Licensed Program Specifications

IBM

IBM Encryption Facility for z/OS V1.2 – Program Number 5655-P97

IBM Encryption Facility for z/OS® is designed to leverage the powerful encryption capabilities of the IBM mainframe to help secure files for archive or transfer purposes. Encryption is a powerful and widely used technology to help protect data from loss and inadvertent or deliberate compromise. The Encryption Facility helps you to encrypt data to tape or disk, enabling sensitive information to be transferred across platforms with partners and vendors.

Overview

IBM Encryption Facility for z/OS Version 1.2 is a program product that runs on z/OS and is comprised of three components: The IBM Encryption Services feature, the IBM DFSMSdss Encryption feature, and the IBM Encryption Facility for z/OS Client web download.

With IBM Encryption Facility for z/OS V1.2, the IBM Encryption Services feature is enhanced to provide support for the OpenPGP Message Format standard (RFC 4880). An OpenPGP compliant system provides data integrity services for messages and data files through encryption and digital signature authentication.

The IBM Encryption Facility for z/OS can be used on z/OS. The IBM Encryption Facility uses the z/OS key management capabilities of z/OS Integrated Cryptographic Service Facility (ICSF) and can leverage, when installed, the hardware cryptographic and compression capabilities of IBM System z mainframe processors. IBM Encryption Facility for z/OS also supports zEnterprise Data Compression (zEDC) for OpenPGP messages. zEDC will be used for compression when a zEDC feature is available on the system and when using IBM 31-bit SDK for z/OS, Java Technology Edition, Version 7 Release 1 or later, with z/OS 2.1.

The two features of IBM Encryption Facility for z/OS are priced and optional; one or both features may be ordered:
- IBM Encryption Services (FMID HCF7740)
- IBM DFSMSdss Encryption (FMID HCF773D)

The Encryption Services feature supports encrypting and decrypting certain file formats on z/OS for transfer purposes or small-volume archival purposes. The DFSMSdss Encryption feature enables the encryption of DFSMSdss DUMP data sets. Both features are designed to use ICSF to perform encryption and decryption of files and to manage cryptographic keys.

The IBM Encryption Facility for z/OS Client (web download program) includes a Java-based Client that can decrypt the contents of tapes encrypted by the Encryption Services feature running on z/OS and encrypt tapes to be decrypted using the Encryption Services feature on z/OS. This allows the exchange of encrypted data between z/OS systems and other operating systems. Also included is a Decryption Client component, which is designed to decrypt data that has been created through the Encryption Services feature on z/OS. The decryption component can decrypt data that has been processed using compression.

Functions

The IBM Encryption Facility for z/OS V1.2 Encryption Services feature includes a Java-based program enhancement to support the OpenPGP standard. This includes support for the following:

- All required data integrity services for OpenPGP compliance.
- Compression data service.
- Minimal key management capabilities.
- Radix-64 conversion services for OpenPGP certificates.

IBM Encryption Facility for z/OS V1.2 can operate with other OpenPGP compliant systems and also can be integrated with z/OS Integrated Cryptographic Service Facility (ICSF) and Resource Access Control Facility (RACF).

IBM Encryption Facility for z/OS V1.2 continues to support encrypting or decrypting data using the System z format, first introduced in IBM Encryption Facility for z/OS V1.1. The functions and services of Encryption Facility for OpenPGP of IBM Encryption Services for z/OS V1.2 are not compatible with the System z functions and services of Encryption Facility for z/OS.

Specified Operating Environment

Machine Requirements

The IBM Encryption Facility for z/OS can use the hardware cryptographic capabilities (when installed) of IBM mainframe servers. The options that you specify for encryption and decryption, including cryptographic keys, depend on the processor type and the cryptographic hardware that you have installed on the system.

IBM Encryption Facility for z/OS Version 1.2 runs on System z mainframe processors that are currently in service with IBM. If a System z mainframe processor level goes out of service with IBM, Encryption Facility for z/OS will no longer be supported on that processor level and you must upgrade to a System z mainframe processor level that is still in service.

Software Requirements

IBM Encryption Facility for z/OS V1.2 has the following software requirements:
- The *Encryption Services* feature of IBM Encryption Facility for z/OS requires:
  - z/OS
  - IBM 31-bit SDK for z/OS, Java Technology Edition
  - Integrated Cryptographic Services Facility (ICSF)

  IBM Encryption Facility for z/OS requires its software levels to be at a level that is still in service with IBM. At the time of this publication, the minimum service levels for these software programs are z/OS (5694-A01) Version 1 Release 12 or later release, IBM 31-bit SDK for z/OS, Java Technology Edition (5655-R31) Version 6 or later release, and Integrated Cryptographic Services Facility (ICSF) FMID HCR7770 or later release.

  Note: If a software requirement level goes out of service with IBM, Encryption Facility for z/OS will no longer support that software level and you must upgrade to a software level that is still in service.
- The functions and services of Encryption Facility for OpenPGP of IBM Encryption Services for z/OS V1.2 are not compatible with the System z functions and services of Encryption Facility for z/OS.
- The *DFSMSdss Encryption* feature of IBM Encryption Facility for z/OS requires:
  - z/OS
  - Integrated Cryptographic Services Facility (ICSF)

- The DFSMSdss priced feature of z/OS
- The IBM Encryption Facility for z/OS Client: The software requirements for the decryption client are the same as the Encryption Services feature System z format (provided in IBM Encryption Facility for z/OS Version 1.1). The decryption component of IBM Encryption Facility for z/OS Client only runs on z/OS and provides only decryption services.
- The Java client has additional requirements. To run on z/OS, the following is required:
  - IBM 31-bit SDK for z/OS, Java Technology Edition.
- To run on other platforms, one of the following is required:
  - Sun SDK 5.0.
  - A supported IBM JVM.
  - A JVM with a JCE cryptographic provider installed that supports all the required algorithms. See Encryption Facility Client documentation for details on the algorithms, modes, and padding schemes needed.

For complete information on Encryption Facility for z/OS Client, see: http://www.ibm.com/servers/eserver/zseries/zos/downloads/#asis. For the Java-based program, including PTF requirements for iSeries™ or other platforms, see the README file in the Java reference code for Encryption Facility for z/OS Client.

For additional information, see:
- *IBM Encryption Facility for z/OS: Planning and Customizing*, SA23-2229.
- *Encryption Facility for z/OS: Using Encryption Facility for OpenPGP*, SA23-2230.

Licensed Program Materials Availability

Restricted materials - Yes.

This licensed program is available with source licensed program materials for some modules designated as "RESTRICTED MATERIALS OF IBM®." The remaining licensed programming materials are available and are not designated as "RESTRICTED MATERIALS OF IBM."

Supplemental Terms

Designated Machine Identification

Designated Machine Identification Required - Yes.

Program Features Not Used on the Designated Machine

Not applicable.

Installation/Location License

You can install IBM Encryption Facility for z/OS V1.2 and use either of the optional features:
- Encryption Services
- DFSMSdss Encryption

You can download the IBM Encryption Facility for z/OS Client from the following URL: http://www-03.ibm.com/servers/eserver/zseries/zos/downloads/#asis

For detailed installation information, see *IBM Encryption Facility for z/OS Program Directory*.

Charges/Usage Restriction

Ordering information and charges will be available through the Offering Information website. Registered external customers and IBM Business Partners can access IBMLink for ordering information and charges.

In a Parallel Sysplex, the charge for all copies is associated to one license by specifying the applicable PSLC license options and quantity represented by the sum of the Service Units in Millions (MSUs) in your Parallel Sysplex. For all other program copies, specify the System Usage Registration No-Charge Identifier on the licenses.

Type/Duration of Program Services

The Encryption Facility for z/OS is a separately licensed product. Program service, including the IBM Support Center, will be available until discontinued by IBM upon twelve month's written notice.

For assistance with Java, contact your Java provider or IBM Java user assistance at http://www-03.ibm.com/systems/z/os/zos/tools/java/

Softcopy Publications

z/OS include publications in displayable form. Except as provided in this section, the terms and conditions of the license agreement with IBM apply to these publications and to any copies that are made from them.

Related publications include:
- *IBM Encryption Facility for z/OS Planning and Customizing*, SA23-2229.
- *IBM Encryption Facility for z/OS: Using Encryption Facility for OpenPGP*, SA23-2230.
- *IBM Encryption Facility for z/OS Program Directory*, GI10-0771.

One copy of the program directory and the LPS are supplied automatically with the basic machine-readable material.

Refer to the IBM Publications Center website for more information about publication ordering: http://www.ibm.com/shop/publications/order

Additional Supplemental Terms

Excluded Components

Not applicable.

Separately Licensed Code

Not applicable.

Warranty

This program is warranted as specified in the IBM license. These Licensed Program Specifications may be updated from time to time and such updates may constitute a change in warranty specifications. Warranty service, if any, will be provided only through the Basic License location.

Following the discontinuance of program services, this program will be provided 'AS IS', as specified in the IBM license.

The IBM Encryption Facility for z/OS Client, which is a no-charge web download, is provided 'AS IS'.

Trademarks