



# IBM Tivoli Key Lifecycle Manager V2.0 delivers new pricing metric

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## At a glance

IBM® Tivoli® Key Lifecycle Manager V2.0 helps you:

- Manage your information risk by providing the capability to manage encryption keys used to secure information, address information integrity, implement encryption key retention policies, and ease data recovery.
- Manage encryption keys for a wide variety of encryption implementations.
- Provide a key management facility for transparent encryption, supporting IBM tape drives, IBM storage, and encryption end points, which support the Key Management Interoperability Protocol (KMIP) V1.0 standard.

New in IBM Tivoli Key Lifecycle Manager V2.0:

- A new reference library for the OASIS Key Management Interoperability Protocol standard
- A new set of simple, comprehensive pricing metrics to support enterprise-wide encryption key management for devices, users, and server capacity

For ordering, contact Your IBM representative or an IBM Business Partner.  
For more information contact the Americas Call Centers at  
800-IBM-CALL (426-2255).

Reference: YE001

## Overview

IBM Tivoli Key Lifecycle Manager V2.0 provides an automated solution to centralize and strengthen the encryption and key management process throughout the enterprise, helping minimize the risk of data exposure and reduce operational costs.

Tivoli Key Lifecycle Manager offers a simple and robust solution for key storage, key serving, and key lifecycle management for IBM self-encrypting storage devices and non-IBM devices and endpoints that conform to the Key Management Interoperability Protocol (KMIP) V1.0 standard. By enabling effective encryption of sensitive data, Tivoli Key Lifecycle Manager enhances data security and compliance management.

## What's new

A new reference library for the OASIS KMIP standard is available to help you and your IBM Business Partners enable their applications for centralized key management using Tivoli Key Lifecycle Manager V2.0.

New policy enforcement controls in Tivoli Key Lifecycle Manager address compliance activities. Role-based access controls can define multiple administrators with different permissions such as security officer, storage administrator, and operations. With Tivoli Key Lifecycle Manager, you can define different administrators for different groups of devices and restrict what devices can get which keys. Tivoli Key Lifecycle Manager also enhances disaster recovery with new options that automate keystore backup and restore, and enforce that encryption keys are backed up before providing key serving.

To support enterprise-wide encryption key management, a new set of pricing metrics is now available. These pricing metrics are simpler and more comprehensive for devices, users, and server capacity.

Previously, the capacity-based metric was based upon managed terabytes of self-encrypting storage. These new metrics include:

- Per Client Device for:
  - Tape device
  - Disk device
  - Mobile device
  - Network adapter
  - Switches
  - Smartmeters
- Per Processor Value Unit
- Per Authorized User

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## Key prerequisites

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Refer to the [Hardware requirements](#) and [Software requirements](#) sections.

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## Planned availability date

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September 2, 2011 for electronic availability (for Passport Advantage® only)

September 16, 2011 for physical media availability (for AAS and Passport Advantage)

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## Description

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IBM Tivoli Key Lifecycle Manager V2.0 provides an automated solution to centralize and strengthen the encryption and key management process throughout the enterprise, helping minimize the risk of data exposure and reducing operational costs.

Tivoli Key Lifecycle Manager offers a simple and robust solution for key storage, key serving, and key lifecycle management for IBM self-encrypting storage devices and non-IBM devices that are compliant with the OASIS Key Management Interoperability Protocol V1.0 standard. By enabling effective encryption of sensitive data, Tivoli Key Lifecycle Manager enhances data security and compliance management.

Tivoli Key Lifecycle Manager V2 capabilities include:

- Providing a platform independent, industry standards-based, and extendable key lifecycle management solution for small, medium, and large enterprise requirements.
- Simplifying the key lifecycle management process including an intuitive interface that eases key creation, tracking, reporting, and removal. This includes role-based access controls with different permission for users for different groups of devices.
- Providing a base that can accommodate all forms of "data at rest" implementations. This includes security for backup and restore copies of the keystore that enforce that keys are backed-up before key serving.
- Delivering new metrics for a variety of device types and new application and middleware integration based upon the Key Management Interoperability Protocol (KMIP) V1.0 standard. The metrics are expanded to help simplify the counting of devices, users, or sizes of database servers, simplify the licensing, and reflect the broader support of enterprise-wide key management.

IBM Tivoli Key Lifecycle Manager V2.0 benefits:

- Making the prospect of managing encryption, and the costs associated with encryption, a feasible reality in a standards-based approach to key lifecycle management
- Focusing on helping reduce the complexity of distributed key management from hundreds of pages of documentation into a handful of screen captures
- Enforcing security policy that requires protection of sensitive data to demonstrate compliance with standards and regulations
- Helping you manage your information risk by providing the capability to secure information, assure information integrity, implement information retention policies, and ease data recovery

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

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)

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### **Section 508 of the US Rehabilitation Act**

Tivoli Key Lifecycle Manager is capable as of September 2, 2011, 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. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following Web site

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

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## **Product positioning**

IBM Tivoli Key Lifecycle Manager provides encryption key serving and lifecycle management to help protect sensitive data encrypted using IBM Storage and encryption endpoints which support Key Management Interoperability Protocol (KMIP) V1.0 standard.

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## **Reference information**

Refer to Software Announcement [210-248](#), dated August 24, 2010.

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## Availability of national languages

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Tivoli Key Lifecycle Manager V2.0 is enabled to support all language environments and is translated into the following languages on the dates shown below.

Language	Availability date
English	September 2, 2011

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## Program number

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Program number	VRM	Program name
5724-T60	2.0.0	IBM Tivoli Key Lifecycle Manager
5608-A99	2.0.0	IBM Tivoli Key Lifecycle Manager

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## Product identification number

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IBM Tivoli Key Lifecycle Manager v2.0

Program PID number	Maintenance 1 year PID number	Maintenance 1 year after license PID number		
5608-A99	5608-A92 Maintenance	5608-A95 Maintenance	Maintenance	
Program PID number	3 year Reg PID number	3 year after license	3 year renewal PID number	
5608-A99	5608-A93	5608-A94	5608-A96	

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## Business Partner information

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If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=211-305>

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## Education support

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Comprehensive education for IBM Tivoli products is offered through Worldwide Tivoli Education Delivery Services. A wide range of training options are available, including classes led by instructors, learning on demand, on-site training, and blended learning solutions.

For additional information, visit

<http://www-306.ibm.com/software/tivoli/education/>

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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>

Also, visit the Passport Advantage website

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## Publications

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IBM Tivoli Key Lifecycle Manager V2.0 Quick Start Guide (5724-T60, for Passport Advantage only) is delivered on a separate publications DVD with the basic machine-readable material. It can also be downloaded from

[http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/topic/com.ibm.tklm.doc\\_2.0/pdf/tk200\\_qsg\\_en.pdf](http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/topic/com.ibm.tklm.doc_2.0/pdf/tk200_qsg_en.pdf)

The Quick Start Guide DVD includes the following languages:

- English
- French
- German
- Italian
- Japanese
- Korean
- Spanish
- Simplified Chinese
- Traditional Chinese

The following English and translated publications may be downloaded from

<http://www.ibm.com/software/tivoli/library>

English publications:

- IBM Tivoli Key Lifecycle Manager Quick Start Guide (GI11-8738-01)
- IBM Tivoli Key Lifecycle Manager Installation and Configuration Guide (SC27-2741)

The IBM Publications Center

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

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***

#### **IBM Tivoli Key Lifecycle Manager V2.0 supports the following hardware:**

System components	Minimum values*	Recommended values**
System memory (RAM)	4 GB	4 GB
Processor speed	For Linux® and windows® systems: 3.0 GHz single processor	For Linux and windows systems: 3.0 GHz dual processors

For AIX® and Sun Solaris systems:	For AIX and Sun Solaris systems:
1.5 GHz (2-way)	1.5 GHz (4-way)

Disk space free for product and prerequisite products such as DB2® Universal Database

4 GB

5 GB

Disk space free in /tmp or C:\temp

2 GB

2 GB

Disk space free in /home directory for DB2 Universal Database

1.8 GB

2.8 GB

All file systems must be writable.

\* Minimum values: These values enable a basic use of Tivoli Key Lifecycle Manager.

\*\* Recommended values: You might need to use larger values that are appropriate for your production environment. The most critical requirements are to provide adequate system memory, and free disk and swap space. Processor speed is less important.

**Tivoli Key Lifecycle Manager V2.0 supports the following IBM storage products:**

Product name	Machine type	Model
TS1120 Tape Drive	3592	E05
TS1130 Tape Drive	3592	E06/EU6
TS1140 Tape Drive	3592	E07
TS2900 Tape Auto loader	3572	S4H, S4E, S4R, S3H, S3E, S3R
3592 C20 Frame	3592	C20
TS1120 Tape Cntrl	3592	C06, J70
TS3100/3200 Tape Lib	3573	L2U, L4U, LT04, LT05 LTO-4-specific models: S42, S44, E42, E44, F4S, S4S, F4H, S4H
TS3310 Tape Library	3576	L5B, E9U
TS3500 Tape Library	3584	L32, L22, L23, L52, L53
TS3400 Tape Library	3577	L5U
3494 Tape Library	3494	L10, L12, L14, L22
TS3400 Tape Library	3577	L5U
3953 Library Mgr	3953	F05
TS2340 Tape Drive	3580	S43/S4X
TS2240 Tape Drive	3580	H4S/S4E
TS2350 Tape Drive	3580	S53/S5X
TS2250 Tape Drive	3580	H5S/S5E
TS1040 Ultrium Tape Drive	3588	F4A
TS1050 Ultrium Tape Drive	3588	F5A
DS8000 Storage Controller	2107	921, 922, 9A2, 931, 932, 9B2
DS8000 Storage Controller	2421	931, 932, 9B2, 941
DS8000 Storage Controller	2422	931, 932, 9B2, 941
DS8000 Storage Controller	2423	931, 932, 9B2, 941
DS8000 Storage Controller	2424	931, 932, 9B2, 941
DS8800 Storage Controller	2421	951, 95E
DS8800 Storage Controller	2422	951, 95E
DS8800 Storage Controller	2423	951, 95E
DS8800 Storage Controller	2424	951, 95E
DS5020 Storage Controller	1814	20A
DS5100 Storage Controller	1818	51A
DS5300 Storage Controller	1818	53A

Tivoli Key Lifecycle Manager also supports:

- IBM System Storage® SAN32B-E4 (2498-E32), a standalone appliance FC: 3895 - Encryption Blade

## Tivoli Key Lifecycle Manager supports the following non-IBM hardware:

- Quantum i500 and i2000 tape libraries
- Emulex OneCommand Guardian (part number 2Port-02-100) with OneSecure HBAs using a prefix that starts with LPSe12002
- Network Appliance FAS2040, machine type FAS, Model 2040
- Network Appliance FAS3200, machine type FAS, Model 32xx
- Network Appliance FAS6200, machine type FAS, Model 62xx

## Software requirements

IBM Tivoli Key Lifecycle Manager V2.0 supports the following:

- AIX V5.3, 64-bit, Technology Level 9, Service Pack 2, and AIX V6.1 (A 64-bit AIX kernel is required for both versions.)
- Red Hat Enterprise Linux AS 4 on x86, 32 bit.
- Red Hat Enterprise Linux AS 5, Update 2 on x86, (32 bit and 64 bit in 32-bit mode application).
- SUSE Linux Enterprise Server V9 on x86, 32 bit, V10, Service Pack 2 on x86, (32 bit and 64 bit in 32-bit mode application), and V11 (32 bit and 64 bit in 32-bit mode).
- Sun Server Solaris 9 and 10 (SPARC 64 bit). Note: Tivoli Key Lifecycle Manager runs in a 32-bit JVM.
- Microsoft® Windows Server 2008 (all Intel® and AMD processors in 32-bit mode).
- Microsoft Windows Server 2003 R2 (all Intel and AMD processors in 32-bit mode).
- Microsoft Windows Server 2008 R2 (64 bit for all Intel and AMD processors in 32-bit mode application).

Refer to the Tivoli Key Lifecycle Manager V2 release information for details on runtime environment.

## Supported web browsers

A supported browser is required in order to use Tivoli Key Lifecycle Manager. The following table lists the browser and browser versions that are supported by Tivoli Key Lifecycle Manager:

Browser	Fix pack, patch, and maintenance level requirements	Sun Server Solaris (SPARC)	windows Server 2003 R2	windows Server 2008	windows Server 2008 R2	Red Hat Enterprise Linux	SUSE Linux Enterprise Server
Microsoft Internet Explorer, version 7.0.x	None		X	X			
Microsoft Internet Explorer, version 8.0	None		X	X	X		
Firefox, version 3.0.x (Note: v3.5, or later is not supported.)	None	X	X	X	X	X	X

## Systems with no supported browsers

No browser is supported on AIX. You must deploy a remote browser on a separate computer.

Refer to the *Tivoli Key Lifecycle Manager Installation and Configuration Guide* for additional requirements depending on which operating system is used.

For more information, refer to the IBM Tivoli Key Lifecycle Manager Information Center at

[http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/topic/com.ibm.tklm.doc\\_2.0/welcome.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/topic/com.ibm.tklm.doc_2.0/welcome.htm)

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.

## Planning information

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### Packaging

Tivoli Key Lifecycle Manager V2.0 is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document
- DVDs
- Quick Start Guide CD-ROM
- Publications (refer to the [Publications](#) section)

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

## Security, auditability, and control

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Tivoli Key Lifecycle Manager V2.0 uses the security and auditability features of the operating system software. 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/>

### Licensing metric definitions

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#### Client Device

Client Device is a unit of measure by which the program can be licensed. A Client Device is a single user computing device or special purpose sensor or telemetry device that requests the execution of or receives for execution a set of commands, procedures, or applications from or provides data to another computer system that is typically referred to as a server or is otherwise managed by the server. Multiple Client Devices may share access to a common server. A Client Device may have some processing capability or be programmable to allow a user to do work. Examples include, but are not limited to actuators, appliances, automated teller machines, automatic meter readers, cash registers, disk drives, desktop computers, kiosks, notebook computers, personal digital assistant, point-of-sale terminals, sensors, smart meters, tape drives, and technical workstations. Licensee must obtain entitlements for every Client Device which runs, provides data to, uses services provided by, or otherwise accesses the Program and for every other computer or server on which the program is installed.

Following are definitions for the Client Device types.

*Tape:* A storage device that writes data sequentially in the order in which it is delivered, and reads data in the order in which it is stored on the media.

*Disk:* A non-volatile, randomly addressable, rewritable data storage device. This definition includes rotating magnetic and optical disks and solid-state disks, or non-volatile electronic storage elements.

*Network Adapter:* An I/O adapter that connects a host computer bus to a Fibre Channel or SCSI or Ethernet medium.

*Mobile:* Laptop, tablet, smart phones and similar mobile personal productivity devices.

*Switch:* A network infrastructure component to which multiple ports attach.

*SmartMeter:* A meter or sensor used to measure energy consumption and communicate with a utility for monitoring and billing purposes.

#### Authorized User

Authorized User is a unit of measure by which the program can be licensed. An Authorized User is a unique person who is given access to the program. The program may be installed on any number of computers or servers and each Authorized User may have simultaneous access to any number of instances of the program at one time. Licensee must obtain separate, dedicated entitlements for each Authorized User given access to the program in any manner directly or indirectly (for example, via a multiplexing program, device, or application server) through any means. An entitlement for an Authorized User is unique to that Authorized User and may not be shared, nor may it be reassigned other than for the permanent transfer of the Authorized User entitlement to another person.

#### Processor Value Unit (PVU)

PVU is a unit of measure by which the program can be licensed. The number of PVU entitlements required is based on the processor technology (defined within the PVU Table by processor value, brand, type, and model number at

[http://www.ibm.com/software/lotus/passportadvantage/pvu\\_licensing\\_for\\_customers.html](http://www.ibm.com/software/lotus/passportadvantage/pvu_licensing_for_customers.html)

and the number of processors made available to the program. IBM continues to define a processor, for the purpose of PVU-based licensing, to be each processor core on a chip. A dual-core processor chip, for example, has two processor cores.

Licensee can deploy the program using either full capacity licensing or virtualization capacity (sub-capacity) licensing according to the Passport Advantage Sub-Capacity Licensing Terms (refer to the webpage below). If using full capacity licensing, licensee must obtain PVU entitlements sufficient to cover all activated processor cores\* in the physical hardware environment made available to or managed by the program, except for those servers from which the program has been permanently removed. If using virtualization capacity licensing, licensee must obtain entitlements sufficient to cover all activated processor cores made available to or managed by the program, as defined according to the Virtualization Capacity License Counting Rules at

[http://www.ibm.com/software/lotus/passportadvantage/Counting\\_Software\\_licenses\\_using\\_specific\\_virtualization\\_technologies.html](http://www.ibm.com/software/lotus/passportadvantage/Counting_Software_licenses_using_specific_virtualization_technologies.html)

\* An activated processor core is a processor core that is available for use in a physical or virtual server, regardless of whether the capacity of the processor core can be or is limited through virtualization technologies, operating system commands, BIOS settings, or similar restrictions.

Instead of the entitlements required for the program directly, licensee must obtain PVU entitlements for this program sufficient to cover the processor cores for the systems on which the resources managed or processed by the program reside.

### **Enterprise**

Any legal entity (such as a corporation) and the subsidiaries it owns by more than 50 percent.

### **Install**

Install is a unit of measure by which the program can be licensed. An Install is an installed copy or instance of the program on a physical or virtual disk made available to be executed on a computer. Licensee must obtain an entitlement for each Install of the program

### **Resource**

Terabyte of encrypting storage capacity, cor example, encrypting tape with one terabyte of encrypting capacity.

### **Resource Value Unit (RVU)**

RVU is a unit of measure by which the program can be licensed. RVU Proofs of Entitlement (PoEs) are based on the number of units of a specific resource used or managed by the program. Licensee must obtain sufficient entitlements for the number of RVUs required for licensee's environment for the specific resources as specified in the tables below. RVU entitlements are specific to the program and the type of resource and may not be exchanged, interchanged, or aggregated with RVU entitlements of another program or resource. The RVU tables are shown in the product example below.

### **Standby or backup systems**

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm and hot. In cold and warm situations, a separate entitlement for the copy on the backup machine is normally not required and typically no additional charge applies. In a hot backup situation, the customer needs to acquire other license or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer's control, even if running at another enterprise's location.

As a practice, the following are definitions and allowable actions concerning the copy of the program used for backup purposes.

**Cold:** A copy of the program may reside, for backup purposes, on a machine as long as the program is not started. There is no additional charge for this copy.

**Warm:** A copy of the program may reside for backup purposes on a machine and is started, but is idling, and is not doing any work of any kind. There is no additional charge for this copy.

**Hot:** A copy of the program may reside for backup purposes on a machine, is started, and is doing work. The customer must acquire a license or entitlements for this copy and there will generally be an additional charge.

Doing work includes, for example, production, development, program maintenance, and testing. It also could include other activities such as mirroring of transactions, updating of files, synchronization of programs, data or other resources (for example, active linking with another machine, program, database or other resource, and so on), or any activity or configurations that would allow an active hot switch or other synchronized switch over between programs, databases, or other resources to occur.

In the case of a program or system configuration that is designed to support a high availability environment by using various techniques (for example, duplexing, mirroring of files, or transactions, maintaining a heartbeat, active linking with another machine, program, database, or other resource), the program is considered to be doing work in the hot situation and a license or entitlement must be purchased.

### **Terabyte**

Terabyte is a unit of measure by which the program can be licensed. A terabyte is 2 to the 40th power bytes. Licensee must obtain an entitlement for each terabyte of storage available to the program.

### **Value Units**

A Value Unit (VU) is a unit of measure by which the program can be licensed. Value Unit entitlements are based on the quantity of a specific designated measurement, for example MSUs, users, engines, tape drives, and so on, for the given software. Licensee must obtain sufficient entitlements for the number of Value Units required for licensee's environment as specified in the specific program terms. The Value Unit entitlements are specific to the program and may not be exchanged, interchanged, or aggregated with other Value Unit entitlements of another program.

### **Pricing examples**

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The following examples are provided to illustrate your licensing requirements.

IBM Tivoli Key Lifecycle Manager requires entitlement for each Basic Edition and all resources managed.

Tivoli Key Lifecycle Manager can manage encryption keys for a wide variety of usage patterns, for example:

1. For self-encrypting tape drives, the metric is per Client Device with the tape device feature number.
2. For self-encrypting disk drives, the metric is per Client Device with the disk drive feature number.
3. For laptops or mobile devices, the metric is per Client Device with the mobile device feature number.
4. For customer-written applications or commercial applications with KMIP support, a per Authorized User metric is available.
5. For databases or other middleware with built-in encryption, a Processor Value Unit (PVU) metric is available.

Products may also have program-specific licensing terms, which are described later in this document. Consult the program-specific licensing terms to determine total licensing requirements for the applicable products.

## **Distributed pricing scenario for Tivoli Key Lifecycle Manager**

### **Transaction 1a**

Assume customer ABC uses encryption built into IBM tape devices. Customer ABC's environment consists of 24 tape drives utilized across 2 sites. Customer ABC would require entitlements for Tivoli Key Lifecycle Manager Basic Edition for each of the two sites and 24 tape drives.

Total entitlements required for Customers ABC's environment would be 2 Tivoli Key Lifecycle Manager Basic Editions and 24 Tivoli Key Lifecycle Manager for Tape.

### **Transaction 1b**

Assume customer ABC intends to add 60 self-encrypted disk drives, 2 databases, and 3 applications to the centralized key management environment. The customer would need to purchase additional entitlements for self-encrypted disk drives, databases, and applications.

Assume each database resides on one server with 2 physical processors and each physical processor consists of 2 cores. Assume 100 PVUs per core. Total PVUs required to entitle 2 customer databases are:

- Two databases X 1 (server per database) X 2 (physical processors per server) X 2 (cores per processor) X 100 (PVUs per core) = 800 PVUs required of Tivoli Key Lifecycle Manager for database.

Assume 5,000 authorized users use application one, 3,000 authorized users use application two, and 6,000 authorized users use application three. Customer ABC would require 14,000 Authorized User entitlements for Tivoli Key Lifecycle Manager for Application.

For 60 self-encrypted disk drives, customer ABC would require, 60 Tivoli Key Lifecycle Manager for disk entitlements.

Total entitlements required for Customers ABC's environment would be:

- 2 entitlements for Tivoli Key Lifecycle Manager Basic Edition
- 24 entitlements for Tivoli Key Lifecycle Manager for Tape
- 60 entitlements for Tivoli Key Lifecycle Manager for Disk
- 800 PVU entitlement for Tivoli Key Lifecycle Manager for Database
- 14,000 Authorized User entitlements for Tivoli Key Lifecycle Manager for Application

### **Transaction 2**

Assume customer XYZ, an energy utility company, wants to utilize Tivoli Key Lifecycle Manager for encryption key management for its new environment. The customer's environment consists of 1,000 mobile devices (desktops and laptops), 5 network switches, 10 network adapters and 100,000 SmartMeters. Total entitlements required for customers XYZ environment are:

- 1 entitlement for Tivoli Key Lifecycle Manager Basic Edition
- 1,000 entitlements for Tivoli Key Lifecycle Manager for Mobile
- 5 entitlements for Tivoli Key Lifecycle Manager for Switches
- 10 entitlements for Tivoli Key Lifecycle Manager for Network Adapters
- 100 entitlements for Tivoli Key Lifecycle Manager for SmartMeters (sold in 1,000 Packs)

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## Ordering information

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This product is only available via Passport Advantage. It is not available as shrinkwrap.

Product group: IBM Tivoli Security  
Product: IBM Tivoli Key Lifecycle Manager (5724T60)  
Product: IBM Tivoli Key Lifecycle Manager (5608A99) (Distributed non-Passport Advantage)

Product category: Security Event Management

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### Processor Value Unit (PVU) sub-capacity licensing

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This software product is eligible for sub-capacity licensing. Customers must accept the terms of the IBM International Passport Advantage Agreement Attachment for Sub-Capacity Licensing Terms (Attachment), and must obtain PVU Proofs of Entitlement (PoEs) for the maximum processor core capacity available to an eligible sub-capacity product when deployed in an eligible virtualization environment. This is also referred to as sub-capacity or virtualization capacity licensing.

Customers must use the IBM License Metric Tool unless they meet the exceptions described in the Attachment.

For information regarding PVU sub-capacity licensing, including terms and IBM License Metric Tool ordering information, visit

<http://www.ibm.com/software/lotus/passportadvantage/subcaplicensing.html>

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### Current licensees

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#### ***New licensees***

Orders for new licenses will be accepted now.

Shipment will begin on the planned availability date.

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### Basic license

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#### **Ordering information for the distributed product in Passport Advantage**

Passport Advantage allows you to have a common anniversary date for Software Maintenance renewals, which can simplify management and budgeting for eligible new versions and releases (and related technical support) for your covered products. The anniversary date, established at the start of your Passport Advantage Agreement, will remain unchanged while your Passport Advantage Agreement remains in effect. New software purchases will initially include twelve full months of Software Maintenance. Software Maintenance in the second year (the first year of renewal) can be prorated to be coterminous with your common anniversary date. Thereafter, all Software Maintenance will renew at the common anniversary date for twelve full months of maintenance.

Refer to the IBM International Passport Advantage Agreement and to the *IBM Software Support Handbook* for specific terms relating to, and a more complete description of, technical support provided through Software Maintenance.

The quantity to be specified for the Passport Advantage part numbers in the following table is per required number of Installs or Resource Value Units. To order for Passport Advantage, specify the desired part number and quantity.

Description	Part number
Tiv Key Lifecycle Mgr for Disk per Client Device	D0L4QLL

Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr for Disk per Client Device	E0CQLL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr for Disk per Client Device	D0L4RLL
SW S&S Reinstate 12 Mo	
Tiv Key Lifecycle Mgr Tape per Client Device	D0L4NLL
Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr Tape per Client Device	E0CQKLL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr Tape per Client Device	D0L4PLL
SW S&S Reinstate 12 Mo	
Tiv Key Lifecycle Mgr for NW Adpt per Client Dev	D0L4SLL
Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr for NW Adpt per Client Dev	E0CQMLL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr for NW Adpt per Client Dev	D0L4TLL
SW S&S Reinstate 12 Mo	
Tiv Key Lifecycle Mgr for Mobile per Client Dev	D0L4ULL
Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr for Mobile per Client Dev	E0CQNLL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr for Mobile per Client Dev	D0L4VLL
SW S&S Reinstate 12 Mo	
Tiv Key Lifecycle Mgr for Switches per Client Dev	D0L4WLL
Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr for Switches per Client Dev	E0CQPLL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr for Switches per Client Dev	D0L4XLL
SW S&S Reinstate 12 Mo	
Tiv Key Lifecycle Mgr for Databases per PVU	D0L4YLL
Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr for Databases per PVU	E0CQQLL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr for Databases per PVU	D0L4ZLL
SW S&S Reinstate 12 Mo	
Tiv Key Lifecycle Mgr for App per Auth User	D0L53LL
Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr for App per Auth User	E0CQULL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr for App per Auth User	D0L54LL
SW S&S Reinstate 12 Mo	
Tiv Key Lifecycle Mgr for SmartMeters 1000 pack CD	D0L58LL
Lic + SW S&S 12 Mo	
Tiv Key Lifecycle Mgr for SmartMeters 1000 pack CD	E0CQYLL
Annual SW S&S Rnw	
Tiv Key Lifecycle Mgr for SmartMeters 1000 pack CD	D0L59LL
SW S&S Reinstate 12 Mo	

The following part numbers for Tivoli Key Lifecycle Manager V2.0 have not changed they are listed here for reference only.

Description	Part number
TKLM Basic Ed per Install LIC+SW S&S 12 Mo	D0887LL
TKLM Basic Ed per Install Annual SW S&S Rnw	E06JMLL
TKLM Basic Ed per Install SW S&S Reinstate 12 Mo	D0888LL

To order a media pack for Passport Advantage, specify the part number in the desired quantity from the following table:

Description	Part number
IBM Tivoli Key Lifecycle Manager V2.0 Multilingual, Multiplatform Media Pack	BJ0WAML

Tivoli Key Lifecycle Manager V2.0 is also available, via Web download, from Passport Advantage.

**Ordering information for 5608-A99 non-Passport Advantage, non-System z offerings**

To order a basic license, specify the program number and the feature number of the desired distribution medium. Also, specify the one-time charge feature number in the quantity desired (maximum quantity of 250).

The quantity to be specified for the features in the following table is (per client device).

Use the following table to order the program products listed below:

Product number	Product name	Feature number	
		Qty 1	Qty 250
5608-A99	IBM Tiv Key Lifecycle Manager for Tape per Client Device with 1 year SW Maintenance	0007	0008
	IBM Tiv Key Lifecycle Manager for Disk per Client Device with 1 year SW Maintenance	0009	0010

This software license includes Software Maintenance, previously referred to as Software Subscription and Technical Support.

Extending coverage for a total of three years from date of acquisition may be elected. Order the program number, feature number, and quantity to extend coverage for your software licenses. If maintenance has expired, specify the after license feature number.

**IBM Tivoli Key Lifecycle Manager**

Maintenance IASP PID 1 Year: (5608-A92)

Description	Feature number qty 1	Feature number qty 250
IBM Tiv Key Lifecycle Manager For Tape Per Client Device 1yr no charge Reg	0021	0022
	0023	0024

IBM Tiv Key Lifecycle Manager For Disk Per Client Device 1yr no charge Reg	0017	0018
Per Client Device 1yr SW Maintenance Rnw	0019	0020

Maintenance IASP PID 1 Year: (5608-A95)

Description	Feature number qty 1	Feature number qty 250
IBM Tiv Key Lifecycle Manager For Tape Per Client Device 1yr After License	0009	0010
IBM Tiv Key Lifecycle Manager For Disk Per Client Device 1yr After License	0007	0008

Maintenance IASP PID 3 Year: (5608-A96)

Feature number	Feature number
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Description	qty 1	qty 250
IBM Tiv Key Lifecycle Manager For Tape Per Client Device 3yr Renewal	0009	0010
IBM Tiv Key Lifecycle Manager For Disk Per Client Device 3yr Renewal	0011	0012
Maintenance IASP PID 3 Year: (5608-A94)		
	Feature number	Feature number
Description	qty 1	qty 250
IBM Tiv Key Lifecycle Manager For Tape Per Client Device 3yr After License	0015	0016
IBM Tiv Key Lifecycle Manager For Disk Per Client Device 3yr After License	0013	0014
Maintenance IASP PID 3 Year: (5608-A93)		
	Feature number	Feature number
Description	qty 1	qty 250
IBM Tiv Key Lifecycle Manager For Tape Per Client Device 3yr Registration	0011	0012
IBM Tiv Key Lifecycle Manager For Disk Per Client Device 3yr Registration	0009	0010

### Subscription and Support

Subscription and Support must be ordered to receive voice technical support via telephone during normal business hours, and future releases and versions, at no additional charge. The capacity of Subscription and Support (for example, Value Units or number of processors) must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program product number 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 Support Maintenance (IAASM). 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 future releases and versions at no additional charge. Note that the customer is not entitled to new products.

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

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## Terms and conditions

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.

This product is only available via Passport Advantage. It is not available as shrinkwrap.

### ***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. Part number products only, offered outside of Passport Advantage, where applicable, are license only and do not include Software Maintenance.

This software license includes Software Subscription and Support (also referred to as Software Maintenance).

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

The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) agreement applies for Subscription and Support (also referred to as 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. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available. 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.

### ***License Information form number***

- L-LMOZ-8HUPEL (5724-T60)
- GI11-9399-01 (5608-A99)

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 technical support**

Technical support of a program product version or release will be available for a minimum of five years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect. This technical support allows you to obtain assistance (via telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support (Software Maintenance) also provides you with access to updates (modifications or fixes), releases, and versions of the program. You will be notified, via announcement letter, of discontinuance of support with 12 months' notice. If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

### **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 (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) 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.

### **Other terms**

#### **Volume orders (IVO)**

Yes. Contact your IBM representative.

### **IBM International Passport Advantage Agreement**

#### **Passport Advantage applies**

Yes, and through the Passport Advantage website at

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

#### **Usage restriction**

Yes. Usage is restricted to the number of Value Units licensed.

For additional information, refer to the License Information document that is available on the IBM Software License Agreement website

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

#### **Software Subscription and Support applies**

Yes. Software Subscription and Support (also referred to as Software Maintenance), is now included in the Passport Advantage Agreement. Installation and technical support for the products announced in this announcement is provided by the Software Subscription and Support offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice or electronic access into the IBM support organizations.

IBM includes one year of Software Subscription and Support with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support can be extended by the purchase of a renewal option.

While your Software Subscription and Support is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions,

and code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, every day of the year. For additional details, consult your IBM Software Support Handbook at

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

Software Subscription and Support does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under this agreement.

For additional information about the Passport Advantage Agreement, visit the Passport Advantage website at

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

All distributed software licenses include Software Subscription and Support for a period of 12 months from the date of acquisition, providing a streamlined way to acquire IBM software and assure technical support coverage for all licenses. Extending coverage, for a total of three years from date of acquisition, may be elected.

***Variable charges apply***

No

***Educational allowance available***

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

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## **IBM Electronic Services**

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IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

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

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## Prices

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### **Business Partner information**

If you are an IBM Business Partner -- Distributor for Workstation Software acquiring products from IBM, you may link to Passport Advantage Online for resellers where you can obtain Business Partner pricing information. An IBM ID and password are required.

<https://www.ibm.com/software/howtobuy/passportadvantage/paoreseller>

Information on charges is available at website

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

In the Electronic tools category, select the option for Purchase/upgrade tools.

### **Passport Advantage**

For Passport Advantage and charges, contact your IBM representative or your authorized IBM Business Partner. Additional information is also available at

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

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## Order now

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To order, contact your local IBM representative or your IBM Business Partner.

To identify your local IBM Business Partner or IBM representative, call 800-IBM-4YOU (426-4968). For more information, contact the Americas Call Centers.

Phone: 800-IBM-CALL (426-2255)  
Fax: 800-2IBM-FAX (242-6329)  
For IBM representative: [callserv@ca.ibm.com](mailto:callserv@ca.ibm.com)

For IBM Business Partner: [pwswna@us.ibm.com](mailto:pwswna@us.ibm.com)

Mail: IBM Teleweb Customer Support  
[ibm.com](http://ibm.com)® Sales Execution Center, Americas North  
3500 Steeles Ave. East, Tower 3/4  
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Reference: YE001

The Americas Call Centers, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

**Note:** Shipments will begin after the planned availability date.

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<http://www.ibm.com/planetwide/us/>

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**Corrections**

**Corrected on December 21, 2011**

Updated the Program number section.