

VM/SYSTEM PRODUCT RELEASE 2

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A new release of the VM/System Product (VM/SP) is announced. This release contains all of the functions currently available in Release 1 of the VM/System Product. In addition to the Release 1 system functions, VM/SP Release 2 will also contain the following new or enhanced capabilities:

- o Programmable Operator support.
- o New CMS functions for the End-User.
- o New CMS Productivity Aids provided for the DP Professional.
- o DIAL command support for remote BSC 3270 Users.
- o CMS Nucleus restructured.
- o Removal of the CMS Tokenization eight-byte restriction.
- o Starter System full screen support.
- o Enhanced HELP file installation.
- o CMS/DOS upgrade to VSE/Advanced Functions Release 3.
- o A Command Retrieve capability.
- o Query command enhanced to obtain System Identification information.
- o Enhanced ASCII support.
- o Enhanced 3800 support.
- o Trace Table Recording Facility.

SUMMARY OF THE RELEASE 2 ENHANCEMENTS

Programmable Operator Support:

The Programmable Operator facility can be used in a VM/SP system to reduce or eliminate system operator messages. This facility provides the capability to log messages, suppress messages, redirect messages, execute commands, and pre-program message responses, all under the control of an editable message routing table in a CMS file.

The Programmable Operator facility can be used by a stand-alone VM/SP system or can allow the operation of a remote VM/SP system to be controlled by an operator at a host VM/SP system. Remote operation of a VM/SP system requires Release 2 or Release 3 of the RSCS Networking Program Product on both VM/SP systems. Installation of the RSCS Networking Release 3 Program Product will provide enhanced display utilization.

New CMS End-User Functions:

Numerous end user functions are being provided to assist the non-professional user as well as the professional user in utilizing the system. These functions are provided to enhance

the system usability and to improve user productivity. These functions provide:

- o The new VM/SP SENDFILE and RECEIVE commands may be used in conjunction with the TSO/E Interactive Data Transmission Facility TRANSMIT and RECEIVE commands to exchange files between VM/SP Release 2 and MVS/TSO Systems connected through an NJE/NJI network.
- o enhanced full screen capability to display information about Reader Spool files. Allows the ability to review/browse through files, to discard files, or initiate other actions such as to copy the file to other media.
- o a full screen capability to display file information (information presented is similar to what LISTFILE provides today) and issue CMS commands that perform some type(s) of action on the file(s) being displayed. Program function keys are also assigned to useful functions like EDIT, SORT, or HELP.
- o Enhanced command capability such as:
 - a. Header option on Print
 - b. DISK LOAD extended to allow sequence verification and the ability to load a file and retain its original date/time.
 - c. Ability to specify '=' for any file identifier in the fileid2 operand of the COMPARE command.
 - d. LISTFILE enhanced to allow 'STACK', 'ARGS', 'BLOCK', 'TRACE', 'FIFO', 'LIFO', and extended pattern matching options.
 - e. UPDATE extended to keep a record of missing PTF files.
 - f. A new command to display environmental status such as userid, nodeid, date, time, zone.

New CMS Productivity Aids for the DP Professional:

CMS has been enhanced to provide the DP professional user with several productivity enhancements to make system implementation easier. These productivity enhancements provide:

- o a CMS facility to allow I/O between a device and an EXEC program.
- o the ability to dynamically extend the CMS nucleus.
- o a routine to display at the console or stack virtual reader file characteristics.
- o an enhanced CMS QUERY command to display CMSLEVEL information such as product name, release identification, service level, and information regarding virtual disks that are accessed. In addition, QUERY command results can be stacked.

- o a GLOBALV command which allows a user to maintain a collection of named values whose lifetime is either within a single IPL, within a session, or across sessions.
- o the ability to specify that portions of a line should be displayed, highlighted, protected, and/or masked using the VM/SP editor.
- o the ability to directly access EXEC 2 variables from a program. Variables may then be inspected and/or set.

DIAL Command support for Remote BSC 3270 Users:

This support provides the ability for remote BSC 3270 users to issue the DIAL command. The remote 3270 will appear to be as a locally attached terminal to the dialed virtual machine.

In addition, this support removes the previous restriction of 16 remote communication lines. The maximum number of remote communication lines is now 256.

CMS Nucleus Restructured:

The CMS nucleus has been restructured to provide a CMS system which is more flexible and extendible for development, serviceability, and maintenance purposes.

CMS Tokenization:

The eight-byte tokenization restriction has been eliminated for parameter passing.

Starter System Full Screen Support:

The ability to operate the new CMS editor in full screen mode has been extended to the VM/SP Starter System running second-level. Previously, the new CMS editor would only run in single line mode.

HELP Files:

The HELP files can now be placed on disks other than the S-DISK.

CMS/DOS Upgrade:

CMS/DOS support has been upgraded to VSE/Advanced Functions Release 3 and VSE/VSAM Release 2 including support for the 3375 DASD as announced in blue letter 280-059.

Command Retrieve Capability:

The CP SET Program Function command is enhanced to include the option "RETRIEVE". When specified, the system will save input lines. When the specified program function key is pressed, the saved input lines are redisplayed in the reverse sequence of entry. The number of saved lines depends upon buffer size and input line length.

QUERY Command Enhanced:

The QUERY command is enhanced to allow the user to specify the

operands "USERID" or "CPLEVEL". The Query USERID command responds with the userid and with the system identifier of the

system that the user is logged on to.

The Query CPLEVEL provides information relative to the software product's name (e.g. VM/SP), Release number, Service level number, Nucleus Creation Date and time, along with the IPL Date and Time. Timezone information is also included.

Enhanced ASCII Support:

ASCII support has been enhanced to provide the 3101 terminal user with the following capability:

- o Screen management - controlled scrolling of output.
- o Improved communication line utilization - compression of contiguous blanks.
- o Program function key support (1-8).

In addition, support for other ASCII terminal users has been enhanced with the following:

- o Prompting - Linefeed prompting can be selected to allow data to be entered starting in column 1.
- o Read operations can be command-chained to write operations.
- o Linesize Control option has been added.

Enhanced 3800 Support:

This enhancement allows the RSCS Networking Release 3 program product to pass to CP the 3800 attributes defined in a NJI header created by a system using the NJI protocol. This will also allow files created in these systems to print properly on a 3800 controlled by VM/SP Release 2. Copy group and burst attributes remain unsupported.

Trace Table Recording Facility:

A new serviceability enhancement is provided to record a history of system operations on spool. This facility is controlled by a new Class C command. Selective recording of CP trace entries by type, VMBLOK address, interrupt code, and device type is provided. In addition, user generated information from a virtual machine and CP information can be included.

A utility program is also provided. This utility provides the user with the capability to print the collected information or display it on a terminal.

As a customer convenience, the Class 2 SCP Standalone Device Support Facility is being shipped in conjunction with VM/System Product. Device Support Facility is a utility used to initialize DASD volumes or mini disks and performs data analysis and

recovery either stand-alone or in a virtual machine under VM/SP.

SPECIFIED OPERATING ENVIRONMENT:

Machine Requirements: The VM/System Product is designed to run on the IBM System/370 Models 135, 135-3, 138, 145, 145-3, 148, 155II, 158, 158-3, 158AP, 158MP, 165II, 168, 168-3, 168AP, and 168MP; on the IBM 3031, 3031AP, 3032, 3033, 3033N, 3033S, 3033AP, 3033AP-2, and 3033MP processor complexes; on the IBM 3081 processor complex and the IBM 4300 Processors.

NOTE: VM/SP Release 2 will support AP/MP and 3081-D16 processors by April, 1983.

Real Storage Requirement: VM/SP Release 2 requires a minimum user accessible storage of 512K.

ECPS:VM/370 Support:

Model No.	VM/370	Availability
135-3	Level 18	EC #149136 and later
138	Level 18	EC #149136 and later
145-3	Level 18	EC #356901 and later
148	Level 18	EC #147710 and later
4331MG1	Level 19	EC #364290 and later
4331MG2	Level 19	EC #364415 and later
4341MG1	Level 19	EC #154315 and later
4341MG2	Level 19	EC #856093 and later
3031	Level 19	EC #274276 and later
3031AP	Level 19	EC #274276/388860 and later

Notes:

1. VM/SP will execute on the 135-3, 138, 145-3 and 148 processors at earlier EC levels, but the hardware assist will not be used.
2. The 4331 Model Groups 1 & 2, 3031 and 3031AP processors support a subset of full ECPS:VM/370 function.
3. If users running the VM/SP on System/370 Models 135-3, 138, 145-3, 148 or the 4341 Model Group 1 processor with ECPS for VM/370 also choose to use the shadow table maintenance functions of the VM/SP, they will not realize the full benefit of ECPS. This is because the shadow table maintenance algorithms will be used in preference to some ECPS algorithms.
4. CMS disk I/O (Diagnose 18) has been modified to take advantage of ECPS:VM/370 for CCW translation. The improvement is available with the existing ECPS:VM/370 assist on the System/370 Models 135-3, 138, 145-3, 148 processors. The improvement is also available with the

ECPS:VM/370 assist on the 4341 processors.

5. The ECPS:VM/370 and ECPS:MVS options on the 4341 Model Group 1 are mutually exclusive. The 4341 Model Group 1 Processor MVS users who have specific throughput or terminal response requirements and who plan to run the MVS/System Products in conjunction with the VM/SP should carefully review their configurations to ensure that expected performance needs are met.
6. The ECPS:VM/370 and ECPS:MVS options may be concurrently utilized on the 4341 Model Group 2 Processor, whenever ECPS:VM/370 and ECPS:MVS are both selected at IML time.
7. On the 3031 and 3031AP processors, an engineering change (EC #276271 and later) is available to improve the performance gains of the shadow table function of the VM/SP. Because system performance is dependent on a number of variables, IBM will not warrant that improvement in performance will be realized in all cases where the VM/SP shadow table function is activated.

Programming Requirements:

VSE/VSAM Release 2 program product support and CMS/DOS services for VSE/Advanced Functions Release 3 are supported by VM/SP Release 2.

MVS support for data exchange between VM/SP Release 2 and MVS is provided by the TSO Extensions (TSO/E) Licensed Programs.

COMPATIBILITY: Application programs that currently execute under VM/Basic System Extensions, VM/System Extensions, and the VM/SP Release 1 program products and are not dependent on internal CP or CMS structure and/or control blocks should also run on VM/System Product Release 2.

CONVERSION: Other than the optional compatibility macros announced in VM/SP Release 1, no conversion aids are required to move from VM/Basic System Extensions Release 2, VM/System Extensions Release 2, or VM/SP Release 1 to Release 2 of VM/SP.

SERVICEABILITY: Improved serviceability of the VM/SP environment can be achieved upon installation of the VM/IPCS Extensions Release 2 program product (5748-SA1) and its corresponding service level containing the VM/SP Release 2 updates. With the IPCS component of the VM/370 SCP Release 6, certain control blocks and control block extensions will not be formatted because they have been modified for the VM/SP program product. The VM/SP General Information Manual (GC20-1838) contains a list of these control blocks and control block extensions.

SECURITY, AUDITABILITY, AND CONTROL: Many of the Release 2 enhancements described earlier extend the VM/SP system in providing the user with facilities to control and monitor their system activities/operations. The customer is responsible for the selection, application, adequacy, and implementation of these features and for appropriate application and administrative controls.

EDUCATION: The VM/SP educational offerings will be updated to reflect the new facilities offered by VM/SP Release 2.

PLANNED AVAILABILITY: July, 1982.

CHARGES: Consult your IBM Marketing Representative.

TESTING PERIOD: 30 days.

PROGRAM SERVICES:

Central service, including the IBM support center, will be available until discontinued by IBM upon twelve (12) months' written notice.

LOCAL LICENSED PROGRAM SUPPORT:

Local licensed program support will be available until discontinued by IBM upon twelve (12) months' written notice.

This support will be provided under the terms and conditions of the Agreement for Local Licensed Program Support for IBM Licensed Programs at the monthly licensed program support charge, monthly

additional licensed program support charge, or will be provided at the applicable hourly rate. Local licensed program support will be provided by IBM Customer Engineering.

WARRANTED: Yes, in accordance with the Agreement for IBM Licensed Programs.

INSTALLATION LICENSE APPLIES: No. A separate license is required for each machine on which the licensed program materials will be used.

NOTE: VM/SP Release 2 will support AP/MP and 3081 processors by April, 1983.

CURRENCY STATEMENT: For purposes of IBM providing program services, the following products will remain current at least until the noted dates:

VM/System Extensions Releases 1 and 2 12/82

VM/System Product Release 1 1Q84
