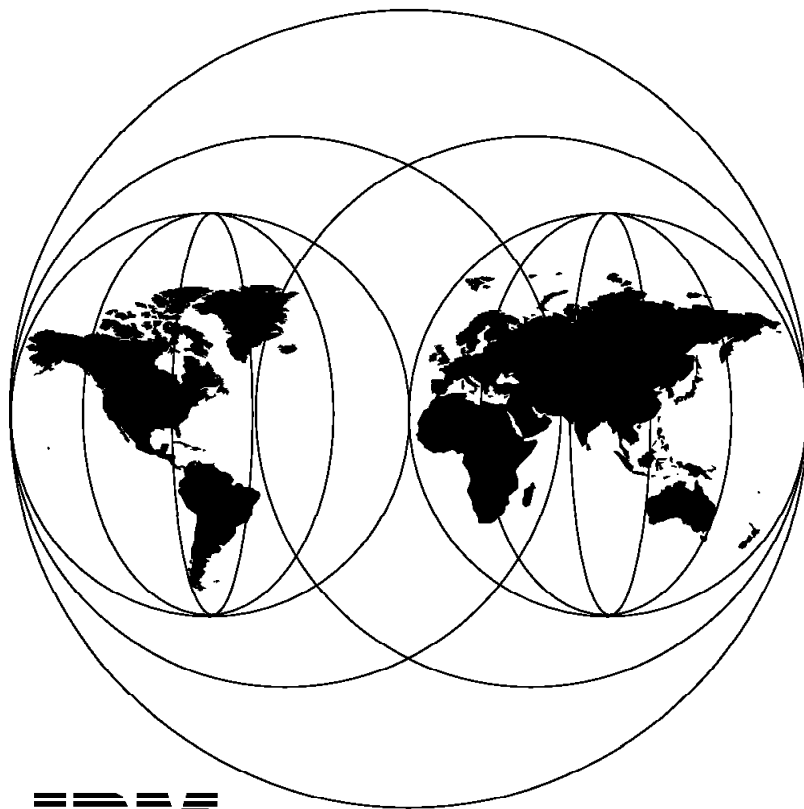


International Technical Support Organization

GG24-4268-00

**System Management with FAQs/ASO for VM  
in a VM/VSE Environment**

February 1995



**IBM**

**International Technical Support Organization  
Boeblingen Center**





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February 1995

**Take Note!**

Before using this information and the product it supports, be sure to read the general information under "Special Notices" on page xi.

**First Edition (February 1995)**

This edition applies to FAQs/ASO for VM Version 3.5 (LEGENT Software, Inc.) running under VM/ESA 1.2.1 program number 5684-112.

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## Abstract

This document is unique in its detailed coverage of FAQS/ASDO for VM (a LEGENT product). It focuses on FAQS/ASO for VM in a VM/VSE ESA environment. It provides information about planning, installing, customizing and using FAQS/ASO for VM.

This document was written for system support personnel who plan the implementation of automatic system management in a VM/ESA environment with VSE guest systems. Some knowledge of VM/ESA is assumed.

(80 pages)



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## Special Notices

This publication is intended to help the system support person to plan and implement FAQs/ASO for VM (LEGENT) in a VM/ESA with VSE/ESA system environment. The information in this publication is not intended as the specification of any programming interfaces that are provided by VM/ESA or VSE/ESA. See the PUBLICATIONS section of the IBM Programming Announcement for VM/ESA and VSE/ESA for more information about what publications are considered to be product documentation.

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## Preface

This document is intended to help system personal to plan and implement FAQS/ASO for VM to allow automatic system management. It contains information and guidance for the implementation and usage of FAQS/ASO for VM in an ESA based VM/VSE environment. It does not cover an automation of the system management within a VSE/ESA system.

---

## How This Document is Organized

The document is organized as follows:

- Chapter 1, “ Introduction of FAQS/ASO for VM”  
This chapter describes the function of FAQS/ASO for VM.
- Chapter 2, “ Installation Requirements for FAQS/ASO VM”  
This chapter describes the installation requirement for FAQS/ASO in an ESA based VM environment.
- Chapter 3, “ The Installation Process”  
This chapter describes the installation process and gives hints and tips for those installation steps where you are asked for input.
- Chapter 4, “ CONSERVE Customizing and Usage”  
This chapter describes how to customize and use CONSERVE.
- Chapter 5, “BATCH Customizing and Usage”  
This chapter describes how to customize and use the Batch facility.
- Chapter 6, “Customization and Usage of ViewSpool”  
This chapter describes how to customize and use ViewSpool.
- Chapter 7, “CONSERVE Message Definition and the Programmable Operator”  
This chapter gives a short overview of the available functions in the Programmable Operator Facility of VM/ESA and the functions usable with FAQS/ASO for VM.

---

## Related Publications

The publications listed in this section are considered particularly suitable for a more detailed discussion of the topics covered in this document.

### IBM Publications

- *VM/ESA Release 2.1 Planning and Administration*, SC24-5521

### LEGENT Publications

- *FAQS/ASO for VM V. 3.5 Installation Guide*, 26-0350-M301
- *FAQS/ASO for VM V. 3.5 VIEWSPPOOL User's Guide*, 26-0350-M50
- *FAQS/ASO for VM V. 3.5 CONSERVE User's Guide*, 26-0350-M53
- *FAQS/ASO for VM V. 3.5 BATCH User's Guide*, 26-0350-M504

- *FAQS/ASO for VM V. 3.5 Messages Guide, 26-0350-M507*

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## International Technical Support Organization Publications

- *VM/VSE Performance Hints and Tips, GG24-4260*
- *Controlling Multiple VSE Systems under VM/ESA, GG24-3847*

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## Chapter 1. Introduction of FAQs/ASO for VM

This section gives an overview of FAQs/ASO for VM and its components. It explains what you can do with FAQs/ASO for VM and introduces the Global Disk used by it.

---

### 1.1 What is FAQs/ASO for VM?

FAQS/ASO for VM is a product of the LEGENT Software Inc, US which allows you to automate your system management. This product gives you tools to filter and automate responses to system messages and helps you to manage your system more efficiently, especially in the areas of Log Management and Spool Management.

It consists of the following tools:

1. CONSERVE
2. ViewSpool
3. BATCH

#### 1.1.1 CONSERVE

CONSERVE is a tool for managing messages that are issued by various components of a VM system. These messages can range from simple logon and logoff messages to error messages issued by subsystems such as VTAM or CICS. CONSERVE writes all messages into an integrated log file which is called the CONSERVE system log file. This log file allows the user to view messages, to print selected messages and monitor statistics.

CONSERVE allows you to do the following:

- Look at the log file interactively
- Prepare your system to answer messages automatically
- Schedule commands to execute at specified times
- Print selected messages
- Archive old messages for retrieval at a later stage

CONSERVE consists of the following features:

1. Console Display
2. Message Collector
3. EXEC Server
4. Log Utility
5. Archival system
6. GCS Router
7. FAQs/CALL interface

A short description of these features follows.

### 1.1.1.1 The Console Display

The Console Display allows to view the integrated log file. There is a default display, but each user can change the settings for the display according to his needs. It is possible to:

- Filter the system log file to display only messages from some particular user IDs or only messages that contain certain text
- Display certain types of messages in different colors
- Search for a specific text using commands similar to IBM XEDIT.

### 1.1.1.2 Message Collector

This feature:

- Manages all messages from the user IDs and writes them into the System log file
- Collects the messages and checks if there is any Message Definition for them. If it finds any and there is any action to be taken, then it calls the EXEC Server to perform the required action.
- Enables you to schedule commands to run at a specific time.

**Note:** The Message Collector runs in a virtual machine called FAQSVN.

### 1.1.1.3 The EXEC Server

The EXEC Server is a function that executes specified EXECs for specified actions through the Message Collector Parameter file.

EXECs used by the EXEC Server are user written and none are officially supplied. However, with the ViewSpool installation a few sample EXECs are provided that can be used as examples and modified.

The EXEC Server virtual machine is FAQSEXEC.

### 1.1.1.4 The Log Utility

This utility enables you to:

- Print the system log file
- Display statistics about the current status of the log
- Select messages from archived data
- Copy the system log file for archiving

The CONSERVE archival system automatically archives the system log file, but in some cases it may be required to do it manually using this copy function.

**Note:** Even when the Message Collector is not active this function is available.

### 1.1.1.5 The Archival System

The archival system is the facility of CONSERVE which allows to select how, where, when and what in the SYSTEM LOG you want to archive. This facility is driven by panels, and through the archival maintenance utility panels you can:

- Select the archive technique
- List all archived information available for retrieval
- Delete archived data.

#### 1.1.1.6 The GCS Router

The GCS router is an optional server and can be used to implement communications between CONSERVE and OPS/MVS and between different systems running CONSERVE.

It can be set up to route messages and commands between these environments.

There is a GCSROUTE Virtual Machine that must be set up. Note that the GCS router is only of interest for system environments where VM systems are connected to MVS systems running stand alone or as a guest under VM.

#### 1.1.1.7 The FAQS/CALL Interface

FAQS/CALL runs on a PS or PC and allows to notify an user when a predefined message has occurred. The notification can be a beeper, a phone call or a voice message through an amplified loudspeaker.

To be able to use a PWS a user needs the FAQS/CALL program and a workstation with a 3270 communications board.

This facility makes it possible to set up the environment in such away, that a user on a PWS can receive the FAQS/ASQ for VM messages on his personal system and can receive some selected messages through Voice Mail.

The default FAQS/CALL virtual machine is FAQSCALL.

### 1.1.2 ViewSpool

ViewSpool is a tool that lets you list, look at, move and erase spool files. It has many additional features that differentiate it from RDRLIST. Using ViewSpool you can:

- List your spool files in the print, punch and reader queues all at once  
**If you have CP privilege class D you can list all spool files on the system.**
- Look at or receive print and punch spool files without transferring them to your reader first
- Transfer, view and erase spool files all on one screen
- Look at an entire file, not only a portion of a file as determined by the amount of the virtual storage available on your virtual machine as with RDRLIST's PEEK command
- Receive a file without losing its printer control characters.

### 1.1.3 BATCH

BATCH is a FAQS/ASO for VM feature similar to CMSBATCH that provides you the ability to run a job on a CMS machine other than your own, freeing your machine to work on other tasks while the batch job is running.

It uses two types of virtual machines:

1. A monitor virtual machine.
2. Worker virtual machines.

This FAQS BATCH has the following features that differentiate it from the normal CMSBATCH facility:

- Multiple workers that can run concurrently
- Full screen control of jobs and workers that run the jobs
- Full screen or command submission
- Commands that can be restricted to privileged users
- Job scheduling capabilities
- Job error recovery
- Security system interface
- Account capability
- Ability to limit time and I/O use of a job
- Ability to limit time and I/O use of a worker
- Ability to designate what jobs a worker runs by class

### 1.1.3.1 The Monitor

This component controls the BATCH Facility and it runs in its own virtual machine. The default name of the virtual machine is BATCHMON.

The Monitor acts when a job arrives at the Monitor's virtual machine. It:

- evaluates the job's parameters
- determines on which worker the job should be run
- schedules the job for the appropriate worker
- sends the job, via IUCV, to the worker for execution as soon as the worker is available
- Removes the job from the worker's queue when the job has finished processing.

### 1.1.3.2 The Workers Virtual Machines

The workers are those virtual machines, which are chosen from the Monitor to execute jobs. When a job is finished, the output of the job is sent to the destination specified by the job's parameters and the worker's virtual machine logs off.

Each worker runs on its own CMS machine. You must set up at least one worker virtual machine. The default name for the first worker is BATCH1.

**Note:** After the installation you can set up as many worker user IDs as you require. The number of user IDs depends on the type of jobs the worker will run.

The next figure shows how BATCH works:

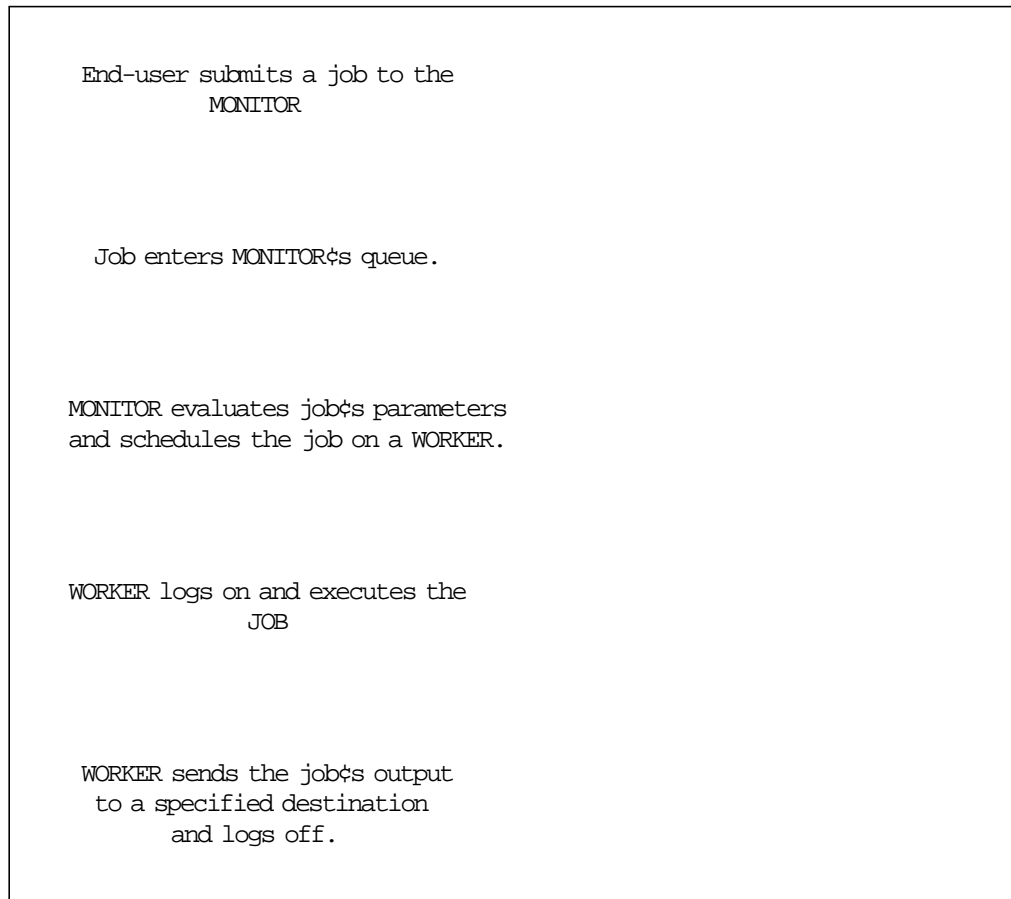


Figure 1. How BATCH Works

---

## 1.2 What is the Global Disk?

The global disk is a CMS minidisk or SFS disk that contains common code used by all users of that facility. The default global disk is the 19E disk owned by the system maintenance virtual machine called MAINT. Due to the fact that MAINT's 19E disk is accessed by all VM users it was decided to give FAQS/ASO for VM its own global disk.

This global disk contains files common to FAQS/ASO, CONSERVE, ViewSpool and BATCH.

**Note:** During the installation you will be required to specify a global disk for the FAQS/ASO for VM components, Please note that it is not allowed to specify one of the required disks, you have to set up and specify a completely new disk for this purpose or use the default. Please refer to Chapter 2, "Installation Requirements for FAQS/ASO VM" on page 7 for more details.





---

## Chapter 2. Installation Requirements for FAQS/ASO VM

The following section discusses the installation prerequisites, planning considerations and describes the software and hardware used for our FAQS/ASO for VM implementation.

---

### 2.1 Program Requirements

FAQS/ASO for VM runs under VM on /370, XA or ESA hardware. There are no other program dependencies.

FAQS/ASO runs under one of the following VM systems:

VM/SP HPO Release 5 or above (5749-DMK)

VM/XA SP Release 1 or above (5664-308)

VM/ESA 370 Release 1 or above (5684-112)

VM/ESA ESA Release 1 or above (5684-112)

For our project we used the following hardware and software environment.

- The hardware environment:
  - IBM 9121 model 260 with 256 MB
  - IBM 3390 disks
  - IBM 3480 cartridges
- The software environment:
  - VM/ESA 2.1 level 9408
  - FAQS/ASO for VM version 3.5

---

### 2.2 Disk Space Requirements

FAQS/ASO for VM does not require dedicated DASD. All code is loaded on minidisks. The following shows the recommended space allocations.

1. CONSERVE requires about 2500 4K blocks of disk space.

The FAQS/ASO for VM Installation Guide gives detailed information how to determine the size of the system log.

In our setup, with two VSE guest machines, we used the default of 10 cylinders of 3390 for this log file and it was big enough to allocate all messages.

2. ViewSpool requires approximately 300 4K blocks of disk space.

We allocated this space for our ViewSpool's files.

3. The Help Library requires about 625 4K blocks of disk space.

We allocated this space for our help library.

---

## 2.3 Planning Considerations

Before you start to install you must consider the following points regarding the FAQs/ASO for VM features you need for the system automation and the layout of FAQs/ASO. You have to:

1. decide which FAQs/ASO for VM features you plan to install.
2. define a user ID for the installation.
3. define virtual machines for FAQs/ASO, and the required minidisks.
4. decide which disk will be the Global Disk.
5. obtain the Product Expiration Code from LEGENT.
6. decide whether to run the Help Facility and ViewSpool with DCSS or without.

### 2.3.1 Which FAQs/ASO Features?

According to our VM/VSE system environment (one CPU, no intelligent terminals), we installed:

- CONSERVE to manage all messages.
- ViewSpool to manage our spool files.
- BATCH to run batch jobs in a CMS machine.

Because we used only one VM/VSE system without connection to another VM or MVS system, we had no need to install the GCS ROUTER.

An installation of FAQs/CALL was not required because we have not used a PWS or PC.

### 2.3.2 Define an Installation User ID

We used ASOMAIN as the installation user ID. Please refer to Chapter 3, “ The Installation Process” on page 11 for details.

### 2.3.3 Define the Virtual Machines for FAQs/ASO

The following virtual machines and minidisks are required:

Feature	Resource
<b>CONSERVE</b>	Two virtual machines and six minidisks. One will run the message collector. The default name is FAQSVMS. The other will run the EXEC server and its default name is FAQSEXEC.
<b>ViewSpool</b>	No own virtual machine required, but you have to know on which disk you plan to install the ViewSpool files. The global disk is recommended.
<b>FAQS/CALL</b>	One user ID. The default is FAQSCALL.
<b>GCSROUTE</b>	GCS Route user ID. The default is GCSROUTE.
<b>BATCH</b>	Two virtual machines and three minidisks. One of them must contain the batch Monitor. The default is BATCHMON. The other must contain a worker. The default name is BATCH1.

**Note:** According to our hardware and software environment we had no need to install FAQSCALL and GCSROUTE. But if your environment requires the installation you should first read the chapter 'Setting Up the FAQs/CALL and GCSROUTE USERID' in the FAQs/ASO for VM Installation manual.

The sample directory on the installation tape provides you with sample virtual machines, which are easy to tailor according to your environment. We did this for the following virtual machines:

- FAQSVN
- FAQSEEXEC
- BATCHMON
- BATCH1

We used the default names of these machines and installed the ViewSpool files on the Global Disk.

Please refer to Chapter 3, " The Installation Process" on page 11.

### 2.3.4 The Global Disk Location

Normally you should not use a temporary disk as global disk. Therefore the FAQs/ASO install exec accepts no temporary disks. VDISKs with a four digit address are also not accepted as global or FAQs/VM server disks. Although a VDISK with a three digit address is allowed we do not recommend the use of it, because this disk is also required after the installation.

When we used a VDISK with address 9999 the installation exec returns: 'invalid address' and when we used other addresses with less than four digits or temporary disks we get:

```
'HCPLNM107E USERID XXXXX not linked; not in CP directory'
```

**Note:** This message did not appear with three digit address VDISKs.

The 191 of ASOMAIN was used as a global disk. We added it to all the directory entries and updated the profile execs to automatically access it every time.

### 2.3.5 Obtain the Product Expiration Code

During the installation you will be asked for the Product Expiration Code and if you don't have it, FAQs/ASO for VM will not initialize.

This product code identifies which components of FAQs/ASO you can run. Some products, such as FAQs/ASO for VM, have some features and the product code must reflect them, otherwise they will not be available when you try to use them.

It is a 20 digit code which you will receive together with the ordered programs from LEGENT.

## 2.3.6 Using DCSS for Help and ViewSpool

Using DCSS is optional and you do not have to decide during the installation whether you want to use them. If required you can define them later.

If your system has a large number of users you should use DCSS for performance purposes, to allow multiple users to access the same copy of a module. It can improve the system performance because these users can access the module which is already loaded into storage. This will reduce I/O and DASD seek time.

We have not used DCSS because we only had a few users. If you choose to use DCSS, you will have to define a segment. How to do this depends on the VM system you have installed.

### 1. How to define a segment for VM/SP and VM/ESA 370 feature:

You can use the FAQSVMSNT file as an example. It is on the first tape file of the installation tape.

But we would like to remind you that you have to tailor this file according to your environment, include this definition in the DMKSNT ASSEMBLE file, reassemble it and regenerate the CP nucleus.

In this case you should choose to use these modules from the disk.

### 2. How to define a segment for VM/XA and VM/ESA ESA:

After you find a location where you can place these two new segments, FQVHELP and FQVSFD, you need to define them with the CP DEFSEG command.

Also you must remember that a segment begins and ends on a megabyte boundary and to avoid leaving unused address ranges you should put the Help and ViewSpool segments in the same SEGMENT SPACE.

You can take the following example as a model. Take care to not overlap any applications that are to be used with the product's DCSS.

```
DEFSEG FQVSFD 867-897 SR SPACE DCMSYSVM
```

```
DEFSEG FQVHELP 898-8C7 SR SPACE DCMSYSVM
```

After you finish the installation, you can save these segments using the following commands:

```
.For Help Facility:  
FQVINST SEGMENT FQVHELP
```

```
.For ViewSpool:  
FQVINST SEGMENT
```

---

## Chapter 3. The Installation Process

The following section describes how we installed FAQs/ASO for VM. First we defined the required virtual machines then we ran the installation exec which allows a complete menu driven installation. During this chapter we do not explain all installation steps, because most of them do not ask for big decisions. We concentrate on those steps where we found differences to the implementation guide descriptions.

---

### 3.1 Installation Prerequisites

According to our planning considerations, we used the following virtual machines and disks to implement FAQs/ASO for VM with the CONSERVE, ViewSpool and BATCHMON features:

- The user ID for the installation is ASOMAINT.
- The user ID for the Message Collector is FAQSVL.
- The user ID for the Monitor is BATCHMON.
- The 191 of ASOMAINT is used as the global disk. The default disk is MAINT's 319. This disk was already in use for other purposes in our VM/VSE installation.
- The help library should be placed on the global disk.
- No DCSS for the Help Facility and ViewSpool.

---

### 3.2 Installation Process Overview

The installation was done by performing the following tasks:

1. Definition of an ASOMAINT virtual machine.
2. Loading the first file of the installation tape.
3. Definition of the FAQs/ASO virtual machines.
4. Executing the installation exec.
5. (Next step would be the saving of the DCSS)

#### 3.2.1 The ASOMAINT Virtual Machine

Figure 2 shows the directory entries for our virtual machine ASOMAINT.

```
USER ASOMAIN  XXXXXXXX 35M 64M BCDEFG
  ACCOUNT 1 SYSPROG
  MACH XC
  IUCV ALLOW
  IPL 190
  CONSOLE 009 3215 T
  SPOOL 00C 2540 READER *
  SPOOL 00D 2540 PUNCH A
  SPOOL 00E 1403 A
  LINK MAINT 190 0190 RR
  LINK MAINT 19D 019D RR
  LINK MAINT 19E 019E RR
  MDISK 191 3390 XXXX 10 XXXXXX MR XXX XXX XXX
  MDISK 200 3390 XXXX 05 XXXXXX MR XXX XXX XXX
```

Figure 2. Directory Entry for User ASOMAIN

**Note:**

- The minidisk 191 is required for installing FAQS/ASO for VM. It is our global disk.
- The minidisk 200 was provided by us for archiving data. For details refer to 4.3.3, “Using the Archive Maintenance Utility - ARCHMNT” on page 39.

### 3.2.2 Loading the Installation Tape

After logging on to user ASOMAIN, we attached the FAQS/ASO installation tape to ASOMAIN and loaded the first file on the global disk (191 of ASOMAIN).

The first file contains:

- the sample directory entries
- the installation exec
- a sample for a DMKSNT ASSEMBLE (which was not used by us)

Now you have to customize the directory entries according to your system environment.

### 3.2.3 Defining the FAQS/ASO Virtual Machines

In our installation, we accepted the defaults for all machines we installed: FAQSVM, FAQSEEXEC, BATCHMON and BATCH1. This means we had only to choose the corresponding DASD type and to replace the disk names, size and addresses.

**Note:**

1. If your system is an XA or ESA you have to take ECMODE out of the directory entries.
2. During the installation you will be asked for all link passwords of the FAQSVM’s minidisks, FAQSEEXEC’s minidisks and FAQSEEXEC’s password, so keep them available.

### 3.2.4 Run the INSTALL Exec

- STEP 1:

Executing the installation exec will present the first installation menu, and you have to select the features you want to install. You may use any character to mark your choice. Because we planned to install all three installation features we marked all of them.

```
FAQS/ASO for VM 3.50          Installation Menu

Select one or more of the following by entering any character:

Install:  X CONSERVE                      X BATCH
          X ViewSpool

Refresh:  _ CONSERVE                      _ BATCH
          _ ViewSpool

Utility:  _ Install FAQs/CALL interface
          _ Install GCS Router USERID
          _ Install Help Library from Tape
          _ Copy CONSERVE User Files to a Common Disk
          _ Copy BATCH User Files to a Common Disk
          _ Load Optional Files
```

Figure 3. Installation Menu

**Note:** Because it was our initial installation we could not do a refresh. Note also that the installation of utilities is not possible with the first installation. You have to do this later (after the installation or after a refresh).

- STEP 2:

Because we do not use MAINT's 319 as the global disk, we had to change the address and the owner id for it.

FAQS/ASO for VM 3.50	Common Product Information
Date format	: MM/DD/YY (MM/DD/YY or DD/MM/YY or YY/MM/DD)
Global files disk	: ASOMAIN
Disk address	: 191
Disk read password	: ALL
Disk write password	: XXX
Mode letter (if accessed)	: A

Figure 4. Global Product Information Menu

**Warning:** Do not forget to insert the mode letter, if the disk is already accessed, otherwise you will have the following error:

DMSDKD1307T File system error detected by DMSRCM at address 00E2B83A (offset 00002792

DMSDKD1307T WRTK request failed with code 3 while processing file FAQSAOVM INSTALL A1

DMSABE2047I AUTODUMP dump started; please wait

DMSABE1297I Dump has been taken

HCPGIR450W CP entered; disabled wait PSW 000A0000 80F18186 CP

See the FAQS/ASO for VM Installation manual (Version 3.5) for more details.

**Note:** The same problem may occur during step 12 and step 13.

- STEP 4: Specify the Expiration Product Code

Now you have to enter the ADD command in the command line.

```
ADD product-code
```

The help facility (PF1) provides a good explanation.



```

Goal Systems Product Code Maintenance Ver. 1.0
===> ADD product-code

Product Code      Product          Expires  Feature(s)
-----
*** End of Display ***

PF1=Help  PF3=Save  PF7=Backward  PF8=Backward  PF12=Cancel

```

Figure 5. GOALPROD Menu

**Note:**

1. After adding the product code you can leave the screen by pushing PF3 or with the SAVE command.
2. This screen is provided by the GOALPROD utility, which maintains the product code file for LEGENT's VM products. If you want to display the current status of a product code or to add a new one at any time after the installation, you can use this utility by entering the GOALPROD command.

If you enter a wrong product code you will receive the following message.

```

Goal Systems Product Code Maintenance Ver. 1.0
===>

Product Code      Product          Expires  Feature(s)
-----
ZZZZZZZZZZZZZZZZZZZZZZ DCM Systems VM    11/27/94  Feature 4A4 unknown
                                           Feature 4B4 unknown
                                           Feature 4C4 unknown
                                           Feature 4D4 unknown

*** End of Display ***

PF1=Help  PF3=Save  PF7=Backward  PF8=Backward  PF12=Cancel

```

Figure 6. GOALPROD Menu Error Message

**Note:** Even in this case, the installation seems to complete successfully, but later we could not use any function. We received the following message:

**FQVMCL207E required feature(s) not present in this product code**

This means we had to go back to step 4. We did this by entering the GOALPROD command which again provided us with the GOALPROD menu. After entering the correct code we received the following messages:

```
Goal Systems Product Code Maintenance V. 1.0
===>

Product Code      Product      Expires  Feature(s)
-----
XXXXXXXXXXXXXXXXXXXX DCM Systems VM  11/27/94 CONSERVE & ViewSpool
                                     VM/XA or VM/ESA Support
                                     BATCH

*** End of Display ***

PF1=Help  PF3=Save  PF7=Backward  PF8=Backward  PF12=Cancel
```

Figure 7. GOALPROD Menu with the Correct PRODCODE

- STEP 5: The CONSERVE Installation

During this step, you have to specify the Message Collector and EXEC Server disks for CONSERVE. You have also to define the CONSERVE system operators and archive information.

- STEP 6: Install BATCH

```
FAQS/ASO for VM 3.50          BATCH Installation

Monitor Userid                : BATCHMON
  191 disk write password     : xxxx
  192 disk write password     : xxxx

Worker Userid                 : BATCH1
  Logon password              : xxxxxxxx
  195 disk write password     : xxxx

BATCH Operator(s)            : OPERATOR
                              :

Install User files?          : n   (Y or N)

ENTER = Continue           PF3 = Skip           PF12 = Cancel
```

Figure 8. GOALPROD Menu for the BATCH Installation

In this step, you have to specify at least one BATCH operator in order to have someone who will be the BATCH administrator. Otherwise, you will not be able to use all the BATCH functions.

**Note:** All other steps do not require special attention. They all executed as described in the implementation guidelines. Therefore we do not refer to them here.

- End of the installation:

At the end of the installation you will receive the STEP 1 menu again with the message: 'Installation completed successfully'. Now you can select the Utility option, which was not allowed during the initial installation. Here you have to mark the utilities you want to install. The next figure shows what we selected (as planned).

```
FAQS/ASO for VM 3.50          Installation Menu

Select one or more of the following by entering any character:

Install:  _ CONSERVE                _ BATCH
          _ ViewSpool

Refresh:  _ CONSERVE                _ BATCH
          _ ViewSpool

Utility:  _ Install FAQS/CALL interface
          _ Install GCS Router userid
          X Install Help Library from Tape
          X Copy CONSERVE User Files to a Common Disk
          X Copy BATCH User Files to a Common Disk
          X Load Optional Files

Installation completed successfully.
ENTER=Begin          PF3=Quit          PF12=Abort
```

Figure 9. Installing the Utility Options

The installation is now complete and you can start with the customizing of the installed features.

---

## Chapter 4. CONSERVE Customizing and Usage

The following section describes how to prepare your system to run, customize and use CONSERVE. It is divided into the following parts:

- Preparing for Customizing
- Customizing
- Using CONSERVE commands

---

### 4.1 Preparing for Customizing

Before you start with the customizing you have to do some initial work.

1. Select one of the CONSERVE operating modes
2. Add secondary users
3. Start the message collector
4. Add the CONSERVE command

#### 4.1.1 Select One of the CONSERVE Operating Modes

In a VM system, without CONSERVE, the OPERATOR is usually the first machine to be logged on and it is the user ID who receives all messages. They may come from:

- the CP (Control Program)
- disconnected Service Machines via SCIF

**Note:** SCIF (Single Console Image Facility) reflects all the output normally shown on one VM user's console (the primary console) to another VM user's console (the secondary console).

- guest operating systems

There are two CONSERVE operating modes:

- The normal operating mode

CONSERVE manages all the messages. SCIF messages will be routed to the message collector. Therefore messages will not be displayed on an operator console. You need to use the CONSERVE console to view them.

- Alternative operating modes.

It is possible to run CONSERVE without changing the way your system issues the messages. The alternatives are:

1. Don't give the message collector class C privileges. Class C allows CONSERVE to store data in real memory and this enables it to change the message routing to go directly to the message collector.

Without class C, the messages go to the operator user ID and, if the CONSERVE command is active on it, they go to the message collector.

2. Switch off the secondary user message redirection.

You can also inactivate the re-routing of the SCIF messages by CONSERVE, if you set the following command in the CONSERVE PARMFILE:

## OPTION NOSECCHANGE

It turns off the re-routing of the secondary user SCIF messages.

**Warning:** These alternative options may cause system performance degradation, some messages may be lost and it may also affect the way message definitions function.

Therefore we recommend to use the normal operating mode of CONSERVE.

### 4.1.2 Add Secondary Users

In order to have CONSERVE managing SCIF messages from disconnected machines it is necessary to specify a secondary user for each machine whose messages you want to be sent to the message collector.

To do this you need to set up a secondary user on the CONSOLE statement in the directory for each affected user ID.

```
CONSOLE XXX 3215 T USERID
```

Where *userid* names the secondary user and can be:

- the operators user ID (OPERATOR)
- the message collector user ID (usually FAQSVN)
- the user ID of any other system operator that is running CONSERVE

In our setup we altered the CONSOLE statement for the following virtual machines:

- V131B94 (our VSE user ID)
- V131A94 (another VSE user ID)
- DATAMOVE (one of Dirmaint's machines)
- VTAM
- RSCS
- EREP
- SQL34LDS

We selected FAQSVN as our secondary user.

### 4.1.3 Start the Message Collector

During the installation process you have already preset the parameters needed to define the message collector.

We decided to use and evaluate the message collector as it is before doing any customizing.

There are two ways to start the message collector:

1. Add the AUTOLOG or XAUTOLOG command for the user ID FAQSVN in the profile exec of the AUTOLOG1 virtual machine.
2. Enter the XAUTOLOG or the AUTOLOG command from the command line.

#### 4.1.3.1 Adding the AUTOLOG Command to the Profile Exec

To automatically start the message collector when the system starts up you need to add the AUTOLOG or XAUTOLOG commands, as described below, in the AUTOLOG1's profile exec.

**Note:**

1. It is recommended to use AUTOLOG and XAUTOLOG with the SYNCH option.

The SYNCH option indicates that the AUTOLOG or XAUTOLOG command is to be run synchronously. Please read the *VM/ESA 2.1 CP Commands* manual for more details.

2. In order to have your CONSERVE system working properly you have to start it before the other users begin to send messages. Therefore add the AUTOLOG or XAUTOLOG command for FAQSVN before the other entries in the profile.

```

/* */
TRACE OFF
ADDRESS COMMAND CP XAUTOLOG FAQSVN (SYNCH
ADDRESS COMMAND CP XAUTOLOG BATCHMON
ADDRESS COMMAND CP XAUTOLOG VMSERV
ADDRESS COMMAND CP XAUTOLOG VMSERVS
ADDRESS COMMAND CP XAUTOLOG VMSERVU
ADDRESS COMMAND CP XAUTOLOG DIRMAINT
ADDRESS COMMAND CP XAUTOLOG DATAMOVE
SLEEP 60 SEC
ADDRESS COMMAND CP LOGOFF

```

Figure 10. The AUTOLOG1's Profile Exec

But if you have a security system installed, it may require that you autolog the message collector after it. You should also check if additional steps have to be taken.

#### 4.1.3.2 Start by Command

Normally CONSERVE is autologged when the system starts up, but if you want to start CONSERVE without waiting for a system restart, you need to enter one of the following commands from an authorized user:

```
AUTOLOG FAQSVN password
```

Where:

- FAQSVN is our user ID of the message collector.
- password is the password of the FAQSVN user ID.

For VM/XA and VM/ESA ESA, you should use:

```
XAUTOLOG USERID
```

In our case we did the following command from our ASOMAINT machine:

```
XAUTOLOG FAQSVM
```

#### 4.1.4 Add the CONSERVE Command

When the message collector had been autologged, the users who should be able to display the console messages should have the CONSERVE command in their PROFILE EXEC. This command invokes the full-screen console display.

In order to collect the system messages that appear before the message collector is initialized, you should use the CONSERVE command with the IPL option in the system operator's PROFILE EXEC.

In our environment we used the CONSERVE IPL command in the operator's PROFILE EXEC.

---

## 4.2 Customizing

The files for CONSERVE you may want to change after the initial installation are:

1. The CONSERVE PARMFILE
2. The CONSERVE CONFIG file

### 4.2.1 The CONSERVE PARMFILE

This is the parameter file that contains settings of the parameters for the message collector. There you will set information such as:

- The system operator USER IDs
- The minidisk of the log file and the password
- The messages you want to be filtered
- The commands you want to be scheduled to execute at specified dates and times.

There are three ways to modify these parameters:

1. Use the PARMUPD command if the message collector is running
2. Use the CONSERVP command if the message collector is not running
3. XEDIT the parameter file using one of the following options:
  - From the PARMUPD first menu (Message Collector Parameters menu), select option 7 - XEDIT the Parameter file
  - Through the PARMGET command copy this parameter file to the largest read/write disk accessed, XEDIT it and then use the PARMPUT command to update the file and return it allowing you to start using the updated PARM file immediately.



We recommend to use PARMUPD or CONSERVP, instead of XEDIT. These CONSERVE commands are easy to use, they have a good on-line help and CONSERVE checks that the fields contain valid values before saving a new version of the file. Please refer to 4.3.1, “Using the PARMUPD or CONSERVP Commands” on page 24.

**Note:** If you use XEDIT and add some parameters, it is possible that you can't see them when you use the PARMUPD command. You can also create a file with messages definitions that don't appear in the PARMUPD panels. To maintain those definitions you will always have to use the XEDIT option. For more details, please read the *CONSERVE User's Guide*.

In our setup we chose not to use XEDIT to alter this file.

## 4.2.2 The CONSERVE CONFIG

This file is used for CONSERVE when it needs information for the processing initiated from the CONSERVE console display and the log file utility.

This file is normally tailored during the installation process according to the input you gave but you can later change your input by using one of the following methods:

- Use the OPTION command during a CONSERVE session
- Edit this file using XEDIT

If you edit it during a CONSERVE session, you will have to terminate the session (PF3 or QUIT) and start it again (CONSERVE command) to activate your modifications.

We recommend to use, if possible, the OPTION command. Using it you can view or override (except for DATE FORMAT or FAQSID) the settings of the values for the console display.

After changing a value, with this command, the new one is saved in the GLOBALV variables. Please refer to 4.3.2, “Using the OPTION Command” on page 32.

---

## 4.3 Using the CONSERVE Commands

This part will describe how to use some of the most important CONSERVE commands. We concentrated on the following commands:

1. PARMUPD or CONSERVP
2. OPTION
3. ARCHMNT
4. LOGUTIL
5. EXECS
6. GOALHELP
7. System operator commands

### 4.3.1 Using the PARMUPD or CONSERVP Commands

These commands will help you to:

- set up basic operation parameters
- specify a dedicated printer, EXEC timer, Log Capacity and remote sites
- create and delete message definitions
- control access to the system log file
- schedule commands
- update parameters

If you are a system operator and you have the message collector running, the easiest way to modify any parameters is to use the PARMUPD command on the console display.

When the message collector is not running you have to use the CONSERVP command but then make sure that you link and access the message collector's 191 minidisk in read/write mode.

With both commands you will receive the message collector parameters menu, as follows:

- Message Collector Parameters Menu

```
CONSERVE Message Collector Parameters                               Version 3.50

      1 - Operational Specifications
      2 - Additional Options
      3 - Message Definitions
      4 - Allow/Deny users
      5 - Schedule Commands
      6 - Table Definitions
      7 - XEDIT the Parameter File

Enter selection :

===>
PF1=Help           PF3=Save           PF5=Quit           PF12=Cancel
```

Figure 11. PARMUPD or CONSERVP Command

**Note:** If you need more information, use the PF1 HELP function. If you enter any invalid data, the help function will display more information about the error message you received. Just move the cursor to the command line before pressing PF1.

- Setting Basic Operation Parameters:

In our environment we decided to include the ASOMAINT and ASOUSER user IDs as CONSERVE system operators, so we selected option 1 from the menu above and added these machines on the following menu.

```

CONSERVE Operational Specifications

System Operators: OPERATOR ASOMAINT ASOUSER_ _____
                  _____
                  _____
                  _____
                  _____

EXEC Server Userid      : FAQSEEXEC   Password: XXXXXXXX_
FAQS/CALL Userid       : _____
Initial PROP Table     : _____
Capacity Archival EXEC : ARCHIVE_

Log disk address       : 100          Password: XXXX_____
Message routing command : MSGNOH___
IPL Message Blocks    :
SHUTDOWN Command(s)   : _____
                       _____

Title on CONSERVE screen: _____

```

Figure 12. Setting Basic Operation Parameters

- Defining Messages

At this point you specify how messages should be handled.

There is an example already defined that can help you understand how it works:

- When the message collector receives an SMSG message that includes the text string TEST SERVER, an EXEC named CHKSERVR must be invoked and this exec will send the message 'EXEC SERVER READY FOR PROCESSING' to the message collector.

To check how it was defined, do the following:

- Select option 3 from the main menu:

```

CONSERVE Message Collector Parameters                                     Version 3.50

1 - Operational Specifications
2 - Additional Options
3 - Message Definitions
4 - Allow/Deny users
5 - Schedule Commands
6 - Table Definitions
7 - XEDIT the Parameter File

Enter selection : 3

```

Figure 13. PARMUPD or CONSERVP Command

- Specify the class of the SMSG message and press the enter key.  
Placing the cursor on this field and pressing PF1 HELP will show you the classes.

```

CONSERVE Message Definitions

Class : SMSG____ Userid: _____

Cmd  Pattern                                     A Clr Class  Userid
-----

```

Figure 14. Specifying a Class of Message

- Edit the indicated definition, in the PREFIX AREA:  
Here you can also use ADD or INS to insert a new definition, CPY to copy the indicated definition to the line below where you entered the FOL command, DEL for delete definition and MOV to move the line indicated to the line marked by the FOL command.  
As now we want to see this example, we use the EDI command, as follows:

```

CONSERVE Message Definitions

Class : SMSG_____ Userid: _____

Cmd  Pattern                                     A Clr  Class  Userid
-----
=== ***** Beginning of Search *****
=== $                                           ANY    &EXEC
EDI $¢test server¢                             SMSG
*== $¢acc192¢                                  SMSG

```

Figure 15. Editing a Message Definition

– Analyze the Message Definition Detail panel:

In this case, the most important fields are:

1. The Pattern field displays the message pattern to be used in matching messages. You can place the cursor in this field and press PF1 HELP to get detailed information.
2. The message text field specifies the text of a message to be matched. Each underscore (\_) represents any number of variable characters.
3. The EXEC field contains the filename of an EXEC or another command which should be invoked when the message is issued. If it is an EXEC, it must be on a disk accessed by the EXEC Server (usually FAQSEEXEC).
4. In our case there is no need to use the Parameter field but if you want to pass any parameter to the EXEC specified above, you can use it.

```

CONSERVE Message Definition Detail

Class      : SMSG____      Userid : _____      Site: _____
Pattern    : $çtest serverç_____
Message text: _test server
Valid times : 0:00 to 23:59

Action     : NO_          Alarm  : NO_
Color      : _____
Display    : YES_____    Pass on: NO_          Hardcopy : YES

EXEC       : CHKSERVR      Update : NO_
Parameter  : _____

Route: User: _____ Node: _____      User: _____ Node: _____
      User: _____ Node: _____      User: _____ Node: _____
      User: _____ Node: _____      User: _____ Node: _____
      User: _____ Node: _____      User: _____ Node: _____
      User: _____ Node: _____      User: _____ Node: _____
      User: _____ Node: _____      User: _____ Node: _____
      User: _____ Node: _____      User: _____ Node: _____

===>
PF1=Help PF3=Save PF5=Quit PF7=Backward PF8=Forward PF12=Cancel

```

Figure 16. Analyzing the Message Definition Detail Panel

Now you can press PF3 to save the changes and go back to the CONSERVE message definitions menu or you can press PF12 to cancel your entries and go back to the CONSERVE console display.

We decided to filter the messages when the user logs on to the system, logs off, dials, reconnects or disconnects. We decided they should not appear at the CONSERVE console, because if we need the messages we can find them in the log file.

These commands need all the same definition. The following shows how we defined the message handling for the LOGON command.

From the Message Collector Parameters menu:

- Choose option 3 - Message Definitions, please refer to Figure 13 on page 26 if you have doubts.
- Type ANY in the CLASS field in the CONSERVE Messages Definition menu and you must receive the same screen as Figure 15 on page 27, but with more defined messages.
- Type the ADD command in the prefix area of any command.
- Fill in the fields as follows:

```

CONSERVE Message Definition Detail

Class      : ANY_____   Userid : _____   Site: _____
Pattern    : _____
Message text: _logon_
Valid times : 0:00 to 23:59

Action     : NO_           Alarm  : NO_
Color      : _____
Display    : no _____   Pass on: NO_           Hardcopy : YES

EXEC       : _____   Update : NO_
Parameter  : _____

Route: User: _____ Node: _____   User: _____ Node: _____
      User: _____ Node: _____   User: _____ Node: _____
      User: _____ Node: _____   User: _____ Node: _____
      User: _____ Node: _____   User: _____ Node: _____
      User: _____ Node: _____   User: _____ Node: _____
      User: _____ Node: _____   User: _____ Node: _____
      User: _____ Node: _____   User: _____ Node: _____

```

Figure 17. Filtering the LOGON Message

Then you must save (PF3) the changes (over some panels) until you are back to the CONSERVE console.

It is not necessary to IPL the message collector to have your changes working. If you now log on any user ID the message should not appear at the CONSERVE console.

**Note:**

If you have also messages filtered by PROP please refer to Chapter 7, "CONSERVE Message Definition and the Programmable Operator" on page 73.

- Scheduling commands:

You can automatically schedule commands, so that they will be set up at a predefined date and time. This function can be used as the IBM WAKEUP command.

**Note:** CONSERVE does not recognize the time if the system was down at the specified time. This means, if you wanted to have a command executed at 10:00, but the system was not running at that time, the command will not be executed.

In our case we wanted to set up the ARCHIVE command daily at 10:00 pm. To do this:

- Select option 5 from the main menu.

```

CONSERVE Message Collector Parameters                                Version 3.50

1 - Operational Specifications
2 - Additional Options
3 - Message Definitions
4 - Allow/Deny users
5 - Schedule Commands
6 - Table Definitions
7 - XEDIT the Parameter File

Enter selection : 5

```

Figure 18. Main Menu - Scheduling Commands

- To edit the ARCHIVE command, type EDI in the prefix area.

```

CONSERVE Command Scheduling

Cmd  Command to be executed                                Start  End  Intv
-----
=== ***** Beginning of Search *****
EDI ARCHIVE                                             9:00   only

```

Figure 19. Scheduling Commands

- Specify the days (daily, but only working days) we want the ARCHIVE command run, by typing an 'X' in the specified field.



```

CONSERVE Command Scheduling Detail

First or only time: 10:00 Last time:   Interval: only   Archive(Y/N):

On these   M T W T F S S   or when this   or when this   or when this
1. Day(s):  X X X X X   _____
2. Date(s):  __ to __   Month(s): _____ to _____
3. The first _____ before   ___ after ___
4. The last  _____ before   ___ after ___
5. The      _____ nearest to ___
6. Also, the day must be: WEEKDAY_____ and _____
7. Also, the day must be: _____ or _____
8. Also, the day must NOT be: _____ and _____
9. Also, the day must NOT be: _____ or _____

Command: ARCHIVE _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____

When: (MON OR TUE OR WED OR THU OR FRI) AND WEEKDAY

```

Figure 20. Scheduling the ARCHIVE Command

- Updating parameters:
 

This is an alternative method of updating the CONSERVE PARMFILE. If you want to view the CONSERVE PARMFILE select option 7 from the CONSERVE Message Collector Parameter menu.

```

CONSERVE Message Collector Parameters                               Version 3.50

1 - Operational Specifications
2 - Additional Options
3 - Message Definitions
4 - Allow/Deny users
5 - Schedule Commands
6 - Table Definitions
7 - XEDIT the Parameter File

Enter selection : 7

```

Figure 21. Search for the CONSERVE PARMFILE

CONSERVE will then present the following menu to you.

```
CONSERVE PARMFILE A1 V 80 Trunc=80 Size=33 Line=0 Col=1 Alt=0

|...+....1....+....2....+....3....+....4....+....5....+....6....+..

0000 * * * Top of File * * *
0001 * File updated by ASOMAINT last
0002 *
0003   execuser FAQSEXEC PL0830W
0004   logdisk 100   ALL
0005   logproc ARCHIVE
0006   routecmd MSGNOH
0007   sysoper      OPERATOR ASOMAINT ASOUSER
0008 msg MSG(OPERATOR)      $¢fgvar¢???¢R¢$ ACTION ALARM
0009 msg LOG                 $ display(NO)
0010 msg MSG(&EXEC)          $
0011 msg ANY(&EXEC)         $ display(NO)
0012 msg SMSG                $¢test server¢ exec(CHKSERVER)
0013 msg SMSG                $¢acc192¢ exec(ACC192)
0014 msg MSG(OPERATOR)      $¢(batchmon)¢$ ACTION ALARM ,
0015   color(UNDERLINE,HIGH)
0016 msg CP(SYSTEM)         ¢PRT¢$¢PRINTING¢$ exec(PRINOTE)
0017 msg CP(SYSTEM)         ???¢RSE501A PRT¢$¢INT REQ¢$ ACTION ,
0018   exec(PRINOTE)
0019 msg CP(SYSTEM)         ¢PRT¢$¢WAITING¢$ exec(PRINOTE)
0020 msg WNG                 $ ACTION ALARM
0021 msg CP(SYSTEM)         $¢INT REQ¢$ ACTION exec(INTREQ)
0022 msg ANY                 $¢logon¢$ display(NO)
0023 msg ANY                 $¢dial¢$ display(NO)
00026 msg ANY               $¢logoff¢$ display(NO)
00027 sched ARCHIVE when((MON OR TUE OR WED OR THU OR FRI)AND WEEKDAY) ,
00028   time 10:00 cmd ¢ARCHIVE¢
00029 sched table WEEKDAY (MON TUE WED THU FRI)
00030 sched table HOLIDAY (JANUARY AND DAY=1) (LAST MONDAY AND MAY) ,
00031   (FIRST MONDAY AND JULY) (FIRST MONDAY AND SEPTEMBER) ,
00032   (LAST THURSDAY AND NOVEMBER) (DAY=25 AND DECEMBER) ,
00033   (DAY=31 AND DECEMBER)
00034 * * * End of File * * *
```

Figure 22. Our CONSERVE PARMFILE

**Note:**

If you insert comments in this file, the PARMUPD command will always throw them away. If you really need comments you have to use the optional PARMEDIT exec. Please refer to the *CONSERVE User's Guide* if you want to use this exec.

### 4.3.2 Using the OPTION Command

Each CONSERVE user can make use of this OPTION command to customize his console display.

When you use this command and change any value, the new one is stored in the LASTING GLOBALV file, except for the date format and the command logging option. All changes you had made are saved from one session to the next. Therefore do not erase the LASTING GLOBALV file from your A-disk.

**Note:** You can change the contents of GLOBALV variables without using the OPTION command, but then you don't have an automatic value checking, which allows you to correct the value immediately. If later CONSERVE finds the invalid value during its initialization, you will receive an error message and the wrong value is ignored.

The OPTION command allows to, for example:

- specify user IDs which should or should not display the messages
- assign function keys
- format messages lines
- specify colors and highlighting

#### 4.3.2.1 The OPTION Menu

To use this command, type the OPTION command from a CONSERVE console. You can also use it with additional parameters. If you enter OPTION without parameters you will receive the following menu.

```
CONSERVE User Option Display                               Version:3.50

Interval          : 10__      Response Buffer: 20__  PF-Key Display : Y
Command Logging   : NO_____ Action on top   : NO_____
Display format    : USERID TEXT TIME_____
Initial CHDisplay: _____

Enter key:
PA1      :
PA2      :
PA3      :

PF1      : BEFORE Help
PF2      : BEFORE Track
PF3      : BEFORE Quit
PF4      :
PF5      : BEFORE ?
PF6      :
PF7      : BEFORE (Bwd) Pageback
PF8      : BEFORE (Fwd) Pageforward
PF9      :
PF10     :
PF11     :
PF12     :
```

Figure 23. OPTION Command

In this screen, the most important fields are:

1. Interval
2. Display Format
3. Initial CHDisplay
4. Function keys

We will explain them and describe how we used them in our environment.

**Interval:** Specifies the rate at which the screen is refreshed. If you specify 0, it means that you don't want an automatic refresh. **Warning:**

There are only two ways to have your CONSERVE console always refreshed:

- Pressing enter, any PF or PA key when the console is in track mode (displaying current messages)
- Set a small INTERVAL of time with the OPTION command

But if you do this and try to type any command at this console you have to expect that your keyboard will be locked.

To avoid this situation, you could define one console with a small INTERVAL where you can view the refreshed information and another console with a larger INTERVAL, but not more than five seconds, which is used for your interaction with the system.

**Display Format:** With this parameter you can change the format of the message lines on the CONSERVE console. By default, each message displays with the components

USERID TEXT TIME

The formats you can choose are:

SITE	with eight characters reserved for the site name
USERID	with 8 characters reserved for the USERID, but if the USERID is the SYSTEM, four blanks will be displayed
JOBNAME	with eight characters for the jobname
TEXT	it contains the text of the message
DATE	it is the date of the message
TIME	it is the time of the message

Figure 24. Components for Formatting the Command Line

**Note:**

1. You can change the message line according to your needs, but take care because the TEXT may overlay any other components that lie to the right of it on the message line. To avoid problems put the most important parameters to the left.
2. You can do the same using the OPTION FORMAT command,

OPTION FORMAT *keywords*

where *keywords* are the components specified in Figure 24.

3. If you ask for help in the DISPLAY FORMAT menu you receive:

```
LEGENT Software, Inc. FAQS/ASO for VM                               Console
                        FORMAT: Specify Message Display Format
==>
    :include conserve_option_format_desc
        --> End <--
```

Figure 25. Help for *OPTION FORMAT*

Please contact LEGENT and ask for the file that contains the help for this command. Note that we were informed, that the new tapes from LEGENT fixes this problem.

**Initial CHDISPLAY:** This parameter specifies that you want to use the CHDISPLAY command when you enter a CONSERVE console session.

**Note:** The CHDISPLAY command selects and displays messages from only those user IDs you have explicitly specified.

**Function Keys:** CONSERVE permits you to assign a command or a macro to the following console keys:

- ENTER
- any PA key
- any PF key

You can provide keywords such as AFTER, BEFORE, PREFIX, SUFFIX and DELAY to specify how you want the command to be processed. There are some examples already pre-set in Figure 23 on page 33.

**Note:** To understand the meaning of the keys, you can place the cursor on any PF of this panel and press PF1 HELP.

In our case we did the following:

1. For the OPERATOR virtual machine:
  - The console should always be updated. Therefore we set an interval of one second.
  - The operator should receive all messages from all users.

The following shows the menu after we typed in our entries.

---

CONSERVE User Option Display

Version:3.50

Interval : 1 Response Buffer: 20\_\_ PF-Key Display : YES  
Command Logging : YES\_\_\_\_\_ Action on top : YES\_\_\_\_\_  
Display format : USERID TEXT TIME\_\_\_\_\_  
Initial CHDisplay: \_\_\_\_\_

Enter key:

PA1 :  
PA2 :  
PA3 :

PF1 : BEFORE Help  
PF2 : BEFORE Track  
PF3 : BEFORE Quit  
PF4 :  
PF5 : BEFORE ?  
PF6 :  
PF7 : BEFORE (Bwd) Pageback  
PF8 : BEFORE (Fwd) Pageforward  
PF9 : PREFIX q t  
PF10 :  
PF11 :  
PF12 :

---

Figure 26. OPTION Command for the OPERATOR Machine

2. For the ASOUSER virtual machine:

- The console will be used to interact with the system, so we set up an interval of five seconds.
- It should receive messages from the VSE guest machines only. (The VSE guest systems run in the V131A94 and V131B94 virtual machines.)
- The JOBNAME should be included on the message line.
- The CANCEL BG command should be assigned to a PF key.

We filled out the following menu.

```
CONSERVE User Option Display                               Version:3.50

Interval          : 5____ Response Buffer: 20__ PF-Key Display : YE
Command Logging   : YES_____ Action on top   : YES_____
Display format    : USERID JOBNAME TEXT TIME_____
Initial CHDisplay: v131a94 v131b94_____

Enter key:
PA1      :
PA2      :
PA3      :

PF1      : BEFORE Help
PF2      : BEFORE Track
PF3      : BEFORE Quit
PF4      :
PF5      : BEFORE ?
PF6      : PREFIX q na
PF7      : BEFORE (Bwd) Pageback
PF8      : BEFORE (Fwd) Pageforward
PF9      : PREFIX q t
PF10     :
PF11     : delay send v131b94 cancel bg
PF12     :
PF13     :
PF14     :
PF15     :
PF16     :
PF17     :
PF18     :
PF19     :
PF20     :
PF21     :
PF22     :
PF23     :
PF24     :
```

Figure 27. OPTION Command for the ASOUSER Machine

3. For the ASOMAINT virtual machine:

- As the ASOUSER virtual machine, the console has to have an interval of five seconds.
- Should not receive VTAM messages

```

CONSERVE User Option Display                                     Version:3.50

Interval      : 5_____ Response Buffer: 20__ PF-Key Display : YE
Command Logging : YES_____ Action on top   : YES_____
Display format : USERID TIME TEXT_____
Initial CHDisplay:~-vtam_____

Enter key:
PA1      :
PA2      :
PA3      :

PF1      : BEFORE Help
PF2      : BEFORE Track
PF3      : BEFORE Quit
PF4      :
PF5      : BEFORE ?
PF6      : PREFIX q da
PF7      : BEFORE (Bwd) Pageback
PF8      : BEFORE (Fwd) Pageforward
PF9      : PREFIX q t
PF10     :
PF11     :
PF12     :

```

Figure 28. OPTION Command for the ASOMAINT Machine

### 4.3.2.2 The OPTION COLOR Command

You can use the OPTION COLOR command to specify color and highlighting of messages based on the user ID that created the message and the type of message.

To enter color specifications, enter the command from your CONSERVE console:

```
OPTION COLOR
```

We then received, in our case at the ASOUSER CONSERVE console, the CONSERVE Color Specification Display, where we filled in our specifications.





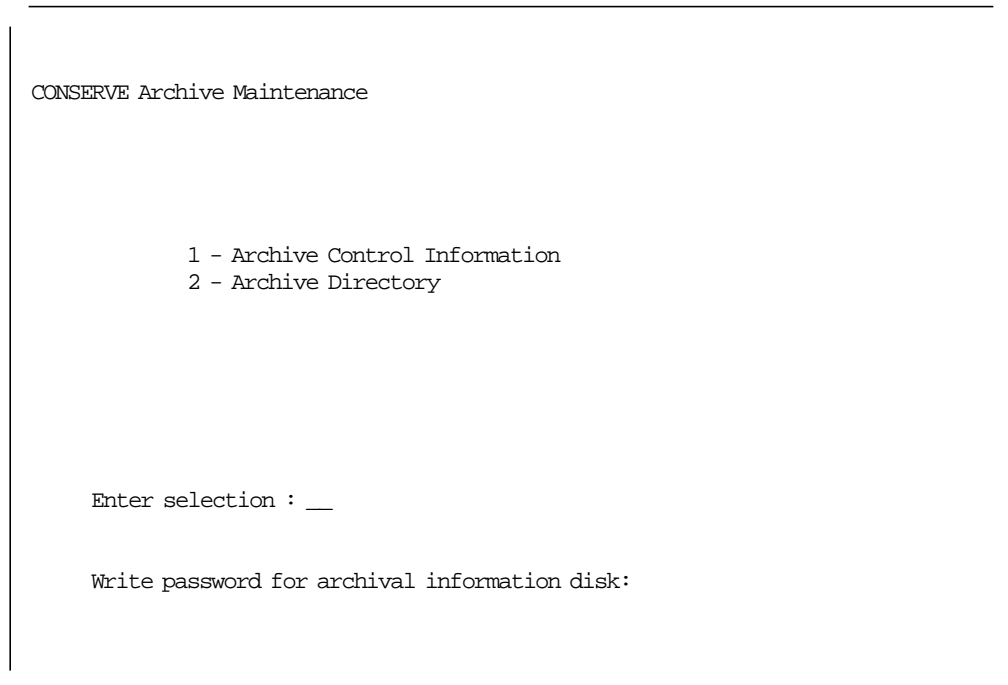


Figure 30. CONSERVE Archive Maintenance Panel

Where:

- The option 1 - Archive Control Information, gives you the possibility to specify what should be done with messages if they are removed from the log file.
- The option 2 - Archive Directory, contains a list of all information that has been archived and you can delete them or retrieve them by using
  - the LOGUTIL ARCHSCAN command from the CONSERVE console or
  - the LOGUTIL command from the CONSERVE console.

ARCHIVE CONTROL INFORMATION PANEL

When you select option 1, you will receive:

```
CONSERVE Archive Control Information

                Select Archive Technique

The archive technique specifies how the messages removed from
the System Log File are managed.  You may select from:

                Disk - Copy to minidisks
                Tape1 - Operator copy to tape
                Tape2 - Immediately requests tape
                Print - Print messages out
                Send - Send messages to a user
                TRASH - Discard immediately

Archival technique: _____
```

Figure 31. CONSERVE Control Information Panel - Select Archive Technique

When you select:

1. the DISK option, the system log file is copied to a minidisk.

**Note:** When there is not enough space for the new file, CONSERVE deletes the oldest one that had been archived. But if after deleting all archived files, there is still not enough space available for the new file, CONSERVE will print the file.

2. The TAPE1 option will require that the operator issue the FQVARCHD command to copy the log file from the staging area to tape. Because of this staging area, it is possible to make the copy even if there are no tape drives available at that moment.

But make sure that you have enough staging disk space available to hold all the data you have to archive.

This option is recommended, if you have to archive frequently and you can't dedicate a tape all the time.

**Note:** The FQVARCHD command controls all tape archive processing and it checks the available tape volume that will be used. It then sends the tape mount messages to the operator.

3. The TAPE2 option automatically issues the FQVARCHD command to copy the file directly to the tape. The operator will receive a message, from CONSERVE, to attach a tape to the EXEC Server machine (the default is FAQSEEXEC). He will receive messages until the tape is attached.

You can use this method instead of TAPE1 if you don't archive frequently, but you need to have a tape available at this time.

4. The PRINT option allows to print the staged file. The LOGUTIL ARCHSCAN command is used here.
5. The SEND option allows you to send the staged file to another user.





**Note:** The only action you can perform on this menu is to delete the archive message data and once you have deleted it, the messages won't exist anywhere.

#### 4.3.4 Using the LOGUTIL Command

This command helps to maintain the system log file and the archived log data.

When you enter the LOGUTIL command from the CONSERVE console or in the CMS environment you will receive the following menu.

- The CONSERVE Log File Utility panel

```
LogUtil                CONSERVE Log File Utility

Enter any character preceding the desired function:

Print from Current Log File
Display Log Statistics
Print from Archived Log Data

Version:3.50
```

Figure 35. CONSERVE Log Utility Panel

Where:

1. The "Print from Current Log File" option can be used to selectively print messages from the current system log. It does not remove the printed messages from the log.  
In our case, as we didn't have a dedicated printer, we used this option every time we wanted to print the file or to print some messages out of it.
  2. The "Display Log Statistics" option is used to get information about the current status of the system log file.
  3. The "Print from Archived Log Data" option is a way to retrieve archived messages.
- The Print from Current Log File option  
We decided to use this option.

```
LogUtil                CONSERVE Log File Utility

Enter any character preceding the desired function:

z Print from Current Log File
  Display Log Statistics
  Print from Archived Log Data

Version:3.50
```

Figure 36. LOGUTIL Command

- The LOGUTIL PRINT panel:
  - Note:** To receive this panel, you can use:
    - the LOGUTIL command or
    - the LOGUTIL PRINT command

```
LogUtil                CONSERVE Log File Utility - Print

Function:  _ Print
          _ Browse
          _ Disk   Fileid: CONSERVE LOG A1_____  Replace: _ Append

Translate: YES_____

Starting Date: 94/11/10      Starting Time: 0:00
Ending   Date: 94/11/11      Ending   Time: 23:59

Userid(s): _____

Class(es): _____
          _____

Text: _____

Extended Format: _          Line Count: 60_          Print Site: _
```

Figure 37. LOGUTIL PRINT Command

Where:

- the PRINT option allows to spool the selected output to your virtual printer and when it finishes, you will receive the Log File Utility menu again. Please refer to Figure 35 on page 44 if you don't remember.
- The BROWSE option causes the output to be copied to a temporary disk file and from there it will be displayed with the BROWSE or XEDIT commands. After that the file is automatically erased from the disk.
- The DISK option causes the output to be directed to the CMS disk file selected by the user.

We used the DISK option to collect all VTAM messages of the day, from 00:00 to 02:00. So we did the following:



```
LogUtil          CONSERVE Log File Utility - Print

Function:  _ Print
          _ Browse
          x Disk   Fileid: CONSERVE LOG A1_____  Replace: _ Append:

Translate: YES_____

Starting Date: 94/11/11      Starting Time: 0:00
Ending Date: 94/11/11      Ending Time: 02:00

Userid(s): VTAM_____

Class(es): _____
          _____

Text: _____

Extended Format: _          Line Count: 60_          Print Site: _
```

Figure 38. Example of the LOGUTIL PRINT Command

- Examining the Printed Output

The output produced is in print-image format. It contains ANSI control characters and is written as variable-length records in a file named CONSERVE LOG A (which is the fileid we have chosen).

```

lLog Date 94/11/11                                FAQs/VM System Log Utility Print

0 0:00:00 VTAM   HCPMID6001I  TIME IS 00:00:00 DST FRIDAY 11/11/94
0:48:18 VTAM   IST663I  INIT OTHER REQUEST FAILED, SENSE=087D0001
0:48:18 VTAM   IST664I  REAL  OLU=DEIBMIPF.IPFAARSC  ALIAS DLU=DEIBMIPF.IPFA2RSC
0:48:18 VTAM   IST889I  SID = C65BD98944D1117
0:48:18 VTAM   IST894I  ADJSSCPS TRIED  FAILURE SENSE  ADJSSCPS TRIED  FAILURE SENSE
0:48:18 VTAM   IST895I  IPFV2                08420000
0:48:18 VTAM   IST314I  END
1:44:18 VTAM   IST663I  INIT OTHER REQUEST FAILED, SENSE=087D0001
1:44:18 VTAM   IST664I  REAL  OLU=DEIBMIPF.IPFAARSC  ALIAS DLU=DEIBMIPF.IPFA2RSC
1:44:18 VTAM   IST889I  SID = C65BD98944D1118
1:44:18 VTAM   IST894I  ADJSSCPS TRIED  FAILURE SENSE  ADJSSCPS TRIED  FAILURE SENSE
1:44:18 VTAM   IST895I  IPFV2                08420000
1:44:18 VTAM   IST314I  END

lLog Date 94/11/12                                FAQs/VM System Log Utility Print

0 0:00:00 VTAM   HCPMID6001I  TIME IS 00:00:00 DST SATURDAY 11/12/94
0:08:19 VTAM   IST663I  INIT OTHER REQUEST FAILED, SENSE=087D0001
0:08:19 VTAM   IST664I  REAL  OLU=DEIBMIPF.IPFAARSC  ALIAS DLU=DEIBMIPF.IPFA2RSC
0:08:19 VTAM   IST889I  SID = C65BD98944D11132
0:08:19 VTAM   IST894I  ADJSSCPS TRIED  FAILURE SENSE  ADJSSCPS TRIED  FAILURE SENSE
0:08:19 VTAM   IST895I  IPFV2                08420000
0:08:19 VTAM   IST314I  END
1:04:19 VTAM   IST663I  INIT OTHER REQUEST FAILED, SENSE=087D0001
1:04:19 VTAM   IST664I  REAL  OLU=DEIBMIPF.IPFAARSC  ALIAS DLU=DEIBMIPF.IPFA2RSC
1:04:19 VTAM   IST889I  SID = C65BD98944D11133
1:04:19 VTAM   IST894I  ADJSSCPS TRIED  FAILURE SENSE  ADJSSCPS TRIED  FAILURE SENSE
1:04:19 VTAM   IST895I  IPFV2                08420000
1:04:19 VTAM   IST314I  END

```

Figure 39. Example of Printed Output

**Note:** This output is the normal output format. It contains the fields:

- Time
- User ID
- Sitename (it cannot appear)
- Message text

But you can also request the extended output format. It contains:

- Time
- Origin user ID
- Sitename (it cannot appear, as in our case)
- Message class
- Action flag
- Exec flag
- Message text
- The Display Log Statistics panel

This panel allows to obtain information about the current status of the system console log and you can use it to adjust the frequency of your archives.

**Note:** To receive the panel, enter

- the LOGUTIL command and then select Display Log Statistics
- the LOGUTIL STATistics command with no parameters
- the LOGUTIL STATistics command with a parameter

For more information use the help function (PF1).

```
LogUtil          CONSERVE Log File Utility - Statistics Display

First message in log:      94/10/13 11:49:52
First non-archived message: 94/11/11  0:00:00
Last  message in log:      94/11/12 15:36:58

Last †COPY† done at :      94/11/11 10:00:04

Log file size (blocks):    1790
Percent in use      :      1          (1772   Free)

Userid count          :      17

Message blocks overwritten due to overlap: 0

Log file version       :      3.5
```

Figure 40. Example of the LOGUTIL STATISTICS DISPLAY

**Note:** When you have a number of the blocks overwritten, it means that the disk space for the log file was not large enough or that the archive wasn't done soon enough. After doing the next archive, this value is reset. Please refer to 4.3.3, "Using the Archive Maintenance Utility - ARCHMNT" on page 39 to get more information about this command.

- Print from the Archived Log Data panel

This is very similar to the Print from the Current Log File panel, but here you work with archived messages.

You can receive this panel if you specify:

- the LOGUTIL ARCHSCAN command with no parameters or
- LOGUTIL and after the Print option from the Log Data option. If you have doubts, please refer to Figure 35 on page 44.

In our case, we deleted all archived data in order to free the space and received the following panel:

```

LogUtil          CONSERVE Log File Utility - Archive Retrieval

Function:  _ Print
          _ Browse
          x Disk  Fileid: CONSERVE LOG A1_____  Replace: _ Append: _

Translate: YES_____

Starting Date: 94/00/11      Starting Time: 0:00
Ending   Date: 94/11/11      Ending    Time: 23:59

Userid(s): _____

Class(es): _____
          _____

Text: _____

Extended Format: _          Line Count: 60_          Print Site: _

FQVLGU050W Warning: Archived messages not available for some
dates selected

```

Figure 41. Example of Print from ARCHIVED LOG DATA

**Note:** If there is archived data, you will receive an output as in the PRINT from LOG File option.

### 4.3.5 EXECs

In a CONSERVE environment you can write your own execs that can be:

- Message-triggered: for specified types of messages the exec will be called for execution. (See the example of the message TEST SERVER that calls a CHKSERV exec.)
- Scheduled: CONSERVE will run them on specified days and times.

You can use any CP, CMS or special EXEC Server commands in your execs.

The recommended disk for your execs is the EXEC Server's 191 and to put them on the disk you should use the following procedure:

- Sendfile the exec to the EXEC Server machine (usually FAQSEXEC).
- Receive it with the RECFILE exec. You can also use the optional exec called EXECEDIT to create or modify execs.
- Define the message in the CONSERVE Parameter file using the PARMUPD command.
- Use the PARMUPD command to save your changes.

After this the EXEC Server is automatically restarted by CONSERVE and the IUCV communication between the Message Collector and the EXEC Server is reestablished.

**Note:** You can force the EXEC Server user ID and directly add your exec on the 191 disk, but you need to log off this machine and restart it again.

Refer to the *CONSERVE User's Guide* for more details.

### 4.3.6 GOALHELP

GOALHELP is a help function which contains more detailed information needed to run FAQs/ASO for VM. You can use it to answer your questions about panels, commands and messages.

Use the PF1 key to activate it.

### 4.3.7 Using System Operator Commands

At the CONSERVE console, you can use the following commands, if you are the system operator. (This is not a complete list.)

- DELMSG
- LOGWRITE
- OP
- SEND
- TERMINATE

You can assign a function key for them also. Please refer to 4.3.2, "Using the OPTION Command" on page 32.

#### 4.3.7.1 DELMSG

The messages that require operator intervention (action messages) do not scroll off the screen. This command makes them scrollable. For example, in the screen above, the message in highlight will not scroll until you enter the following command:

```
CONSERVE Console Display
*CONSERV*01 FQVMCL198I *** Dumps waiting - Call LEGENT Technical Support ***
DATAMOVE Processing 94/11/12 18:36:05 GMT DVHDMF139I COMMAND DIRM QRY CLEANUP
                NO OUTPUT QUALIFIES.                                20:36:05

===>delmsg 1
```

Figure 42. CONSERVE Console with an Action Message

### **4.3.7.2 LOGWRITE**

To insert comments into the System Log file.

Example:

```
LOGW Verify the listing from ASOMAINI.
```

You must have in your Log File:

```
LOGW Verify the listing from ASOMAINI.
```

### **4.3.7.3 OP Command Prefix**

After a CP or CMS command, the responses are trapped and displayed in full screen mode, not in the CONSERVE console.

Using this command, the system operator can place the command responses in the System Log file.

### **4.3.7.4 SEND**

The CONSERVE SEND command is identical to the VM SEND command. With it you can send console input to any disconnected virtual machine that has the system operator specified as secondary user.

### **4.3.7.5 TERMINATE**

This command immediately terminates the message collector.

---

## Chapter 5. BATCH Customizing and Usage

This chapter describes how to customize the BATCH facility and how to use it.

Customizing mainly concerns the three different types of virtual machines involved in the BATCH facility:

1. The BATCH monitor virtual machine (BATCHMON) which controls the execution of the jobs in the worker virtual machines.
2. The worker virtual machines (used for the batch job execution).
3. The operator's virtual machines (which are allowed to submit jobs to the BATCH monitor).

The BATCH User Guide gives detailed information on how to proceed.

---

### 5.1 Customizing and Using the BatchSCN Command

Before you start make sure that BATCHMON is logged on, if not autolog it.

During the installation of **FAQS/ASO Step 6 Batch Installation**, you are asked for the name(s) of the BATCH operator virtual machine(s). If you left the field open, you will **not** be able to use the following options:

- 3 Workers
- 4 Operators
- 5 Monitor Facility

all other functions on options 1, 2 and 6 will run well.

To invoke BATCH, you have to issue the command "BatchSCN" from the CONSERVE screen or from the CMS command line.

This will provide you with the following screen.

```
BATCH Version 3.50                Main Menu

                                BATCH Monitor USERID: BATCHMON
                                Enter the selection number:

                                1  Submit Jobs
                                2  Display,Change,Cancel Jobs
                                3  Workers
                                4  Operators
                                5  Monitor Activity
                                6  Command Classes

PF1=HELP  PF3=QUIT  PF12=CANCEL
```

Figure 43. BATCH Menu Screen

Note:

If you are not able to use option 3, 4 and 5, you have to **edit** either the BATCH CONFIG FILE on the BATCHMON 191 minidisk, (see Figure 44) or **rerun** the whole installation.

The best way we found was to rerun the installation, because it needed only a few minutes to run and we could be sure of having the correct entries.

### 5.1.1 Example of a BATCH CONFIG File

Be careful, if you decide to edit the BATCH CONFIG file. Save the original file before you change anything, because the BATCH facility is based on the correct entries in this file.

All the entries can also be made by commands entered on the command line, or menus within command BatchSCN.

If you want to add or change a batch operator, you have to decide which command classes the batch operator should be able to use.

Command classes in the BATCH facility are given to batch operators for controlling their own jobs and controlling jobs from other operators, such as the system operator or the MAINT user.

The BATCH facility has command classes A to H, numbers or symbols are not allowed.

The following example of a BATCH CONFIG file shows different classes of users and workers.

```
CKPTDISK 191
JOBQDISK 191
DATEFMT MM/DD/YY
SECURE
LOAD
DEFINE BATCH1 PASS PL0830W
DEFINE BATCH2 PASS password
OPERATOR ASOUSER BCDEFG
OP ASOMAIN ABCDEFG
OP MEYER1 BDEFG
DEFINE WORKER PASS password
```

Figure 44. BATCH CONFIG File

---

## 5.2 Usage of the BatchRC Command

**This command can be used only within a job.** The BatchRC command sets a return code for a job within a job itself. This command passes the return code into the job ending message issued to the user.

To issue the command, put the BatchRC command in your job. The command must include a parameter which names the return code you want to use. The command is executed when the job is run on a worker.



It can also pass the return code in a POST command to the monitor.

## 5.3 Submitting Jobs

There are two ways to submit jobs for batch execution. The first and recommended way is to do it on the Job Submission screen and the second way is to issue the BatchSUB command directly from the command line of a CMS or CONSERVE user.

The following is an example of the BatchSCN menu for job submission.

```
BATCH                               Job Submission

      BATCH Monitor USERID: BATCHMON

Press ENTER to submit the job

Submit job FNAME SORT____ FTYPE EXEC____ FMODE A_
      Job type EXEC____ (CMSBATCH or EXEC)

JOBNAME SORT001          ACCOUNT SUPPLY          PRIORITY 64
  CLASS A                DUMP YES                FORMAT95 YES
  OUTPUT _____      NODE _____          DISTRIBUTION _____

  DEADLINE DATE 10 / 25 / 94 MM/DD/YY    TIME 13 : 06 : 00
  AVAILABLE DATE ___ / ___ / ___ MM/DD/YY  TIME ___ : ___ : ___
      WAIT _____
      POST _____

      MAX TIME: (M:S or S) _____
  LIMITS: (K or M) PRINT _____ READ _____ PUNCH _____ SIOS _____

PF1=HELP   PF3=QUIT   PF4=SAVE   PF5=RETRIEVE   PF6=XEDIT   PF12=CAN
```

Figure 45. Submit Menu Screen

The next example shows a submit by using the BatchSUB command.

**BatchSUB SORT EXEC A**

### 5.3.1.1 Creating Jobcards

Jobcards are created automatically when using option 1 on the BatchSCN screen, "Submit Jobs". But if you need to create a job card manually, please examine the following figure that was created via the job submission screen and then saved (PF4).

```
/JOB JOB=SOR001,BAT=BATCHMON,ACC=SUPPLY,P=64,CL=A,
DDATE=10/25/94,DTIME=13:06:00,DUMP=YES,FORM=YES
```

Figure 46. Jobcard Default File. Jobcards are created by menu via BatchSCN, or by XEDITing a jobcard file.

The job card shows job name, monitor name, account, priority, class, deadline date (date when the job must be started), deadline time (time when the job must

start), dump (in case of error) yes or no, format (the 195 of the worker after ending job) yes or no.

There are many combinations possible, but to avoid errors we recommend to create the job cards using the BatchSCN screen.

### 5.3.2 Display, Change, Cancel Jobs

Option 2 on the BATCH screen displays those jobs which were submitted by option 1.

Jobs in this queue are waiting to run. They are waiting because they are scheduled for a later start of execution or they are waiting for the completion of another event.

Jobs can be changed, queried or canceled.

```
BATCH                               Jobs

      BATCH Monitor USERID: BATCHMON
              Job Originid: ASOUSER

Action = ( Change, Query, CAncel )

      JOBID      JOBNAM     ORIGINID  PRIORITY  STATUS
CA_____  13      SORT001   ASOUSER    64      HOLD
_____    59      SORT002   ASOUSER    64      IN QUEUE
Q_____  60      CATALOG   ASOMAIN    64      WORKING
_____    61      BACKUP    MEYER1     10      SUBMITTED
_____    68      BACKUP    ADMIN22    10      WORKING
```

Figure 47. BatchSCN Menu Option 2. Display, Change, Cancel Jobs

### 5.3.3 Defining and Using Workers and Operators

A worker is a VM user, defined in the CP directory. You can define as many workers as you need. The definition of a worker varies upon the type of jobs that the worker will run. The worker receives jobs from the monitor (BATCHMON) and executes them.

How many workers you need, depends on the amount of jobs you plan to run. You must define at least one worker at installation time. Later you can easily define more workers.

You can define as many operators as you need. At least one operator is needed at installation time, but you can easily define more operators afterwards.

Each user using the BATCH facility can be an operator.

Use option 4 of the main menu to define or delete an operator.

**If you define a new worker, do not forget to add the worker user ID in the VM directory as well.**

Workers are controlled with menu option 3, direct on the CMS or the CONSERVE command line.

Following is an example of a worker called BATCH1 in our installation.

We recommend to use the main menu option 3 to define, drain, delete, start or force a worker.

```
USER BATCH1 PASSWORD 4M 4M G
OPTION ACCT
IUCV ALLOW
IPL CMS PARM AUTOOCR
CONSOLE 009 3215 T
SPOOL 00C 2540 READER A
SPOOL 00D 2540 PUNCH A
SPOOL 00E 1403 A
LINK MAINT 190 190 RR
LINK MAINT 19E 19E RR
LINK ASOMAINT 191 333 RR
LINK BATCHMON 192 191 RR
MDISK 0195 3390 XXX 2 XXXXXX MR
```

*Figure 48. Worker Batch1. This is an example for a VM Directory entry*

Defining or deleting a worker by menu, or in CMS, or CONSERVE command line, adds or deletes the worker from the BATCH CONFIG file.

Note:

This means that, a worker defined in the CP directory, but not in the BATCH CONFIG file cannot work, and also not the other way round.

### **5.3.3.1 Operators**

Operators are defined for **FAQS/ASO** to use CONSERVE, BATCH, and for controlling jobs.

To use batch commands that have classes assigned to them, the user must be defined as an operator.

Defining an operator means, that a user is made known to the monitor (BATCHMON) as an operator, and an entry is made in the BATCH CONFIG file.

As many operators as you need can be defined. The operator must be a virtual machine defined in the CP directory.

In **FAQS/ASO VM** are commands used with privileged classes from A - H. No numbers or symbols are allowed. These classes have **not** the same meaning as the VM directory user classes.

**FAQS/ASO BATCH classes have nothing to do with VM directory user classes.**

For example:



```
BATCH                               Monitor

      BATCH Monitor USERID: BATCHMON
Enter the selection number: _

      Schedule jobs on the workers
      1  STOP
      2  ALLOW

      Submit jobs to the monitor
      3  STOP
      4  ALLOW

      Schedule and submit jobs
      5  STOP
      6  ALLOW

PF1=HELP      PF3=QUIT      PF12=CANCEL
```

Figure 50. Batch Monitor Screen

### 5.3.3.3 Changing or Deleting Command Classes

Option 6 on the BatchSCN main menu is used for setting up command classes in the BATCH facility. This is available because of the possibility to give different classes to operators.

All classes can be changed, but we recommend you to be careful when you have to change the commands. First try one of them and check the results in relation to other operators before you go on to the next command.



---

## Chapter 6. Customization and Usage of ViewSpool

This chapter describes how to customize and how to use ViewSpool.

After the installation of **FAQS/ASO VM** there is no urgent need for customizing. You can use ViewSpool as it is. Later if you are more used to working with ViewSpool you may want to tailor it according to your needs. Main customizing activities concern the tailoring of the VIEWSP CONFIG file and the ViewSpool Profile.

We recommend to use it first as it is.

---

### 6.1 Customizing the Screen Format

First you may want to change the screen format. There are two statements, which are part of the VIEWSP CONFIG file which allow you to make your choice.

The FMTSYN statement:

- The FMTSYN statement is already delivered by LEGENT in the ViewSpool CONFIG file, and can be used without change.
- The FMTSYN statement lets you set up synonyms for the formats of the spool files selection screen.
- There are four different delivered spool file selection screens. They allow to present different selection screens to different operators.
- The synonyms can be used without change, but if required you can change the synonyms and truncation for your own usage. Assuming you need more than these four screens, you can define as many as you want by copying them and overwriting.
- There are four predefined formats delivered and they are on the GLOBAL DISK, the names are:
  1. SFDMNU01 FORMAT
  2. SFDMNU02 FORMAT
  3. SFDMNU03 FORMAT
  4. SFDMNU04 FORMAT
- The following shows how these entries are described in the VIEWSP CONFIG file
  1. fmtsyn sfdmnu01 Rrdlist 1
  2. fmtsyn sfdmnu02 Standard 1
  3. fmtsyn sfdmnu03 Owner 1
  4. fmtsyn sfdmnu04 Form 1

To review the VIEWSP CONFIG file see Figure 54 on page 68.

The SORTSEQ statement:

- The SORTSEQ statement is a default statement supplied in the VIEWSP CONFIG file. It can be used to change the view of your reader files for example.

No change is required, but by changing the SORTSEQ entry in the VIEWSP CONFIG file, another ordering sort sequence of the display from a spool file, will result.

The following shows the default sort sequence:

Loading ...	Format	LRECL	Records	Date	TIME
GOALHELP MESSAGES A2	V	76	156	05/11/94	15:57:57
GOALHELP PANELLIB A2	V	8192	23	05/11/94	15:43:45
GOALHELP MODULE A2	V	3016	2	06/14/94	15:18:11
FQVHELP MODULE A2	V	65535	5	06/14/94	15:02:06
GOALPROD MODULE A2	V	56528	3	08/27/94	15:19:07

By changing the SORTSEQ statement: 'CREATION DATE' Position 64 and 'CREATION TIME' Position 72, the display will look like this. The "DATE" field exchanged with the "TIME" field.

Loading ...	Format	LRECL	Records	Time	Date
GOALHELP MESSAGES A2	V	76	156	10:57:57	05/11/94
GOALHELP PANELLIB A2	V	8192	23	15:43:45	05/11/94
GOALHELP MODULE A2	V	3016	2	15:18:11	06/11/94
FQVHELP MODULE A2	V	65535	5	15:02:06	06/11/94
GOALPROD MODULE A2	V	56528	3	15:19:07	08/27/94

- The two samples before are with SET DATEFMT DD/MM/YY.
- Use the SET statement to add numerous options in the VIEWSP CONFIG file. SET DATEFMT MM/DD/YY will result in the following:

GOALHELP MESSAGES A2	V	76	156	10:57:57	11/05/94
----------------------	---	----	-----	----------	----------

## 6.2 Using ViewSpool

ViewSpool lets you list, look at, move and erase spool files. You can see READER, PUNCH and PRINTER queues. ViewSpool lets you print, punch or receive spool files without transferring them to your READER queue.

Dependent on your privclass, you can list, view, transfer and erase spool files for the entire system.

1. To display **your** own spool files, you enter only the command **VIEWSP** on the CONSERVE or CMS command line.
2. If you enter the command **VIEWSP ?**, you will see the prompt menu. On the prompt menu you can select, if you want to see all files with a certain class, or READER files, or ORIGIN USERID and so on.

For example:

Entering `†A†` in the classes field, will display all spool files with this class if any exist.

Another example:

If, on the prompt menu you enter in field `†Userst†` the user ID of the user OPERATOR, all spool files from it will appear.



You can also query more than one user or combine several commands:

as USERID †OPERATOR†  
and †ASOUSER†, and queue=†RDR† and class=†A†, the result would be  
all RDR files class †A† from OPERATOR and ASOUSER are displayed,  
see following example.

```
ViewSpool                               Spool File Selection
====>
FAQS117W Warning: Product code expires in 22 days

Queue      : RDR_____      Classes: A_____

Users      : operator asouser_ _____

Distributions : _____

Origin Userids: _____

Dates      From: 01/01/00      To: 12/31/99
```

3. Or enter **VIEWSP** keywords.

- a) **VIEWSP RDR** will show you all VIEWSP READER files of all users.
- b) The command "**VIEWSP Spool file ID**" shows you a certain spool file.
- c) Keywords can be entered in any order, possible is **VIEWSP OPERATOR rdr CP a** or **VIEWSP rdr cl a OPERATOR**.
- d) When you enter VIEWSP RSCS then you will see all VIEWSP files from RSCS.

Following is a screen with spool files, shown with different classes, rdr, pun, prt and different users, only invoked by command **VIEWSP**.

On this screen, you may manipulate spool files, for example purge, display, duplicate, drop and extract them. You have to write the command in front of the file. (In our example a 'D' for display.)

```

ViewSpool                               Spool Files Selected

====>

10 files selected

      Filename Filetype Origin  Class Sfid Hold Records  Date  Time
      (none)   (none)   BATCHL  T CON 432 NONE      7 11/03 18:22
      PROFILE TESTE    RSCS    A PUN 434 NONE      31 11/02 14:17
      (none)   (none)   FAQSVM  T CON 435 NONE     1801 11/03 10:16
      D  FAQSAOVM INSTALL ASOMAINT I PRT 426 USER     51 11/07 12:39
      CONSERVE LOG     FAQSEEXEC A PRT 106 NONE     919 11/08 12:15
      WARNING NOTICE DIRMAINT A PUN 73 NONE      23 10/28 22:30
      OPERATOR LOG     DIRMAINT A PUN 105 NONE      9 11/08 10:00
      FAQSAOVM INSTALL ASOMAINT I PRT 427 USER     64 11/07 12:48
      FAQSAOVM INSTALL ASOMAINT I PRT 428 USER     73 11/07 14:13
      FAQSAOVM INSTALL ASOMAINT I PRT 423 USER     88 11/05 15:57

```

There are a lot of *keywords* some of which are listed below. For a complete list refer to the *ViewSpool Users Guide*.

<u>Item</u>	<u>Description</u>
<b>Down</b>	Moves you nn lines towards the end of the list.
<b>DROP</b>	Temporarily removes a spool file from the screen.
<b>CANCEL</b>	Changes you to CMS.
<b>Duplicate</b>	Copies a spool file to a new spool file.
<b>FULL</b>	Shows all the attributes of a spool file on the Spool File attributes screen.

---

### 6.3 ViewSpool Utilities

During the installation you will be asked which utilities you want to install. We recommend to install all of them, because they give you a lot of flexibility, additional capabilities and make life easier. Most of them are in REXX and this makes it easy to change them according to your needs. You may also create your own utilities in REXX or in the EXEC2 language.

Following is a list of all utilities delivered by LEGENT for FAQS/VM.

FAQS/ASO for VM 3.50      Optional File Installation

Place the cursor on file to be loaded and press PF4  
 Press PF10 when all files to load are selected.  
 All files will be loaded to the †A† disk.

Filename	Filetype	Description
HELP	SAMPEXEC	Optional GOALHELP front-end
HELP	SAMPXEDIT	Optional GOALHELP front-end
CHGTEXT	EXEC	CONSERVE: Personalize message text
GETLINE	EXEC	CONSERVE: Get a line & display info about it
WHATTIME	EXEC	CONSERVE: Display the time for a message
CMTBOX	EXEC	CONSERVE: Box a comment
PARMEDIT	EXEC	CONSERVE: Directly edit the parameter file
TARGET	EXEC	CONSERVE: Specify a USERID for the following commands
EXECEDIT	EXEC	CONSERVE: Create and modify EXECs for the EXEC Server
MOVE	VIEWSP	ViewSpool macro
PFPURGE	VIEWSP	ViewSpool macro
ORDER	VIEWSP	ViewSpool macro
SPCOPY	VIEWSP	ViewSpool macro
NEXTPAGE	VIEWSP	ViewSpool macro
SFDMNU01	FORMAT	ViewSpool: Basic menu format for Rdrlist
NEXTPAGE	VIEWSP	ViewSpool macro
SFDMNU01	FORMAT	ViewSpool: Basic menu format for Rdrlist
SFDMNU02	FORMAT	ViewSpool: Basic menu format for Standard
SFDMNU03	FORMAT	ViewSpool: Basic menu format for Tag
SFDMNU04	FORMAT	ViewSpool: Basic menu format for Owner
SAMP1	FORMAT	ViewSpool: Another sample format
SAMP2	FORMAT	ViewSpool: Another sample format
GBMEXT1	ASSEMBLE	BATCH: Sample user exit
TERMFAT	EXEC	Terminal feature display
SEGXA	EXEC	FAQS A/O for VM XA SP segment saver
CALC	VIEWSP	ViewSpool: Dump analysis macro
D	VIEWSP	ViewSpool: Dump analysis macro
DUMPINIT	VIEWSP	ViewSpool: Dump analysis macro
GETDATA	VIEWSP	ViewSpool: Dump analysis macro
TOD	VIEWSP	ViewSpool: Dump analysis macro
INTREQ	EXEC	Intervention required msg auto-delete
PENDACT	EXEC	Time-delay pending action msg delete
BATCHECK	EXEC	Periodic Batch checkout
PERFORM	EXEC	Allow commands on EXEC Server
FQVRPY	EXEC	Reply to any msgs logged by the MSG COLLECTOR
CP	EXEC	Issue CP commands from message definition
SPLCLEAN	EXEC	Purge spool files greater than X days old
SPLCLEAN	VIEWSP	Purge spool files greater than X days old
CHKSEVR	EXEC	Check EXEC Server communication status
ACC192	EXEC	Re-access 192 disk and EXECDROP EXECs
RECVFILE	EXEC	Receive files onto EXEC Server 191 disk
FQVCALL	EXEC	Pass messages and commands to FAQS/CALL

Figure 52. Optional File Installation. This file shows the utilities delivered on tape

Let's take one of them to see what it does. The SPLCLEAN EXEC searches and erases spool files older than three days when invoked via the command "SPLCLEAN 3".

Note:

You can automatically erase spool files through the use of this exec when they are older than 20 days by the facility in CONSERVE to schedule BATCH jobs.

If you want to do this:

1. Enter in CONSERVE mode "PARMUPD".
2. Select option 5 "Scheduled commands".
3. Select one of the predefined examples by cursor.
4. Copy it to a new one.
5. Edit the copied one on "Command:" fields with command "SPLCLEAN 3".
6. Decide when it shall run by an 'X' in row 1.
7. Save by pressing PF3 (SAVE).

---

## 6.4 Date Setting in ViewSpool

The default date format supplied with the installation is YY/MM/DD. If you want to change it, alter the CONSERVE CONFIG file or the VIEWSP CONFIG file. This works as follows:

ViewSpool gets the **datefmt** from the last file processed in the following order:

1. CONSERVE CONFIG
2. VIEWSP CONFIG
  - By invoking CONSERVE, the CONSERVE CONFIG file is read first, and the **datefmt** from this file will be used unless there are overriding entries in the VIEWSP CONFIG file or the PROFILE VIEWSP. These files are all on a global disk.
3. Please take note that all the users in your environment should use the same date format.

ViewSpool tries to get the date from:

```

option pf1 Help
option pf2 Track
option pf3 Quit
option pf5 ?
option pf7 (Bwd) Pageback
option pf8 (Fwd) Pageforward
OPTION DATEFMT YY/MM/DD
* OPTION DATEFMT DD/MM/YY
option interval 10
OPTION FAQSID FAQSVM
option pfkdisplay yes
option respbuffer 20
option color action high yellow reverse
*
* IBM commands
*
cmdlist network(3) PASSTHRU
cmdlist backspac('backspac' 1)
*
* Goal Systems commands
*
cmdlist alert(NOATTN) ddmf(NOATTN)
*
* CONSERVE commands
*
cmdlist parmupd('conservp' 5 nylon) d(nolog 'conservd')
*
* Example commands
*
cmdlist whattime(nolog) getline(nolog) cmtbox(nolog)

```

Figure 53. CONSERVE CONFIG File

Please note that only one option datefmt can be active, that is the one without an asterisk (\*) in column 1.

```

* Installation Definitions for ViewSpool
*
* Un-comment the next two lines if you don't have CONSERVE CONFIG
* set dumpid FAQSV
* set datefmt YY/MM/DD
  set initfmt sfdmnu01
  set cc a
  set cc off
  set pfkdisplay yes
  set display on
  set buffers 64
*
* Change the following to "ON" if you have a 3800 printer
*
  set 3800 off
  set synonym print 2 macro fqvsfprt
  set synonym prt macro fqvsfprt
  set synonym newfmt cms exec fqvsfbld
*
* Installation standard program function key definitions
*
  set pf1 help
  set pf3 quit
  set pf6 only ?
  set pf7 (Bwd) Back
  set pf8 (Fwd) Forward
  set pf9 only =
  set pf12 cancel
*
* Sort sequence definitions
*
  sortseq class 86 1
  sortseq date 70 2 d 64 2 d 67 2 d 72 8 d
  sortseq dist 88 8
  sortseq form 104 8
  sortseq name 40 24 a 70 2 64 2 67 2 72 8
  sortseq type 52 12 40 12 70 2 64 2 67 2 78 8
  sortseq origin 16 8
  sortseq owner 8 8
  sortseq queue 444 3
  sortseq records 24 4 d
*
* FORMAT command panel name synonyms
*
  fmtsyn sfdmnu01 Rrdlist 1
  fmtsyn sfdmnu02 Standard 1
  fmtsyn sfdmnu03 Owner 1
  fmtsyn sfdmnu04 Form 1

```

Figure 54. VIEWSP CONFIG File

This is the default VIEWSP CONFIG file. The asterisk in front of the datefmt statement indicates that the date field in this CONFIG file cannot be used. In this case the datefmt field of the CONSERVE CONFIG file is used.

---

## 6.5 ViewSpool Profile

Following is an example of the Profile VIEWSP on the global disk. You can copy it to your own disk and modify.

```
/*-----*/
/*                                     */
/* User Profile for ViewSpool          */
/*                                     */
/* This provides the user with the ability to */
/* override the installation standard */
/* definitions.                         */
/*                                     */
/*-----*/
    arg entry_type file_queue file_name file_type file_origin

/*-----*/
/*           Menu Commands             */
/*-----*/
    if entry_type = 'MENU' then do
        'SET PF5 Expand'
        exit
    end

/*-----*/
/*           Display Commands          */
/*-----*/
    'SET PF5 *'
    'SET PF10 LEFT'
    'SET PF11 Right'
    'SET CURLINE 1'
    'SET VERIFY 1 79'
    'SET COLOR TOFEOF REV WHITE'
    'SET COLOR CURLINE YELLOW'
    'SET SYN ON'
    'SET SYN PP 2 PURGE'
    'SET TOFEOF ON'
    if file_type = 'LISTING' then 'SET TABS 41'
    'EXTRACT /FTYPE/'
    if ftype.1='DMP' then do
        'SET NONDISP .'
    end
    'SET STAY ON'
    exit
```

Figure 55. Profile VIEWSP File

---

## 6.6 ViewSpool Commands

The following list are valid ViewSpool commands.

- Display
- DROP

- FULL
- Print
- PURge
- Receive
- DUPLICATE
- TAKE
- TRANSfer

Writing wrong commands on the ViewSpool command line can result in a ViewSpool abend with or without a dump.

ViewSpool		Spool Files Selected								
==>										
command	Filename	Filetype	Origin	Class	Sfid	Hold	Records	Date	Time	
	ASOMAIN	DIRECT	DIRMAINT	A PUN	424	NONE	38	11/05	15:5	
	PROFILE	TESTE	RSCS	A PUN	397	NONE	31	11/02	14:1	
	(none)	(none)	BATCH1	T CON	411	NONE	7	11/03	18:2	
	(none)	(none)	BATCH1	T CON	412	NONE	7	11/03	18:2	
	VMDUMP	CMS	ASOMAIN	V DMP	422	NONE	1448	11/05	12:5	
B	(none)	(none)	FAQSVM	T CON	429	NONE	1801	11/03	10:1	
	FAQSAOVM	INSTALL	ASOMAIN	I PRT	430	USER	73	11/07	14:1	
	(none)	(none)	FAQSVM	T CON	430	NONE	85	11/07	14:1	
	SORT001	EXEC	ASOMAIN	I PRT	423	USER	88	11/05	15:5	
	MYJOB	EXEC	ASOUSER	I CON	425	USER	73	11/05	23:0	
R prompt	FAQSAOVM	INSTALL	ASOMAIN	I PRT	426	USER	51	11/07	12:3	
	FAQSAOVM	DIRECT	DIRMAINT	I PUN	428	USER	64	11/07	12:4	

Figure 56. ViewSpool "Spool Files Selected" Screen

In the previous figure, there is a "B" entered next to the spool file, which always produced an abend in our installation with the following message:

**DMSDIE3550I All APPC/VM and IUCV paths have been severed.**

This error appeared with all kinds of spool files.

After a re-IPL of CMS you can invoke ViewSpool again and it will function correctly.

The same error sometimes produced a dump additionally with message:

```
DMSABE148T System ABEND 0C1 called from xxxxxx reason code 0000000
abnormal end of ViewSpool.
FQVSFD050E CMS ABEND at X'87', code C6; Dump has been taken, sent
to FAQSVM
FQVCDC050E Abnormal termination of 'VIEWSP' with code of X'2000'
```

**Note:** The problem was reported to LEGENT. They could reproduce it and are working on a solution.



---

## 6.7 Required PTFs for ViewSpool

Ask your LEGENT representative for all available PTFs, when you order your installation tape. We received the following PTFs:

1. PTF number 18983 (Informational)
2. PTF number 73004 (Production)
3. PTF number 73144 (Production)
4. PTF number 73196 (Production)

These PTFs solved the following problems:

### RECEIVE PROMPT

- We entered "Receive prompt" in VIEWSP on the command line, (see Figure 56). The system changed to VMREAD, then, when we entered a FNAME FTYPE FM we got a "production exception". This occurred only if the machine, in our case ASOMAIN, is in XA or ESA mode. In 370 mode, it works alright. We could find no information that the machine running VIEWSP must be in 370 mode.

### PUT 1 TEST FILE A

- You must be in 370 mode, otherwise you will receive: FQVSFD050E CMS ABEND at X'291CBC', code 1CB; Dump has been taken, sent to FAQSVMDMSITP143T Addressing exception occurred at 86549680 in system routine VIEWSP; r DMSABE2047I AUTODUMP dump started; please wait DMSABE1297I Dump has been taken HCPGIR450W CP entered; disabled wait PSW 000A0000 80E77268



---

## Chapter 7. CONSERVE Message Definition and the Programmable Operator

This chapter gives a short description of the programmable operator, how it works and how CONSERVE works. It also gives an overview of the functions available in PROP and CONSERVE of FAQs/ASO for VM. Be aware that this chapter only relates to the CONSERVE feature of FAQs/ASO for VM.

---

### 7.1 What is a Programmable Operator

Programmable Operator (**PROP**) is an integral part of VM. The required modules and EXECs are supplied with the VM system and reside on the CMS system disk, normally MAINT's 190 mdisk. It is useful for filtering out non-essential messages, so that the real operator only sees the important ones, or automatically responding to messages with pre-programmed actions, and is also capable of acting as a focal point, accepting messages from multiple virtual machines.

PROP usually runs in a disconnected machine and passes any messages it cannot handle to another virtual machine, known as the logical operator. This logical operator should be monitored by the real operator and actions taken appropriately. The logical operator can be on the same VM system as the PROP machine, or it can be on another one connected via RSCS.

PROP needs only two things to enable it to run:

1. A Routing Table (RTABLE)
2. Action Routines

---

### 7.2 How PROP Works

When PROP is started, it receives messages and commands via IUCV sent from the Control Program (CP) or from CMS Virtual Machines. All incoming messages are logged (if logging is active) and then it searches through the Routing Table (RTABLE) to see if the message conforms to any of the filtering criteria and to determine which action to take.

PROP can service as many guest systems as required, each PROP runs with its own RTABLE. It receives messages from the guest, filters them, passes them to the logical operator's console, doing actions or only writes to the console log.

- Let us examine a sample routing table and see what happens when a message is received that requires an action routine and also what happens when a message is received that only has to be filtered.

The sample RTABLE follows.

```

*          ----- SPECIFY THE PROP CONFIGURATION -----

* IDENTIFY THE LOGICAL OPERATOR

LGLOPR OPERATOR

* BLANK SEPARATOR IS ¢/¢, ARBCHAR SEPARATOR IS ¢$¢, †NOT† SYMBOL IS ¢ ¢

TEXTSYM / $

* DO LOGGING WHEN THIS TABLE IS IN EFFECT

LOGGING ON

ROUTE      ----- END OF CONFIGURATION SPECIFICATION -----

*-----
*T          S E T U          N          A          P
*X          C C Y S          O          C          A
*T          O O P E          D          T          R
*T          L L E R          E          N          M
*-----
* FILTER OUT LOGON, LOGOFF, ETC. MESSAGES SO OPERATOR NEEDN¢T SEE THEM
*-----
/OUTPUT OF          19 27 3
/LOGON              19 23 3
/LOGOFF$ FORCED     19 80 3
/DISCONNECT         19 27 3
/RECONNECT          19 27 3
/DIAL               19 22 3
/DROP               19 22 3
/IST663I            1  8                VNET
*-----
* SEND FILTERED ASYNCHRONOUS CP MESSAGE STREAM TO LOGICAL OPERATOR
*-----
                          3                DMSPOS  LGLOPR
*-----
* SEND A CP OR CMS COMMAND TO VM TO BE EXECUTED
*-----
/CMD /              1  4    FAQSEXEC BOEVMIS1 DMSPOR  TOVM
/CMD /              1  4    ASOMAINI BOEVMIS1 DMSPOR  TOVM
/CMD /              1  4    ASOUSER  BOEVMIS1 DMSPOR  TOVM
/CMD /              1  4    OPERATOR BOEVMIS1 DMSPOR  TOVM
/CMD /              1  4    MAINT     BOEVMIS1 DMSPOR  TOVM
*-----
* QUERY PROGRAMMABLE OPERATOR SETTINGS
*-----
/QUERY /            1  6    OPERATOR BOEVMIS1 DMSPOR  QUERY
/QUERY /            1  6    MAINT     BOEVMIS1 DMSPOR  QUERY
/QUERY /            1  6    ASOUSER  BOEVMIS1 DMSPOR  QUERY
/QUERY /            1  6    ASOMAINI BOEVMIS1 DMSPOR  QUERY

```

**EXAMPLE ONE** *A message that requires an Action Routine.*

- A message from VTAM with **IST663I** in columns 1 to 8 is received.
- It passes through the routing table and it is determined that if a message from any user starting with "IST663I" in columns 1 to 8 is received an action routine called **VNET** should be run.

The action routine is an EXEC or MODULE written by the user to do some kind of action. In this case it could send a

message to VTAM to determine the cause of the problem and take emergency action if required

**EXAMPLE TWO** *A message that only needs to be filtered.*

- When a user issues a LOGON to a VM system a message is sent to the OPERATOR id.
- When a message with the word LOGON in columns 19 to 23 is received the message is written to the log and no other action is taken.

**Note:** More information on using PROP is in the *CMS Planning and Administration Guide*, Chapter 5.

### 7.3 How CONSERVE Message Definition Works

When CONSERVE has to filter a message, you have to enter the "PARMUPD" command on the CONSERVE command line, select option 3 "Message Definition", and specify the kind of filtering and action necessary via option 3 on the menu. See the following example of a CONSERVE message definition menu:

```

CONSERVE Message Definitions

Class : ANY_____ Userid: _____

Cmd  Pattern                                     A Clr  Class
-----
=== ***** Beginning of Search *****
=== $¢fqvarc¢??¢R¢$                             A      MSG  Userid
=== $                                           LOG  OPERATOR
=== $                                           MAT  &EXEC
=== $                                           ANY  &EXEC
=== $¢test server¢                               SMSG
=== $¢acc192¢                                     SMSG
=== $¢(batchmon)¢$                              A UND  MSG  OPERATOR
=== ¢PRT¢$¢PRINTING¢$                          CP    SYSTEM
=== ???¢RSE501A PRT¢$¢INT REQ¢$               A      CP    SYSTEM
=== ¢PRT¢$¢WAITING¢$                           CP    SYSTEM
=== $                                           A      WNG
=== $¢INT REQ¢$                                 A      CP    SYSTEM

```

The following items may be used in a message pattern:

CONSERVE Message Definitions

Item	Description
'text'	Exact text match
(nn)	Move to position nn in text
¬	NOT following item
/	any number of blanks
\$	Any number of characters
\$nn	Exactly nn characters of anything

? Any single character  
**CUU(xxx-xxx)** Device address in specified range  
**CCUU(xxxx-xxxx)** Device address in specified range

These items may be used in nearly any combination, with the restriction that the "-" character cannot precede anything but constant text, "?", "CUU" and "CCUU" specifications.

The example on the next screen shows a definition class **CP**, the message shall be displayed and an action called **PRINOTE** shall run on the system when message **???'RSE501A PRT'\$'INT REQ'\$** appears. The **???** means, that any three characters can be before the exact text denoted between the quotes. A **'''\$'** within the text, means any number of characters

---

```

CONSERVE Message Definition Detail

Class      : CP_____  USERID : SYSTEM__  Site: _____
Pattern    : ???'RSE501A PRT'$'INT REQ'$_____
Message text:
Valid times : 0:00 to 23:59

Action     : YES          Alarm : NO_
Color      : _____
Display    : YES_____  Pass on: NO_      Hardcopy : YES

EXEC       : PRINOTE_    Update : NO_
Parameter  : _____

Route: User: _____ Node: _____ User: _____ Node: _____
      User: _____ Node: _____ User: _____ Node: _____
      User: _____ Node: _____ User: _____ Node: _____
      User: _____ Node: _____ User: _____ Node: _____
      User: _____ Node: _____ User: _____ Node: _____

This specifies the actual pattern to be used in matching
messages. It may be entered directly or generated from the message
text.

```

---

### 7.3.1 Defining Actions in CONSERVE

Actions are easily defined in CONSERVE. Enter "PARMUPD" on the CONSERVE command line and select option 5 "Scheduled commands".

A few possibilities follow:

- It can send messages to any virtual machine when a job finished with return code > 0.
- It can release jobs monthly, weekly, daily or at a specified time.
- You can specify the order in which jobs should run, and you can also specify what to do when one of the jobs in the chain fails.

- You can create chains of jobs for BATCH.
- In the following example the message **SEND VTAM VTAM V NET INACT ID=LKITSC94** is sent to VTAM at 17.00 hours. The message is sent only on weekdays but not on Saturdays or Sundays.

---

```

CONSERVE Command Scheduling Detail

First or only time: 17.00  Last time:          Interval: only  Archive(Y/N):

On these   M T W T F S S  or when this  or when this  or when this
1. Day(s):  _ _ _ _ _ _ _  _____
2. Date(s):  __ to __      Month(s):  _____ to _____
3. The first _____ before  ___ after ___
4. The last  _____ before  ___ after ___
5. The      _____ nearest to ___
6. Also, the day must be:  WEEKDAY_____ and _____
7. Also, the day must be:  _____ or _____
8. Also, the day must NOT be:  SATURDAY_____ and SUNDAY_____
9. Also, the day must NOT be:  _____ or _____

Command: SEND VTAM VTAM V NET INACT, ID=LKITSC94_____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____
Command: _____

```

---

## 7.4 Controlling VSE with PROP and FAQS/ASO for VM

We wanted to set up an environment similar to the one described in the ITSO redbook *GG24-3847 Controlling Multiple VSE Systems Under VM/ESA* to be able to control VSE not only using PROP but also using FAQS/ASO for VM.

**Note:** Due to the fact that communication with VSE is done via the **Virtual Machine Communication Facility (VMCF)** feature, and that the VSE systems we had installed were evaluating FAQS/ASO for VSE at the same time, and FAQS/ASO for VSE alters the VMCF facility in VSE, we could not set up this facility.

We informed the LEGENT representative of the problem with VMCF and the reply was, that FAQS/ASO for VM and VSE were never used together in this way before, but a change in this area will be investigated.

**Note:** If FAQS/ASO for VSE is running in the VSE system, communication between the two systems is achieved by SMSG commands starting REXX procedures on other VSE or VM systems. Please refer to the appropriate description in the FAQS/ASO for VSE documentation.

## 7.5 Comparing PROP with CONSERVE

After **FAQS/ASO for VM** was installed and customized, we installed a few filters in CONSERVE, and we also tailored the programmable operator to filter the same messages and we found that the effect of both was exactly the same.

This led us to the following observations:

- If you have a fully developed PROP running there is no reason to change it.
- If you are just starting with message filtering, it might be a little easier using CONSERVE as it is all panel driven and somehow easier to understand.
- There are no reasons why you could not run both procedures, but the following are a few things to look out for:
  - You will have **two** systems to administrate, PROP and CONSERVE.
  - In case of a filtering error, you will have to search for this error in two different systems.
  - Deciding which facility to use when having to filter new messages or installing new actions.

Our recommendation is to use only one of the two facilities, but in our opinion CONSERVE is a lot more user friendly and easier to use and should be used in systems where no filtering is done yet.

The following figure shows comparisons between CONSERVE and PROP.

Programmable Operator VM		
LEGENT FAQS/ASO VM		
Filter messages.	Y	Y
Rec. mess.from remote users and filter them.	Y	Y
Release actions dependent on a message.	Y	Y
Send messages to users.	Y	Y
Release actions on time.	Y	N
Release action chains and control them.	Y	Y
Changes in CONSERVE online.	Y	
Changes in PROP RTABLE online.		N
Created Actions in CONSERVE online.	Y	
Created Actions in PROP online.		N
Using VMCF in CONSERVE and PROP.	N	Y

Figure 57. Comparisons between CONSERVE and PROP



---

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**International Technical Support Organization  
System Management with FAQs/ASO for VM  
in a VM/VSE Environment  
February 1995**

**Publication No. GG24-4268-00**

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Runtime values:

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Document type .....	USERDOC
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Profile .....	EDFPRF30
Service Level .....	0029
SCRIPT/VS Release .....	4.0.0
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SYSVAR G .....	INLINE
SYSVAR V .....	ITSCEVAL

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Cross reference head prefix only .....	NO
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Head 1 appendix text .....	Appendix
Hyphenation .....	NO
Justification .....	NO
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Print cross reference page numbers .....	YES
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