IBM CICS VSAM Copy for z/OS allows rapid copying of one or more VSAM files with full integrity

Overview
This new utility is designed for creating copies of VSAM data sets that are used by CICS® applications. CICS VSAM Copy for z/OS® V1.1 allows the creation of "point-in-time" copies of VSAM files concurrent with business-critical online processing. Copies are made without interrupting the online user, who can continue to update the VSAM data sets being copied. The online CICS user is completely unaware that the copy takes place. There is no discernible effect on transaction response time in typical user situations.

Uniquely, CICS VSAM Copy creates a copy of a VSAM file, with full data integrity and consistency, without requiring activity on the VSAM data set to cease before starting the copy. The resulting copy does not contain any in-flight or ongoing units of work (UOWs) and therefore does not require any further processing before it can be used. The copy produced has the "point-in-time" consistency of a copy produced by an offline batch utility, without the disadvantage of application down time for batch processing.

Although designed to produce online copies of CICS files, the utility can also produce offline copies, without interaction with CICS.

Key prerequisites
- CICS Transaction Server for OS/390®, V1.3 (5655-147), or later or
- CICS Transaction Server for z/OS, V2 (5697-E93), or later

Planned availability date
June 25, 2004

At a glance
CICS VSAM Copy allows the creation of point-in-time copies of VSAM files concurrent with business-critical online processing activity. The resulting copy is identical in format to one created by an IDCAMS REPRO request but the copy process is more efficient.

- Allows copies to be made any time by an authorized user.
- Provides automatic registration of all VSAM data sets in all participating CICS regions. The requester does not need to know which CICS region owns the data set to be copied.
- Removes the affect on copying of control interval splits, control area splits, new extents, CICS task abends, or the backout of in-flight or continuous units of work (UOW).
- Works with data sets distributed over multiple volumes supporting all the VSAM data sets currently supported by CICS Transaction Server (CICS TS) except those listed in the Description section.

For ordering, contact:
Your IBM representative, an IBM Business Partner, or the Americas Call Centers at 800-IBM-CALL
Reference: LE001

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.
CICS VSAM Copy for z/OS V1.1 is a utility that allows you to create copies of one or more VSAM data sets. You can create copies of data sets that are allocated and open to CICS for update.

CICS is the foundation for running and managing many of the world’s mainframe applications. VSAM manages more than 50% of corporate data worldwide. Although often taken for granted, CICS and VSAM are critical to many business applications. CICS provides the link between end users, their applications, and data stored in VSAM data sets.

CICS is also a fundamental part of today’s e-business environment, often providing the primary transactional gateway for Internet or Intranet access to S/390® applications. Often it is new Web access to business applications that drives today’s customer needs for increased availability of online systems.

When a copy of critical VSAM data is required, for example for gathering an accurate snapshot of business information for offline analysis, users usually have to make a choice. They either keep the application available and have an inconsistent copy or make the application unavailable while a consistent copy is made in batch mode or online. Now, with the unique capabilities of CICS VSAM Copy, users can produce consistent copies online while keeping the application available to end users.

**Online vs. offline copy**

CICS VSAM Copy supports two modes of copying data sets, online mode or offline mode. Online mode means that the data set is open for update in a CICS region and can be updated during the copy process. Offline mode means the copy utility will attempt to allocate and open the data set according to the parameters specified. If successful, the copy will be made. Regardless of the copy mode, the resulting output data set is identical to one created in similar circumstances by IDCAMS REPRO (while the data set is unavailable for CICS update processing).

**Online mode copy requests**

The most important feature of CICS VSAM Copy is its ability to produce a consistent, point-in-time copy of a VSAM data set while it is being updated through CICS transactions. The online CICS user who may be concurrently updating the data set being copied does not have any indication that the copy is taking place. Of equal importance is the fact that the resulting copies do not contain any in-flight units of work (UOW). The copy is identical to a copy taken while update activity to the data set is quiesced.

Offline copy requests are processed within both the copy utility’s address space and the CICS region. In general, data is read from the data set from within the CICS region’s address space. Data is subsequently written to the output data set by subtasks running within the copy utility’s address space.

**Offline mode copy requests**

CICS VSAM Copy also supports offline copy requests. These are processed entirely in the copy utility’s address space. There is no interaction with CICS. In general, offline copy request processing is very similar to IDCAMS REPRO processing. If a consistent, point-in-time copy is required for an offline copy, you must make sure the data set cannot be updated while the offline copy is in progress.

**Dynamic mode copy requests**

Dynamic mode allows you to copy a data set without knowing whether a CICS region currently has update access to it. When a dynamic mode request is received, CICS VSAM Copy will first try to satisfy the request as an online mode copy by attempting to locate the data set within a CICS region. If a region that owns the data set cannot be found, CICS VSAM Copy will perform an offline copy for the data set.

**Types of VSAM data sets supported**

CICS VSAM Copy is capable of creating consistent copies, for all VSAM data sets that are under the control of a CICS region, for example: Key Sequenced Data Set (KSDS), Entry Sequenced Data Set (ESDS) and Relative Record Data Set (RRDS) with the restrictions listed at the end of this section.

**Achieving point-in-time consistent copies**

A copy request is initiated through a standard MVS™ job step. After performing various initialization tasks it initiates a monitor task in the CICS region that owns the file. The monitor task runs as a standard CICS application task.

At this point, the request enters what is referred to as “Synchronization Phase” or “Phase 1.” During Phase 1, “before-images” are kept for all updates to the file from tasks that started after the start of Phase 1. Phase 2 begins when all tasks that were active in the system before Phase 1 have either completed or issued a syncpoint to start a new Unit of Work (UOW), or been backed out. During Phase 2, as the VSAM file to be copied is read sequentially, CICS VSAM Copy analyzes the before-image information alongside the records being read from the file to determine which records should appear in the output data set.

As a result, the copy reflects only update activity that either happened before Phase 1 began or was part of a task or Unit of Work that was in progress when Phase 1 started. All activity from tasks started after the start of Phase 1 is excluded from the output data set.

**Operational efficiency**

By being able to create consistent copies online, users of CICS VSAM Copy avoid the need to schedule application downtime that will affect all end users. The user of CICS VSAM Copy also gets the copy on demand rather than waiting for it to be scheduled.

While its online operation makes CICS VSAM Copy very much more efficient than a traditional batch copy process, its ability to create consistent copies in real time offers substantial savings even over other copy utilities that claim to work “online.” CICS VSAM Copy uniquely allows all applications and all users to remain online during the copy process, even when they require access to the file that is to be copied.

Because CICS VSAM Copy is very easy to use and is non-disruptive, it can empower IT staff by eliminating the need to make copy requests through the data center. Your organization will achieve efficiency savings relative to the demand for copies of data.

CICS VSAM Copy is faster than IDCAMS. It can deliver significant savings during the peak hours, when copy requests often occur. CICS VSAM Copy is compatible with SMPE®, DFSMSdss®, System Managed Storage (SMS) and RACF®.
To simplify copy request processing, CICS VSAM Copy keeps an internal registry of all of the VSAM data sets owned by CICS regions that have CICS VSAM Copy started. By doing this, CICS VSAM Copy allows the user to copy or backup a data set without knowing which CICS region owns the data set.

Copy requests for multiple data sets

CICS VSAM COPY is capable of copying multiple VSAM data sets to the same "point in time." This can be useful, for instance, when copying all of the data sets that belong to the same application. The only restriction when doing this is that all of the data sets being copied in online mode must be owned by the same CICS region. If they are not, CICS VSAM Copy will detect this and the request will be terminated with an error. There are no restrictions on the types of CICS Supported VSAM data sets that can be copied together. A request can consist of a mix of all of the supported data set types.

Partial data set copy requests

CICS VSAM Copy allows the user to make partial copies of one or more VSAM data sets. This is accomplished by specifying a key range for the data set being addressed. Use of this feature will allow, for instance, users to create subsets of production data sets for uses such as testing.

Security considerations

CICS VSAM Copy uses the MVS System Authorization Facility (SAF). Before beginning the process for a data set, CICS VSAM Copy will issue standard SAF calls to ensure the requestor has READ access to the data set being addressed. If not, the copy request will be terminated with an appropriate message.

Simpler recovery procedures

Recovery procedures are made simpler when using CICS VSAM Copy, because:

- Copies for backup can be taken more frequently, so there are fewer forward recovery logs to manage. This also reduces the amount of processing required to forward recover the data set.
- The point from which forward recovery should start is recorded in the Integrated Catalog Facility (ICF) catalog. The CICS VSAM Recovery product uses this value to automate this part of the forward recovery process. This recovery point is saved with the backup copy and subsequently replaced in the ICF catalog when the backup copy is restored.
- During dataset restore and forward recovery processing, CICS does not allow files to be opened for the same data set.

Improved facilities for interaction between CICS VSAM Copy and CICS VSAM Recovery will be provided by enhancements to both products which will be delivered through the Service channel at a future date.

Output data sets

As described earlier, CICS VSAM Copy can produce as output either:

- Physical sequential data sets capable of being processed using standard QSAM methods. The data sets can be blocked or unblocked, with fixed or variable record length. CICS VSAM Copy will not change any data set characteristics during the copy, but will check that records do not become truncated.
- VSAM data sets that match the input data sets in at least the following attributes:
  - Type of VSAM data set (KSDS, RRDS, or ESDS)
  - Maximum record length
  - Key length and key position (if a KSDS)

Restrictions

- Shareoption 3/4 data sets (or any other VSAM data sets that are capable of being updated from more than one CICS region). If a request is received for a Shareoption 3/4 data set, CICS VSAM Copy will generate a job log message to this effect, then continue with the request. It is up to the user to ensure before the process begins, that the data set is being updated only from the CICS region that CICS VSAM Copy is processing.
- Entry Sequence Data Sets (ESDSs) with alternate index paths are not supported, nor are they detected. It is the responsibility of the CICS VSAM Copy user to recognize this restriction and not attempt to copy a data set in this scenario.
- VSAM KSDS data sets with alternate index paths cannot be copied through a path component. An attempt to do this will be detected and the request will be terminated. Copying, a VSAM data set with alternate index paths through the base cluster is fully supported. CICS VSAM Copy also supports update activity through both the base and the paths while a copy through the base is in progress.

Accessibility by people with disabilities

CICS VSAM Copy for z/OS, V1.1 is operated using the keyboard. The product displays standard 3270 panels, which are accessible by people with visual impairment by using assistive technology products. The product documentation is provided in softcopy (PDF) format.

Section 508 of the U.S. Rehabilitation Act

CICS VSAM Copy is capable as of June 25, 2004 when used in accordance with IBM’s associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

Value Unit-based pricing

Value Unit-based pricing will help align the prices of these products to the principle of the PSLC pricing curve, which provides for a lower price per MSU (millions of service units per hour) for larger capacities.

There is also a price benefit when customers grow their capacity. Additional capacity will be based on the number of Value Units (MSUs) the customer has already installed; for example, additional capacity will not be priced starting at the base with a higher price per unit but on the capacity that is already installed.

Note that Value Units of a given product cannot be exchanged, interchanged, or aggregated with Value Units of another product.
IBM International Programming License Agreement (IPLA) and subscription and support considerations

IPLA licenses can be transferred from one machine to another within, but not limited to an enterprise. The customer may aggregate the capacity for all the processors the product is operated on to achieve a more economic price. This will result in a single Proof of Entitlement. It is the customer’s responsibility to manage the distribution of Value Units within the limits of the entitlement of the product license.

Subscription and Support must cover the same capacity as the product license entitlement. Subscription and Support will be available in the country in which the agreement is made.

Product positioning

CICS VSAM Copy V1.1 provides the ability to make point in time copies of VSAM datasets. This tool creates copies of VSAM datasets, with no interruption to online users, and typically no effect on transaction times while these copies are being made. CICS VSAM Copy manages the copying process, so that no in-flight units of work are included within the copy. CICS VSAM Copy is designed to be complementary with and to enhance a customer’s existing VSAM recovery solution.

Highlights

- Rapidly copies one or more VSAM files, with full integrity.
- Can be used, by any authorized person, to make copies at any time.
- Creates point-in time copies of VSAM files, concurrent with business-critical online processing activity.
- Resulting copies are identical in format to those that would be created by an IDCAMS REPRO.
- Automatically registers all VSAM data sets in all participating CICS regions, so that a requester does not need to know which CICS region owns a data set to be copied.
- Copying is not affected by control interval splits, control area splits, new extents, CICS task abends, or the backout of in-flight UOWs.
- Works with data sets that are distributed over multiple volumes, and are currently supported by CICS TS. Refer to restrictions in the Description section of this announcement.

Trademarks

MVS and DFSMSdss are trademarks of International Business Machines Corporation in the United States or other countries or both.
CICS, z/OS, OS/390, S/390, and RACF are registered trademarks of International Business Machines Corporation in the United States or other countries or both.
Other company, product, and service names may be trademarks or service marks of others.
Education support

No education course is available for this product. However, an online technical presentation is available from

http://www.ibm.com/cics

Offering Information

Product information is available via the Offering Information Web site

http://www.ibm.com/common/ssi

Publications

The hardcopy publication CICS® VSAM Copy for z/OS® — Program Directory (GI10-2579) is shipped with this product.

The CICS VSAM Copy for z/OS — User’s Guide (SC34-6339) publication is available only in PDF format, softcopy.

All publications are available in PDF format. This is provided only by download from the IBM Publications Center Web site, at

http://www.ibm.com/shop/publications/order

Customers who require hardcopy of the documentation can print copies from the from the PDF files.

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 50 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries free of charge.

The IBM Publications Notification System

http://service5.boulder.ibm.com/pnsrege.nsf/messages/welcome

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Technical information

Hardware requirements: CICS VSAM Copy for z/OS, V1.1 runs on any S/390® or IBM zSeries® machine on which the applicable CICS TS will run.

Software requirements: CICS VSAM Copy requires:

• CICS TS for OS/390®, V1.3 (5655-147)
• CICS TS for z/OS, V2 (5697-E93)

Planning information

Packaging

• IBM International Program License Agreement in multi-language booklet, (Z125-3301)
• License Information for CICS VSAM Copy for z/OS, V1.1, (GC34-6340) in multiple languages
• Proof of entitlement
• Program Directory for CICS VSAM Copy for z/OS, V1.1, (GI10-2579)
• 3480 1/2-inch tape cartridge, containing a Customized Offering (CBPDO or ServerPac) delivery of all components of the product

Security, audibility, and control

CICS VSAM Copy for z/OS, V1.1 uses the security and audibility features of the base CICS Transaction Server for OS/390 or CICS Transaction Server for z/OS with which it is operating. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering information

CICS VSAM Copy for z/OS, V1.1 is a mainframe product licensed by the International IBM Program License Agreement. It has a single charge unit, based on Value Units.

New licensees: The CFSW configurator stand-alone path for 5655-L66 will be updated to support price proposals on June 8, 2004. For 5655-L66, media is only shipped via Customized Offerings (ServerPac, SystemPac®, and CBPDO). CFSW configuration and order entry capability will commence with CBPDO on June 22, 2004.
Value Unit exhibit VUE007

<table>
<thead>
<tr>
<th>Value Unit exhibit VUE007</th>
<th>MSUs</th>
<th>MSUs</th>
<th>Value Units/MSU</th>
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<tr>
<td>Base</td>
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<td>1</td>
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<tr>
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<tr>
<td>Tier C</td>
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<tr>
<td>Tier D</td>
<td>316+</td>
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<td>0.2</td>
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Value Units for non MSU-based S/390 processors:

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<tr>
<th>Hardware</th>
<th>Value Units/machine</th>
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<tbody>
<tr>
<td>MP3000 H30</td>
<td>6</td>
</tr>
<tr>
<td>MP3000 H50</td>
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<tr>
<td>MP3000 H70</td>
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<tr>
<td>ESL Models</td>
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</tbody>
</table>

Ordering example

The total number of Value Units is calculated according to the following example.

If the customer has installed 1,500 MSUs, the applicable Value Units would be:

Translation from MSUs to Value Units

<table>
<thead>
<tr>
<th>MSUs</th>
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</tr>
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<tbody>
<tr>
<td>Base</td>
<td>3</td>
<td>1.00</td>
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<td></td>
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</tr>
<tr>
<td>Tier A</td>
<td>45</td>
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<tr>
<td></td>
<td></td>
<td>18.90</td>
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<tr>
<td>Tier B</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>56.50</td>
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<td>Tier C</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>85.50</td>
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<tr>
<td>Tier D</td>
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<td>0.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>237.00</td>
</tr>
<tr>
<td>Total</td>
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<td>343.50</td>
</tr>
</tbody>
</table>

When calculating the total number of Value Units, the sum is to be rounded up to the next integer.

Example: In the above ordering example, for the product running on a machine with 1,500 MSUs requiring 344 Value Units, order feature number S010LL2.

Ordering z/OS through the Internet

ShopzSeries provides an easy way to plan and order your z/OS ServerPac or CBPDO. It will analyze your current installation, determine the correct product migration, and present your new configuration based on z/OS. Additional products can also be added to your order (including determination of whether all product requisites are satisfied). ShopzSeries is available in the U.S. and several countries in Europe. In countries where ShopzSeries is not available yet, contact your IBM representative (or IBM Business Partner) to handle your order via the traditional IBM ordering process. For more details and availability, visit the ShopzSeries Web site at http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp

The products in this announcement have one charge unit — Value Units.

Value Units for IBM 9672 processors will be based upon the full capacity of these systems. This is applicable to all S/390-based systems that are measured on MSU capacity. Information on MSU capacities can be found in the IBM System/370®, System/390® and zSeries Machine Exhibit (Z125-3901).

Value Units for zSeries will be based upon full MSU capacity as defined in the Machine Exhibits.

A tool will be available that provides support for transforming the MSU-based capacities of S/390 systems to new Value Units by calculating the applicable number of Value Units for a given number of MSUs.

**Basic license:** To order, specify the program number, feature number 9001 for asset registration, and the one-time charge (OTC) feature number. Also specify the feature number of the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

Translation from MSUs to Value Units

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<td>237.00</td>
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</table>

Note: The products in this announcement are available with IBM Software On Off Capacity on Demand (OOCoD²). For additional information on OOCd, refer to Software Announcement 203-202, dated August 12, 2003.

² CoDTUC = Capacity on Demand Temporary Use Charge

Subscription and support

To receive voice technical support via telephone during normal business hours, and upgrades at no additional charge, Subscription and Support must be ordered. The capacity of Subscription and Support (Value Units) must be the same as the capacity ordered for the product licenses.

To order, specify the support program number (in this case, 5655-L67) and feature number 9001 for asset registration. IBM is also providing subscription and support for these products via a separately purchased offering under the terms of the IBM International Agreement for Acquisition of Support (IAAS). This Offering:

- Includes and extends the support services provided in the base support to include technical support via telephone during normal business hours.
- Entitles customers to product upgrades at no additional charge. Note that the customer is not entitled for new products.

Once subscription and support is ordered, the charges will renew automatically annually unless cancelled by the customer.

<table>
<thead>
<tr>
<th>Program number</th>
<th>Description</th>
<th>Entitlement Identifier</th>
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<tbody>
<tr>
<td>5655-L67</td>
<td>CICS VSAM Copy for z/OS, V1</td>
<td>S010LL5</td>
</tr>
</tbody>
</table>

The products in this announcement have one charge unit — Value Units.
Single version charging: To elect single version charging, the customer must notify and identify to IBM the prior program and replacement program and the machine the programs are operating on.

On/Off Capacity on Demand
Entitlement identifier S010LL2

Customized offerings
Product media is shipped only via Customized Offerings (for example, CBPDO, ServerPac, SystemPac). Non-customized items (CDs, diskettes, source media, media kits) will continue to be shipped via the stand-alone product.

Terms and conditions

Agreement: IPLA — Proofs of entitlement are required for all authorized use.

These products are licensed under the IPLA, the associated Agreement for Acquisition of Support, and the Addendum for Support (Z125-6435) which provides for support with ongoing access to releases and versions of the program. These programs have a one-time license charge for use of the program and an ongoing recurring charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours) as well as access to updates, releases, and versions of the program as long as support is in effect. S/390 and zSeries IBM Operational Support Services — Support Line/SoftwareXcel is an option for those customers who desire added services.

Limited warranty: Yes

Warranty: This program has warranty for a minimum of one year from acquisition from IBM or authorized IBM Business Partner. The warranty provided to the customer, for at least one year from acquisition, is access to databases (read Web sites) for program information and FAQs, including any known fixes to defects, which the customer can download or obtain otherwise and install at leisure.

Program support: Enhanced Support, called Subscription and Support, includes telephone assistance (voice support for defects during normal business hours) as well as access to updates, releases, and versions of the program as long as support is in effect. The customer will be notified of discontinuance of support with 12 months’ notice.

Money-back guarantee: If for any reason you are dissatisfied with the program, return it within 30 days from the invoice date to the party (either IBM or its reseller) from whom you acquired it for a refund. This applies only to your first acquisition of the program.

Copy and use on home/portable computer: No

Volume orders (IVO): No

Passport Advantage® applies: No

Software Maintenance applies: No

For operating system software, the revised IBM Operational Support Services — SoftwareXcel offering will provide support for those operating systems and associated products that are not available with the newly announced Software Maintenance offering. This will ensure total support coverage for your enterprise needs, including IBM and selected non-IBM products. For complete lists of products supported under both the current and revised SoftwareXcel offering, visit http://www.ibm.com/services/si/products

For additional information on the revised IBM Operational Support Services, refer to Services Announcement 601-023, dated July 10, 2001.

IBM Operational Support Services — SoftwareXcel: Yes

AIX®/UNIX® upgrade protection applies: No

Entitled upgrade for current AIX/UNIX upgrade protection licensees: No

iSeries™ Software Subscription applies: No

Variable charges apply: No

Educational allowance available: Yes, 15% education allowance applies to qualified education institution customers.

Sub-capacity charges terms and conditions

zSeries software charges at less than full machine capacity for eligible tools apply when z/OS is running in z/Architecture™ (64 bit) mode on a zSeries 900, no other MVS™-based operating system is licensed to that server and the required information is provided by the customer in accordance with the applicable terms.

Sub-capacity charges for an eligible tool is based on the z/OS product defined capacity. To obtain charges at less than full machine capacity for eligible tools, the customer is required to

• Determine the MSUs needed for each machine on which the tools will run. Only machines on which the customer has implemented sub-capacity Workstation License Charges (WLC) according to the above terms and conditions, are eligible for charges at less than full machine capacity for the tools.

• Use the product defined capacity for z/OS (as specified on the Sub-Capacity Reports submitted to IBM for sub-capacity WLC) as the sub-capacity (MSUs) for each tool.

• Submit any additional MSUs and/or Value Units required for each product along with the current entitlement in Value Units for each product.

Sub-capacity charges for tools

To be eligible for sub-capacity charges for tools, the machine on which the tools are running must be eligible for WLC sub-capacity charges terms and conditions. The customer must have signed the Attachment for zSeries Workload License Charges Pre-ILM (Z125-6516), and submitted at least one Sub-Capacity Report to IBM as defined in the attachment.
With sub-capacity charges, the charge for an eligible tool is based on the z/OS product defined capacity. To obtain charges at less than full machine capacity for each eligible tool for each machine, the customer should:

- Determine the MSUs needed for the machine on which the tools will run. In a data sharing environment, determine the aggregate MSUs needed on the machine where the tools run. Use the product defined capacity (MSUs) for z/OS (as specified on the Sub-Capacity Reports submitted to IBM for sub-capacity WLC) as the sub-capacity (MSUs) for each tool.

- Submit any additional MSUs and/or Value Units required for each product along with the current entitlement in Value Units for each product.

- If the use of sub-capacity pricing terms for tools results in a reduced requirement for Value Units, thus freeing up entitlements, customers can reallocate the entitlement difference by distributing the Value Units across a larger or different set of systems, or reserve them for future growth. There will be no refunds for these freed up Value Units. Subscription and Support volumes and entitlements for existing contracts will continue to be at the same levels as the acquired licenses.

Management of the Value Unit entitlements continues to be a customer responsibility. If one of the following occur on a machine to which tools are licensed, the customer must determine if additional Value Units and Subscription and Support need to be ordered for those tools to cover the increase:

- The z/OS defined capacity is increased.
- The requirements for WLC sub-capacity charges are no longer met.

**On/Off Capacity on Demand**

To be eligible for On/Off Capacity on Demand pricing, customers must be enabled for temporary capacity on the corresponding hardware, and the required contract (Z125-6611), Attachment for Customer Initiated Upgrade and IBM @server On/Off Capacity on Demand — Software — must be signed prior to use.

**Prices**

<table>
<thead>
<tr>
<th>Description</th>
<th>Program number</th>
<th>Temporary use charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>CICS VSAM Copy for z/OS, V1.1 (5655-L66)</td>
<td>5655-L66</td>
<td>$3</td>
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</table>

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