



# IBM CICS VSAM Transparency for z/OS V2.1 simplifies data migration to IBM DB2

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## At a glance

CICS® VSAM Transparency (CICS VT) for z/OS® V2.1 simplifies and speeds the migration of data from VSAM to DB2® with a range of new capabilities, including:

- Auto-generation of data migration jobs
- Improved support for IDCAMS (Access Method Services) options
- File migration progress reporting
- Improved diagnostics
- Numerous functional enhancements introduced by PTF since the general availability of CICS VT V1.2
- CICS VT V2.1 supports CICS Transaction Server for z/OS (CICS TS) V3 and CICS TS V4, and IBM® DB2 for z/OS (DB2) V9, and DB2 10

## Overview

CICS VSAM Transparency (CICS VT) for z/OS, V2.1 enables the migration of data from VSAM files to DB2 tables. It ensures continued access to the data in DB2, without modification to the CICS or batch VSAM application programs and with only minor changes to CICS and batch configurations, and job control (using JCL).

CICS VT V2.1 adds the following features:

- A new utility will automatically generate customized data migration JCL, speeding the migration process and reducing the risk of errors.
- Support for the REPLACE and REUSE options for the IDCAMS REPRO command further reduce the need to modify existing batch file back-up and restore JCL.
- New reporting function to report the number of migrated files for each CICS region help customers to track their progress through the file migration process and can support customer charge-back systems.
- Improved diagnostic facilities to validate DB2 configuration, and support CICS tracing reduce the time required to solve problems.
- In excess of twenty functional enhancements delivered by PTF to CICS VT V1.2, including many customer requirements, are incorporated in this release.

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: LE001).

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## Key prerequisites

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CICS VT V2.1 runs on any S/390® or IBM eServer™ zSeries® machine on which the applicable operating system and software will run.

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## Planned availability date

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December 2, 2011

Refer to the complete letter for national language availability.

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## Description

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CICS VT for z/OS provides a set of conversion tools and a run-time driver control component. The conversion tools include an Interactive System Productivity Facility (ISPF) dialog interface and supports data mapping from VSAM key-sequenced data set (KSDS) structures and relative record data set (RRDS) structures to DB2 tables.

When the mapping is defined, data-migration processes and drivers containing static Structured Query Language (SQL) calls are generated. The CICS VT run-time component uses the generated drivers to access DB2 data, returning the results to the calling application in the original VSAM format.

CICS VT V2.1 supports CICS TS V3 and CICS TS V4, and DB2 V9 and DB2 10.

### **Key enhancements**

#### **Auto-generation of data migration jobs**

New in CICS VT V2.1 is a utility to generate the JCL required to migrate data from VSAM files to DB2 tables. The new utility can be invoked from the existing ISPF dialogs or in batch. It generates customized members for the following:

- VIDUNLOD
- VIDLOAD
- DB2 LOAD
- Batch DMF
- JCL to create the DUMMY data set
- Batch CSD input to define the drivers

Previously, the JCL needed to be tailored by the customer using a supplied template, so the new auto-generation capability reduces the time required to configure CICS VT, and reduces the chance of making errors during the customization process.

#### **Improved support for IDCAMS options**

Customers who use the IDCAMS REPRO command to back-up and restore VSAM files in their batch job streams and CICS start-up JCL can continue to use REPRO to back-up and restore their CICS VT migrated DB2 data. In the earlier release, if the REPLACE or REUSE options were encountered in a batch job processing a CICS VT migrated file, CICS VT would complain about duplicate records and the REPRO command would be rejected. Now, with CICS VT V2.1, the REPLACE and REUSE options can be successfully used on the IDCAMS REPRO command to further reduce the need to modify existing batch file back-up and restore JCL.

#### **File migration progress reporting**

CICS VT enables the staged migration of VSAM files to DB2, over as long or short a period of time as is convenient for the customer. When customers migrate a large number of files, it can be difficult to track progress over an extended period of time. A new function in CICS VT V2.1 reports the number of migrated files for each CICS region, helping customers to track their progress through the file migration process. These reports can also support internal charge-back systems for customers with different cost-recovery metrics for VSAM and DB2.

### **Improved diagnostics**

During the initial configuration of CICS VT, DB2 BIND members need to be created and customized. Simple typing errors in this customization process can be difficult to resolve. A new function in CICS VT V2.1 tests for the existence of skeleton DB2 BIND members and reports missing members gracefully, reducing the impact of such errors.

The existing CICS trace facility is improved. Previously it was only possible to trace CICS VT activity for transactions associated with a specific terminal identifier (TERMID).

In CICS VT V2.1 tracing can be initiated without specifying a TERMID. This is not only useful when the system programmer doesn't know where the next transaction is coming from, but also in the cases where no terminal facility exists, for example, for started tasks and incoming web service requests.

### ***New and updated function***

Many of the following enhancements were introduced by APAR PTF as a result of customer requirements. In those cases, the FITS number (prefixed with MR) and associated text is also shown.

### **Usability**

PK50628 (PTF UK28187) provides more flexibility for dummy DD names. VIDDDMEX is now called to enable the Dummy Dataset DDNAME to be overridden. If VIDDDMEX changes the DD name for the Dummy Dataset then this is used, otherwise the standard changed name applies. As stated in FITS requirement MR1105065745: Provide more flexibility for dummy DD names.

For PK48564 (PTF UK26971), the CICS VT Exit Work Area limit is increased from 4K to 16K.

### **CICS**

PK72698 (PTF UK42624) provides support for CICS VT exit programs (FBE and IRD ) to be written in LE-enabled high level languages. As stated in FITS requirement: MR0407077555 Allow the exits to be coded in other languages.

PK73622 (PTF UK40774) enables CICS Global User Exit (GLUE) program for CICS VT to co-exist with other CICS GLUE programs.

### **Batch**

PK98873 (PTF UK53928) provides support for multiple TCBs in BATCH jobs when accessing VSAM datasets migrated to DB2 using CICS VT.

For PM05348 (PTF UK54208), CICS VT datasets ending in DSNPARMS were required to specify the DB2 subsystem ID and DB2 plan to use for the batch utilities. The utilities and their associated JCL/PROCs are modified to allow the DB2 subsystem to be specified as a parameter. The CICS VT batch utilities now use a fixed plan called VIDBUTIL.

For PK14457 (PTF UK18531), before this enhancement, all batch application programs accessing a VSAM file migrated with CICS VT had to use the same DB2 plan, and therefore the same DB2 package attributes. This meant that programs could not exploit DB2 features such as uncommitted read or lock avoidance. This

APAR introduces a new DD statement VIDPLAN, that allows a user to specify any plan name

PK21107 (PTF UK12522) provides support for multiple ACBs against the same DDNAME.

## **Migration**

PM27750 (PTF UK66015) provides new functions PREVIEW and UNDO, added to automated mapping facility dialogs.

For PM16102 (PTF UK58110), the CICS VT Dataset Table (DST) is modified to implement the Migration Status indicator, allowing files migrated to CICS VT to be defined in CICS VT as "INACTIVE" prior to their actual migration.

PM07002 (PTF UK55216) provides improved detection of COMP-3 FIELDS in COBOL copybooks.

PM07901 (PTF UK55226) provides improved detection of PIC, DEC and BIN fields when analyzing PL/I copybooks in the automated mapper facility.

PK85545 (PTF UK48179) allows unsigned packed decimal data to be used with CICS VT conversion routines PACKINT, PACKSINT, PACKDATE, PACKTIME, and PACKDTIM, along with their counterparts.

PK82906 (PTF UK46729) permits the processing of unsigned packed decimal VSAM data automatically, and thus removes the need for an exit.

PK10293 (PTF UK10832) improves the processing of COBOL copybooks, particularly the OCCURS clauses in the automated mapper facility.

## **DB2**

PK52988 (PTF UK29339) ensures that CICS VT uses the most efficient cursor on a VSAM OPEN request.

PM16132 (PTF UK60293) provides for numerous changes to be made to CICS VT V1.2 to enable the support of DB2 Extended Object Names. As stated in FITS requirements:

- MR0211103636 CICS VT does not support 128-byte column names, available since DB2 V7. CICS VT should be enhanced to support this feature of DB2.
- MR051707204 CICS VT restricts the column name to 18 bytes to meet the limitations of DB2 V7. DB2 V8 and above allows a column length of 128 bytes.

The CICS VT product should be enhanced to support column names that meet the maximum allowed in COBOL definitions.

For PM38615 (PTF UK68479), CICS VT driver generation code was changed to detect and suppress generation in a DB2 10 environment.

For PM14340 (PTF UK58090), CICS VT Driver modules include all the DB2 SQL required to provide read and write access to a CICS VT DB2 table. This enhancement adds the ability to generate a driver module that only allows read access to the table. Any process using this driver module which attempted write access would ABEND with CICS VT user abend 3111. As stated in FITS requirement: MR0128103926 CICS VT supports security to DB2 tables at the user level. However, access is either None, or Read-write. There is no read-only access.

For PM12877 (PTF UK57233), CICS VT, in batch programs, uses CAF to connect to DB2. This fix implements an optional exit point, VIDCATTE, to enable alternative DB2 connection methods to be used. As stated in FITS requirements:

- MR0128102126 Add support for an optional, user provided connection exit routine to DB2.

- MR1025076152 CICS VT uses parameter datasets during batch utilities to allow VT to connect to DB2 using the Call Attachment Facility (CAF). There are requirements on these parameter datasets that the second node be the DB2 subsystem, and the third node be the plan name. This naming requirement for the parameter datasets does not fit within some customers DSN naming standards.

PM09602 (PTF UK56896) allows for the overriding of PLAN NAME VIDBUTIL when running CICS VT utility jobs.

For PK85546 (PTF UK48652), support was added to allow nullable data in DB2 using a new user parameter mapping field. This provides support for DB2 nullable columns without requiring an exit.

PK45946 (PTF UK28006) provides support for DB2 Backward Index scan. It also provides an exit to enable users to generate IBM AIX® DIM names of their choosing. As stated in FITS requirements:

- MR1211062324 DB2 version 8 provided the capability for backward index scans, which lets DB2 avoid a sort. A sort is avoided when the DB2 optimizer determines that an ORDER BY clause can be satisfied by traversing an existing index in a backward direction. Prior to this enhancement, CICS VT provided a descending index for the sole purpose of avoiding a sort. This index has now been deleted to improve performance.
- MR1203062039 Add an exit to allow customers to determine the naming convention for alternate indexes.

PK45985 (PTF UK25637) provides support for DB2 V9.

### **Accessibility by people with disabilities**

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A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

[http://www.ibm.com/able/product\\_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html)

The following features support use by people with disabilities:

- Operation by keyboard alone
- Optional font enlargement and high-contrast display settings
- Suitability for use by people with hearing impairment
- Capability to use with screen readers and magnifiers for those with visual impairment

Softcopy documentation for the product is provided in PDF format. This documentation supports optional font enlargement and high-contrast display settings, and may be operated by the keyboard alone.

### **Value Unit-based pricing**

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Value Unit pricing for eligible IBM System z® IBM International Program License Agreement (IPLA) programs enables a lower cost of incremental growth and enterprise aggregation. Each System z IPLA product with Value Unit pricing has a single price per Value Unit and a conversion matrix, called Value Unit Exhibit, for converting from some designated measurement to Value Units. Most commonly, Millions of Service Units (MSUs) is the measurement designated by IBM to be converted to Value Units. Some other measurements are engines or messages. Since MSUs are the most common measurement, that measurement will be used for the remainder of this description.

Value Unit pricing offers price benefits for you. For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the **required license capacity**. Each of the various Value Unit Exhibits stipulate that the larger your required license capacity,

the fewer Value Units per MSU you will need. Value Unit Exhibits are uniquely identified by a three digit code and referred to using the nomenclature VUExxx, where xxx is the three digit code.

Subsequent acquisitions of Value Unit priced programs offer additional price benefits. The quantity of each System z IPLA program that you have acquired is referred to as **entitled license capacity**. If you wish to grow your entitled license capacity for a System z IPLA program, the calculation to determine additional needed Value Units is based upon the number of Value Units already acquired.

For each System z IPLA program with Value Unit pricing, you should:

- Determine the required license capacity, in MSUs
- Aggregate the MSUs across the enterprise
- Convert the total MSUs to Value Units, using the applicable Value Unit Exhibit
- Multiply the price per Value Unit by the total number of Value Units to determine the total cost

To simplify conversion from the designated measurement to Value Units or vice-versa, use the Value Unit Converter Tool. For additional information or to obtain a copy of the Value Unit Converter Tool, visit the Value Unit Converter Tool website

<http://ibm.com/zseries/swprice/vuctool>

Note that Value Units of a given product cannot be exchanged, interchanged, or aggregated with Value Units of another product.

To determine the required license capacity for the System z IPLA program you selected, refer to the [Terms and conditions](#) section.

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## Product positioning

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An increasingly competitive economic environment is driving many businesses to transform their existing CICS applications using service-oriented architecture (SOA) and Web 2.0 strategies. The same pressures also force IT managers, CICS system programmers, and application developers to develop applications and operate systems at peak level while maintaining service level commitments and meeting regulatory and corporate governance requirements.

Such businesses need tools to help them avoid outages and reduce downtime, while controlling costs and complying with standards. CICS VT is a product that meets the CICS customer demand for a solution that enables the unlocking of business-critical data from VSAM to a fully relational database, DB2. With critical files held in DB2, the time constraints of batch windows can be minimized or removed altogether. DB2 provides full forward recovery of data, which for VSAM files requires additional software - CICS VSAM Recovery for z/OS (CICS VR) is the IBM solution.

Customers in industries with challenging data security and encryption requirements, such as healthcare, banking, and credit card processing, can benefit from the extensive data governance capabilities that are available for DB2 when it is used with products such as IBM InfoSphere® Guardium® Data Encryption for DB2 and IMS™ Databases. Further details of these, and other IBM tools for DB2 can be found at:

<http://ibm.com/software/data/db2imstools/products/db2-zos-tools.html>

CICS VT is a member of the CICS tools family and part of the System z Enterprise tools portfolio supporting the CICS environment. It can help by improving collaboration between the various roles involved in making and tracking changes, and enabling tighter and more transparent control over CICS administration, both of which are critical for the smooth operation of CICS. CICS VT can also help speed up the overall end-to-end development effort for new applications.

For more details of the CICS Tools family of products, visit

<http://ibm.com/cics/tools/>

For a trial of CICS VT, contact your local IBM sales representative.

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## Availability of national languages

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Description	Availability date	Language
CICS VSAM Transparency for z/OS, V2.1	December 2, 2011	English

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## Program number

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Program number	VRM	Program name
5655-Y01	2.1.0	CICS VSAM Transparency for z/OS

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## Product identification number

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Program PID number	Subscription and Support PID number
5655-Y01	5697-I77

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## Offering Information

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Product information is available via the Offering Information website

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

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## Publications

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The following publications are provided, in PDF softcopy format only:

Title	Order number
CICS VSAM Transparency for z/OS V2.1 Program Directory	GI13-0578
CICS VSAM Transparency for z/OS V2.1 User's Guide	SC34-7249
CICS VSAM Transparency for z/OS V2.1 Data Reengineering & Customization Guide	SC34-7250
CICS VSAM Transparency for z/OS V2.1 Data Sheet	GI13-0579

These PDF format publications are available for download, free of charge, from the IBM Publications Center

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

If hardcopy is required, you may print the PDF document.

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 20 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.

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## Technical information

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### Specified operating environment

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#### **Hardware requirements**

CICS VT V2.1 runs on any S/390 or IBM eServer zSeries machine on which the applicable operating system and software will run.

#### **Software requirements**

CICS VT V2.1 is designed to be used with CICS TS V4.2 (5655-S97), where it supports fully the new function of the latest version of CICS TS. CICS VT V2.1 can also be used with CICS TS V3 (5655-M15).

CICS VT V2.1 will run with any supported level of operating system with which the applicable CICS TS runs.

CICS VT V2.1 requires System Modification Program/Extended (SMP/E) of the supported z/OS or OS/390® system (5655-G44) for installation and maintenance. It operates with the following CICS configurations:

- CICS TS V4.1 and CICS TS V4.2 (5655-S97)
- CICS TS V3.1 and CICS TS V3.2 (5655-M15)

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

### User group requirements

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Requirements from the worldwide user group communities satisfied or partially satisfied by enhancements in CICS VT V2.1 include the following:

Requirement number	Description
MR0128102126	Add support for an optional, user provided connection exit routine to DB2
MR0128103926	CICS VT supports security to DB2 tables at the user level. However, access is either None, or Read-write. There is no read-only access.
MR0210107026	Customers need more flexibility within the CICS VT product. Currently, if a customer wants to return to using the native VSAM file they must comment out the entry in the VIDCDTAB table and reassemble it. This process usually requires the CICS system programmer to perform this function. When they want to resume testing with the migrated file, the process must be reversed.
MR0211103636	CICS VT does not support the 128 byte column names which have been available since DB2 V7. CICS VT should be enhanced to support this feature of DB2.
MR0407077555	Allow the exits to be coded in other languages
MR0508071056	Provide an IVP that validates that the TSO/ISPF interface is active and working correctly.
MR0510072757	New Exit to support unsigned Comp-3 fields.
MR0510077625	Customer has requested an exit that will convert Julian calendar dates into DB2 date format.



- MR0516076544 Customization Option -- Eliminate the requirement for the mapper to create datasets with the TSO Userid as the High-Level Qualifier.
- MR051707204 CICS VT restricts the column name to 18 bytes to meet the limitations of DB2 V7. DB2 V8 and above allows a column length of 128 bytes.
- MR0517111529 Provide capability for packages for several VT migrated files into one DB2 PLAN. Best would be to give customers the choice to bind into different packages.
- MR0601063738 Add the ability to call a DB2 Stored Procedure from the FBE and IRD user exits.
- MR0606056129 Allow CICS VT exits to be coded in other languages.
- MR1025076152 CICS VT uses parameter datasets during batch utilities to allow VT to connect to DB2 using the Call Attachment Facility (CAF). There are requirements on these parameter datasets that the 2nd node be the DB2 subsystem, and the 3rd node be the plan name. This naming requirement for the parameter datasets does not fit within some customers DSN naming standards.
- MR1105065745 Provide more flexibility for dummy DD names.
- MR1203062039 Add an exit to allow customers to determine the naming convention for alternate indexes.
- MR1211062324 DB2 version 8 provided the capability for backward index scans, which lets DB2 avoid a sort. A sort is avoided when the DB2 optimizer determines that an ORDER BY clause can be satisfied by traversing an existing index in a backward direction. Prior to this enhancement, CICS VT provided a descending index for the sole purpose of avoiding a sort. This index has now been deleted to improve performance.
- MR1219063255 New appendix in the CICS VT User's Guide that documents each supplied CICS transaction.
- MR1219063818 New appendix in the CICS VT User's Guide that documents each supplied utility program.

## **Upgrading**

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The CICS VT V2.1 User's Guide will provide details on upgrading from CICS VT V1.2 to CICS VT V2.1.

## **Planning information**

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### **Packaging**

CICS VT V2.1 is shipped via CBPDO or other customized offerings on 3590 tape.

Also shipped are:

- International Program License Agreement (IPLA) booklet (Z125-3301-13)
- License Information booklet (GC34-7248-00)

### **Security, auditability, and control**

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CICS VT V2.1 uses the security and auditability features of the operating system under which it is running.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

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## Software Services

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IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

<http://www.ibm.com/software/sw-services/>

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## Ordering information

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### **Charge metric**

Program Name	PID Number	Charge Metric
CICS VSAM Transparency for z/OS V2.1	5655-Y01	Per Value Unit
CICS VSAM Transparency for z/OS V1.1 - - Software Subscription and Support	5697-I77	Per value unit

### **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 US 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 website at

<http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp>

### **Basic license**

#### **On/Off CoD**

CICS VT for z/OS, V2.1 is eligible for On/Off CoD with a temporary use charge calculated based on MSUs per-day usage.

Program name CICS VSAM Transparency for z/OS V2.1  
Program PID 5655-Y01

Entitlement identifier	Description	License option/Pricing metric
S016P9T	CICS VSAM Transparency	Basic OTC, Per MSU-day TUC

for z/OS V2.1  
Translation from MSUs to Value Units

	MSUs	Value Units/MSU
Base	1-3	1
Tier A	4-45	0.45
Tier B	46-175	0.36
Tier C	176-315	0.27
Tier D	316+	0.2

To order, specify the program product number and the appropriate license or charge option. Also, specify the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

Program name: CICS VSAM Transparency for z/OS V2.1  
Program PID: 5655-Y01

Entitlement identifier	Description	License option/Pricing metric
S016P9T	CICS VSAM Transparency for z/OS V2.1	Basic OTC, Value Units
Orderable supply ID	Language	Distribution medium
S016RCJ	English	3590 tape

**Note:** additional media type selections are offered during Custom Build Offering ordering.

Subscription and Support PID: 5697-I77

Entitlement identifier	Description	License option/Pricing metric
S010V2X	CICS VSAM Transparency for z/OS - Subscription and Support	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S Registration
Orderable supply ID	Language	Distribution medium
S010V2W	English	Hardcopy publication

### Subscription and Support

To receive voice technical support via telephone and future releases and versions 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 Subscription and Support program number (PID) referenced above and the appropriate license or charge option.

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 Software Maintenance. This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new products.

When Subscription and Support is ordered, the charges will automatically renew annually unless cancelled by you.

The combined effect of the IPLA license and the Agreement for Acquisition of Software Maintenance gives you rights and support services comparable to those under the traditional ICA S/390 and System z license or its equivalent. To ensure that you continue to enjoy the level of support you are used to in the ICA business model, you must order **both** the license for the program **and** the support for the selected programs at the same Value Unit quantities.

### **Single version charging**

To elect single version charging, you must notify and identify to IBM the prior program and replacement program, and the machine the programs are operating on.

### **Customized Offerings**

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Product deliverables are shipped only via CBPDO, ServerPac, SystemPac®.

CBPDO and ServerPac are offered for Internet delivery in countries where ShopzSeries product ordering is available. Internet delivery reduces software delivery time and allows you to install software without the need to handle tapes. For more details on Internet delivery, refer to the ShopzSeries help information at

<http://www.software.ibm.com/ShopzSeries>

You choose the delivery method when you order the software. IBM recommends Internet delivery. In addition to Internet and DVD, the supported tape delivery options for CBPDO, ServerPac, and SystemPac, include:

- 3590
- 3592

Most products can be ordered in ServerPac and SystemPac the month following their availability on CBPDO. z/OS can be ordered via all three offerings at general availability. Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac shipments will begin two weeks after general availability
- SystemPac shipments will begin four weeks after general availability due to additional customization, and data input verification.

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## **Terms and conditions**

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The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage® Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

### **Licensing**

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

### **Agreement for Acquisition of Software Maintenance**

The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) agreement applies for Software Subscription and Support (Software Maintenance) and does not require customer signatures:

These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide 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 annual renewable 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.

IBM System z Operational Support Services - SupportLine is an option if you desire added services.

**License Information form number**

CICS VSAM Transparency for z/OS V2.1

- License: L-APIG-8H5CTY
- Form number: GC34-7248-00

The program's License Information will be available for review on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

**Limited warranty applies**

Yes

**Limited warranty**

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the *IBM Software Support Handbook* found at

<http://www.ibm.com/support/handbook>

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

**Program support**

Enhanced support, called Subscription and Support, includes telephone assistance, as well as access to updates, releases, and versions of the program as long as support is in effect. You will be notified of discontinuance of support with 12 months' notice.

**Money-back guarantee**

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

**Volume orders (IVO)**

No

**Passport Advantage applies**

No

**Usage restriction**

Yes

**Software Subscription and Support applies**

No. For operating system software, the revised IBM Operational Support Services - SupportLine offering will provide support for those operating systems and associated products that are not available with the Software Subscription and Support (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 offering, visit

<http://www.ibm.com/services/sl/products>

**IBM Operational Support Services - SupportLine**

Yes

**System i Software Maintenance applies**

No

**Variable charges apply**

No

**Educational allowance available**

Yes. A 15% education allowance applies to qualified education institution customers.

**Academic use allowance:** Yes

**Sub-capacity terms and conditions**

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For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the required license capacity. Your required license capacity is based upon the following factors:

- The System z IPLA program you select
- The applicable Value Unit Exhibit
- The applicable terms
- Whether your current mainframes are full capacity or sub-capacity

For more information on the Value Unit Exhibit for the System z IPLA program you selected, refer to the [Ordering information](#) section.

Program number	Program name	Terms	Parent, if applicable
-			
5655-Y01	CICS VSAM Transparency for z/OS V2.1	Reference-based	5697-E93 5655-M15 5655-S97

**Full-capacity mainframes**

In cases where full capacity is applicable, the following terms apply.

Execution-based, z/OS-based, full-machine-based: The required capacity of a System z IPLA program with these terms equals the MSU-rated capacity of the machines where the System z IPLA program executes.

For more information on mainframe MSU-rated capacities, visit

<http://www-1.ibm.com/servers/eserver/zseries/library/swpriceinfo/>

Reference based: The required license capacity of a System z IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the parent program.

### **Sub-capacity mainframes**

In cases where sub-capacity is applicable, the following terms apply.

Execution-based: The required capacity of a System z IPLA sub-capacity program with these terms equals the capacity of the LPARs where the System z IPLA program executes.

z/OS-based: The required license capacity of a System z IPLA program with these terms equals the license capacity of z/OS on the machines where the System z IPLA program executes.

Reference-based: The required license capacity of a System z IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the parent program.

Full-machine-based: The required license capacity of a System z IPLA program with full machine based terms equals the MSU-rated capacity of the machines where the System z IPLA program executes.

For more information on mainframe MSU-rated capacities, refer to *The IBM System z Machines Exhibit*(Z125-3901), or visit the Mainframes section of the System z Exhibits website

<http://ibm.com/zseries/library/swpriceinfo/>

For additional information for products with reference-based terms, System z IPLA sub-capacity programs with reference-based terms adds value to the parent program across the environment, regardless of where in the environment the System z IPLA program executes.

An environment is defined as either a single or stand-alone machine or a qualified Parallel Sysplex®. You may have one or more different environments across the enterprise. To determine the required license capacity for each System z IPLA program with referenced-based terms, each environment should be assessed separately.

When a System z IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment, the required license capacity of the System z IPLA program must equal with the license capacity of the parent program across the Parallel Sysplex. Qualified Parallel Sysplex refers to where MLC pricing is aggregated across the sysplex.

### **Sub-capacity eligibility**

To be eligible for sub-capacity charging on select System z IPLA programs, you must first implement and comply with all terms of either sub-capacity Workload License Charges (WLC) or sub-capacity Entry Workload License Charges (EWLC). To implement sub-capacity WLC or EWLC, a machine must be System z (or equivalent). On that machine:

- All instances of the OS/390 operating system must be migrated to the z/OS operating systems.
- Any licenses for the OS/390 operating system must be discontinued.
- All instances of the z/OS operating systems must be running in z/Architecture® (64-bit) mode.

For that machine, you must create and submit a Sub-Capacity Report to IBM each month. Sub-Capacity Reports must be generated using the Sub-Capacity Reporting Tool (SCRT). For additional information or to obtain a copy of SCRT, visit the System z Software Pricing website

<http://ibm.com/zseries/swprice>

You must comply with all of the terms of the WLC or EWLC offering, whichever is applicable:

- The complete terms and conditions of sub-capacity WLC are defined in the IBM Customer Agreement - Attachment for System z Workload License Charges (Z125-6516).
- The complete terms and conditions for sub-capacity EWLC are defined in the IBM Customer Agreement - Attachment for IBM System z 890 and 800 License Charges (Z125-6587).

Additionally, you must sign and comply with the terms and conditions specified in the amendment to the IPLA contract - *Amendment for IBM System z9® and System z Programs Sub-Capacity Pricing* (Z125-6929). Once the amendment is signed, the terms in the amendment replace any and all previous System z IPLA sub-capacity terms and conditions.

IBM Getting Started Sub-capacity Pricing for z/OS IPLA Software applies.

### **Sub-capacity utilization determination**

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Sub-capacity utilization is determined based on the utilization of a sub-capacity eligible reference product and machine.

### **On/Off Capacity on Demand (CoD)**

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To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Attachment for IBM System z On/Off Capacity on Demand (Z125-7883) must be signed prior to use.

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## **Prices**

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Prices are subject to change without notice.

GST, QST, and sales taxes, where applicable, are extra.

For additional information and current prices, contact your local IBM representative.

Program name: CICS VSAM Transparency z/OS V2.1  
Program PID: 5655-Y01

Entitlement identifier	Description	License option/Pricing metric
S016P9T	CICS VSAM Transparency for z/OS V2.1	Basic OTC, Value Units

S016P9T	CICS VSAM Transparency for z/OS V2.1	Basic OTC, per MSU-day TUC
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Subscription and Support PID: 5697-I77

Entitlement identifier	Description	License option/Pricing metric
S010V2X	CICS VSAM Transparency for z/OS	Basic ASC, Value Units SW S&S No charge, decline SW S&S
	Subscription and Support	Per MSU SW S&S Registration



Prices are subject to change without notice. GST, QST, and sales taxes, where applicable, are extra. For additional information and current prices, contact your local IBM representative.

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## **Order now**

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