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IBM i Processor and User Entitlement Transfer

About this document

This document is intended to provide guidance to IBM and business partner sales and technical support personnel who are assisting customers with IBM i processor and user entitlement transfers. The instructions in the sections on entering and verifying keys on donor machines should be provided to customers who will be performing their own license key installation.

The latest version of this document can be found on the web site IBM i License Topics. Refer to the section "IBM i Processor and User Transfer."

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1. Overview

1.1 What is the IBM i Processor and User Entitlement Transfer offering?

IBM i terms and conditions require that IBM i operating system license entitlements remain with the machine for which they were originally purchased. Under qualifying conditions, IBM® will allow the transfer of IBM i processor and user entitlements from one machine to another. This capability helps facilitate machine replacement, server consolidation and load rebalancing while protecting a customer's investment in IBM i software. When requirements are met, IBM i license transfer can be configured via the IBM Configurator for e-business (commonly known by the short name e-config).

1.2 Applicable program/product numbers

5722-SS1   IBM i 5.4
5761-SS1   IBM i 6.1
5770-SS1   IBM i 7.1 and subsequent releases

The IBM i Processor and User Entitlement Transfer process and guide applies only to the products listed above. It does not apply to any other software products, e.g. BRMS or PowerVM, or to hardware activations. The transfer rules for other products are covered by the terms and conditions under which the customer acquired the other IBM software and/or hardware products.

The IBM i operating system program is licensed under the terms of the International Program License Agreement (IPLA) (Z125-3301) and License Information document GC52-1312. These documents can be found at http://www.ibm.com/software/sla/.

2. Terms and Conditions

2.1 Eligibility

To be eligible for IBM i entitlement transfer, the following requirements must be met:

- The IBM i entitlements must be owned by the end user's enterprise[1].
- The donor machine and receiving machine must be owned or leased by the end user's enterprise.
- The donor machine must have been in operation in the same end user's enterprise as the receiving machine for a minimum of one year.
- Software Maintenance (SWMA) is required on the donor machine. Each software entitlement to be transferred must have SWMA coverage.
- An electronic Proof of Entitlement (ePoE) must exist in the IBM License Management System (LMS) for the entitlements to be transferred.

- The donor machine entitlements must be IBM i 5.4, i 6.1, or i 7.1 or later. Transfers are not supported for systems entitled at i5/OS V5R3 or earlier.[2]
- The receiving machine must have activated processors available to accommodate the transferred entitlements. No "banking" of the transferred software entitlements is allowed.
- When a donor machine is leased, IBM i entitlements must be transferred prior to the end of the lease.

The IBM i Processor and User Entitlement Transfer offering may not be used in conjunction with the "Move Up to Power" program.

Notes:
1) An "enterprise" is any legal entity (including, without limitation, an individual, a partnership or a corporation) and its subsidiaries. A subsidiary is any legal entity, during the time that more than 50% of its voting stock, or if no voting stock, decision-making power, is owned or controlled, directly or indirectly, by the enterprise.

2) On January 14, 2014, e-config was updated to allow IBM i license transfer when a donor machine has entitlement for the same or an earlier version/release of IBM i than the receiving machine; previously the donor and receiving machines were required to be entitled at the same IBM i version/release to be eligible for IBM i license transfer. Note that the donor machine cannot be at a later version/release of IBM i than the receiving machine.

2.2 Migration Period

When you transfer IBM i software entitlements (or other licensed programs) from one machine to another, concurrent use of the software licenses on both machines is limited to 30 days. If you are transferring IBM i entitlements to a **new** target machine (a new serial number being installed for the first time anywhere), the 30-day period begins when an IPL of IBM i is performed for the first time in any partition on the new machine. If you are transferring IBM i entitlements to an **existing** target machine (an installed machine you already own), the 30-day period begins as soon as you begin migrating IBM i workload from the donor machine to the target machine; any testing on the target machine prior to actual workload movement counts as migration activities included in the 30-day period. If you need additional time to complete the migration, temporary software licensing is required.

2.3 Software Maintenance

For each IBM i processor entitlement transferred to the receiving machine, one year of new Software Maintenance (SWMA) is included at no charge. Additional years of coverage and/or 24x7 support are available options on most models for an additional charge. SWMA is not included when transferring IBM i user entitlements.

SWMA transfer terms and conditions remain unchanged. (See the International Agreement for Acquisition of Software Maintenance (INTC-6011) for more information.) When a donor machine is covered by SWMA fulfilled through AAS (or WTAAS), there may be no benefit in transferring that existing SWMA to the receiving machine because any remaining term will run concurrently with the new SWMA that comes with the IBM i license transfer, resulting in an overlap of coverage of up to one year. Only when the existing donor machine's AAS-based SWMA has a substantial term remaining beyond one year does transferring that SWMA provide any benefit. There are no refunds or credits for SWMA coverage which was fulfilled through

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AAS. AAS-based SWMA can only be transferred from the donor machine to the receiving machine under the following conditions:

> The donor and receiving machines are within a single customer's enterprise and both machines are located within the same country; in addition:
> (a) the associated IBM i entitlement is transferable and is transferred in accordance with its license terms; and
> (b) the entity receiving the IBM i SWMA agrees to the terms of the SWMA agreement. When the customer transfers the IBM i SWMA, the customer must also transfer a printed copy of the SWMA agreement to the entity receiving the IBM i SWMA; and
> (c) the donor and receiving machines must be licensed for the same operating system at the same or a more recent release level, and the customer may incur an increase in the Support Charge if the receiving machine is of a larger capacity.

When transferring one or more IBM i entitlements which are covered by SWMA fulfilled through a ServiceElite contract, the services channel supporting the customer can adjust the number of processors covered by IBM i SWMA on the donor and receiving machines to correspond with the IBM i entitlement transfers.

2.4 Transfer Groups

Donor and receiving machines and nodes which support IBM i are assigned to transfer Groups which reflect their software tier.

Entitlement transfers are allowed…

- within Groups 1 (P20 tier), 2 (P30 tier), and 3 (P50 tier)
- within Groups 4 (P05 tier), 5 (P10 tier), and 6 (PureFlex/Flex)
- from Groups 1, 2, and 3 to Group 6 (PureFlex/Flex), excluding the Group 6 type/model 7895-23A.

When transferring an IBM i processor entitlement from a Group 1, 2 or 3 donor machine to a PureFlex or Flex node, one IBM i Unlimited user entitlement will be automatically created on the receiving PureFlex or Flex node. There can only be one IBM i Unlimited user entitlement on a machine or compute node.

If the receiving machine does not have any existing IBM i entitlement, e-config will add no-charge features for the base product entitlement along with the IBM i processor or user entitlements transferred.

2.5 Non-transferable base entitlements

The following POWER5 models had these base entitlements which are **not** eligible to transfer:

- 9406-550 (1 base license)
- 9406-570 (1 base license)

- 9406-595 (4 base licenses)

Note: The POWER5 model 520 (ordered as 9405-520 or 9406-520) offered only per-processor IBM i licensing, thus there are no per-user or unlimited user entitlements available to transfer to another server. Only the POWER5 520 per-processor entitlement can be transferred.

2.6 Transferable user entitlements

User entitlements eligible for transfer include:

- Per 5 users or per 10 users
- Unlimited users
- IBM i Unlimited Collaboration users
- IBM i External Access

Customers may have acquired the IBM i Unlimited Collaboration users entitlement and/or the IBM i External Access entitlement on a donor machine. In addition, customers may have acquired either a quantity of IBM i users or the IBM i Unlimited users but not both. The various user entitlements -- IBM i Unlimited Collaboration users, IBM i External Access, and IBM i users (either a quantity or Unlimited) --may be transferred or retained independently. The IBM i Unlimited user entitlement must be transferred in its entirety and cannot be divided. If a customer transfers a quantity of IBM i users, all or a portion of the IBM i user entitlements may be transferred, but the user entitlements must be transferred in quantities of 5 or 10 according to the software tier of the receiving machine.

Refer to the Appendix for notes regarding types of IBM i users and transfer of user entitlements for the S812 and the S922 with 1-core processor.

2.7 Pricing

Customers must pay IBM a transfer charge for each transfer.

- For transfers within Groups 1, 2 and 3, customers pay for each processor entitlement transferred.
- For transfers within Groups 4, 5 and 6, for one transfer charge, customers can transfer either (1) processor entitlements only, (2) IBM i user entitlements only, or (3) both processor entitlements and IBM i user entitlements.
- For transfers from Groups 1, 2, or 3 to eligible Group 6 machines, customers pay for each processor entitlement transferred. In addition, one Unlimited User entitlement will be automatically created on the receiving machine at no additional charge. The IBM Flex System p260 Compute Node 7895-23A (Group 6) is not an eligible receiving machine for transfer from Groups 1, 2, or 3.
- For transfers from IBM Flex System p260 Compute Node 7895-23A to any other group 6 or 5 machine (except a Group 6 7895-23A target), a $20,400 (USD list price) per processor transfer charge will apply.

Customers must pay for software tier price differences if the IBM i entitlements are transferred

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to a machine in a higher software tier.

Transfer Charge Per Processor – Group Transition Pricing:	Price (U.S.)*
To same or lower software tier size within the eligible transfer groups as specified in Section 2.4 (E.g., as indicated in Section 2.4, transfers from P20/P30/P50 to P05/P10 or from P05/P10 to P20/P30/P50 are not supported.)	$6,000
Group 1 to 2	$21,600
Group 1 to 3	$21,600
Group 2 to 3	$6,000
Group 4 to 5 or 6 (excluding 7895-23A as target)	$20,400
Between Groups 5 and 6 (excluding 7895-23A as donor)	$6,000
7895-23A to 7895-23A, or to Group 4	$6,000
7895-23A to Group 5 or 6 (excluding 7895-23A as target)	$20,400

*Prices shown are list prices in U.S. Dollars and are subject to change without notice.

2.8 Eligible donor machines

The donor machine must be one of the following models:

Group #1:
- System i 550 (9406-550)
- Power 550   (9409-M50, 8204-E8A)
- Power 560   (8234-EMA)
- Power 750   (8233-E8B, 8408-E8D)
- Power 740   (8205-E6B, 8205-E6C, 8205-E6D)
- Power 730   (8231-E2B, 8231-E2C, 8231-E2D)
- Power S824 (8286-42A)
- Power S924 (9009-42A and 9009-42G)
- Power H924 for SAP HANA (9223-42H)
- Power S1024 (9105-42A) 12- and 24-core processors
- Power L1024 (9786-42H) 12- and 24-core processors

Group #2:
- System i 570 (9406-570, 9406-MMA)
- Power 570   (9117-MMA)
- Power 770   (9117-MMB, 9117-MMC, 9117-MMD)
- Power 760   (9109-RMD)
- Power E870   (9119-MME)
- Power E880   (9119-MHE)

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- Power E870C (9080-MME)
- Power E880C (9080-MHE)
- Power E980   (9080-M9S)
- Power E1080 (9080-HEX)
- Power S1024 (9105-42A) 32- and 48-core processors
- Power L1024 (9786-42H) 32- and 48-core processors

Group #3:
- System i 595 (9406-595)
- Power 595   (9119-FHA)
- Power 780   (9179-MHB, 9179-MHC, 9179-MHD)
- Power 795   (9119-FHB)

Group #4:
- System i 515 (9407-515)
- System i 520 (9405-520 P05, 9406-520 P05)
- Power 520   (9405-520)
- Power 520   (9407-M15, 8203-E4A) 1-core processors
- JS12   (7998-60X)
- Power 710   (8231-E1C, 8231-E1D, 8231-E2B) 4-core processors
- Power 720   (8202-E4B, 8202-E4C, 8202-E4D) 4-core processors
- PS700   (8406-70Y)
- Power S814   (8286-41A) 4-core processors
- Power S812   (8284-21A) 1-core for IBM i
- Power S914   (9009-41A and 9009-41G) 4-core processor
- Power S922   (9009-22G) 1-core processor
- Power S1014   (9105-41B) 4-core processor

Group #5:
- System i 520 (9405-520 P10, 9406-520 P10/P20)
- System i 525 (9406-525)
- Power 520   (9408-M25, 8203-E4A) 2- and 4-core processors
- JS22   (7998-61X)
- JS23/JS43   (7778-23X)
- Power 710   (8231-E1C, , 8231-E1D, 8231-E2B) 6- and 8-core processors
- Power 720   (8202-E4B, 8202-E4C, 8202-E4D) 6- and 8-core processors
- PS701/PS702 (8406-71Y)
- PS703   (7891-73X)
- PS704   (7891-74X)
- Power S814   (8286-41A) 6- and 8-core processors
- Power S822   (8284-22A) stand-alone or IBM PurePower System Solution
- Power S914   (9009-41A and 9009-41G) 6- and 8-core processors
- Power S922   (9009-22A and 9009-22G)
- Power H922 for SAP HANA (9223-22H)
- Power S1014   (9105-41B) 6- and 8-core processors
- Power S1022   (9105-22A)
- Power S1022s (9105-22B)
- Power L1022   (9786-22H)

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Group #6:
- IBM Flex System p260 Compute Node   (7895-23A)
- IBM Flex System p260 Compute Node   (7895-22X)
- IBM Flex System p260 Compute Node   (7895-23X)
- IBM Flex System p270 Compute Node (7954-24X)

- IBM Flex System p460 Compute Node   (7895-42X)
- IBM Flex System p460 Compute Node (7895-43X)

2.9 Eligible receiving machines

The receiving machine must be one of the following models:

Group #1:   P20s
- Power 550   (9409-M50, 8204-E8A)
- Power 560   (8234-EMA)
- Power 750   (8233-E8B, 8408-E8D)
- Power 740   (8205-E6B, 8205-E6C, 8205-E6D)
- Power 730   (8231-E2B, 8231-E2C, 8231-E2D)
- Power S824   (8286-42A)
- Power S924   (9009-42A and 9009-42G)
- Power H924 for SAP HANA (9223-42H)
- Power S1024 (9105-42A) 12- and 24-core processors
- Power L1024 (9786-42H) 12- and 24-core processors

Group #2: P30s and up
- System i 570 (9406-MMA)
- Power 570   (9117-MMA)
- Power 770   (9117-MMB, 9117-MMC, 9117-MMD)
- Power 760   (9109-RMD)
- Power E870   (9119-MME)
- Power E880   (9119-MHE)
- Power E870C (9080-MME)
- Power E880C (9080-MHE)
- Power E980   (9080-M9S)
- Power E1080 (9080-HEX)
- Power S1024 (9105-42A) 32- and 48-core processors
- Power L1024 (9786-42H) 32- and 48-core processors

Group #3:
- Power 595   (9119-FHA)
- Power 780   (9179-MHB, 9179-MHC, 9179-MHD)
- Power 795   (9119-FHB)

Group #4:
- Power 520   (9407-M15, 8203-E4A) 1-core processors

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- JS12 (7998-60X)
- Power 710 (8231-E1C, 8231-E1D, 8231-E2B) 4-core processors
- Power 720 (8202-E4B, 8202-E4C, 8202-E4D) 4-core processors
- PS700 (8406-70Y)
- Power S814 (8286-41A) 4-core processors
- Power S812 (8284-21A) 1-core for IBM i
- Power S914 (9009-41A and 9009-41G) 4-core processor
- Power S922 (9009-22G) 1-core processor
- Power S1014 (9105-41B) 4-core processor

Group #5:
- Power 520 (9408-M25, 8203-E4A) 2- and 4-core processors
- JS22 (7998-61X)
- JS23/JS43 (7778-23X)
- Power 710 (8231-E1C, 8231-E1D, 8231-E2B) 6- and 8-core processors
- Power 720 (8202-E4B, 8202-E4C, 8202-E4D) 6- and 8-core processors
- PS701/PS702 (8406-71Y)
- PS703 (7891-73X)
- PS704 (7891-74X)
- Power S814 (8286-41A) 6- and 8-core processors
- Power S822 (8284-22A) stand-alone or IBM PurePower System Solution
- Power S914 (9009-41A and 9009-41G) 6- and 8-core processors
- Power S922 (9009-22A and 9009-22G)
- Power H922 for SAP HANA (9223-22H)
- Power S1014 (9105-41B) 6- and 8-core processors
- Power S1022 (9105-22A)
- Power S1022s (9105-22B)
- Power L1022 (9786-22H)

Group #6:
- IBM Flex System p260 Compute Node (7895-23A)
- IBM Flex System p260 Compute Node (7895-22X)
- IBM Flex System p260 Compute Node (7895-23X)
- IBM Flex System p270 Compute Node (7954-24X)
- IBM Flex System p460 Compute Node (7895-42X)
- IBM Flex System p460 Compute Node (7895-43X)

3. IBM i Entitlement Transfer Process

3.1 Overview of transfer process steps

1. Ensure all eligibility requirements are understood and met.
2. Use e-config to create software orders to remove the desired entitlements from the donor machine and add these entitlements to the receiving machine. The orders will create new license keys for the donor and receiving machines, however the keys for the receiving machine will not be available until steps 3 and 4 below have been completed.

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3. Install the reduced-quantity software license keys on the donor machine. Refer to Section 4.
4. Send the required verification of the donor keys installation to the IBM Worldwide Support Center, also known as the "Key Center." The Key Center will then make the increased-quantity keys available for the receiving machine.
5. Install the increased-quantity keys on the receiving machine.

3.2 Entitlement transfer order components

When configuring and placing orders for IBM i entitlement transfers, there are several vital steps that MUST be done correctly in order to create and update the proper entitlement records and license keys on the donor and receiving machines. Failure to get these critical order elements right will result in problems that require many hours of manual rework by multiple organizations to correct and thus can impact customer installation schedules and satisfaction.

E-config is used to create orders to transfer IBM i software entitlements -- processors, users and/or Application Server processors -- from a donor machine to a receiving machine. An IBM i entitlement transfer transaction is comprised of at minimum three orders. **All license transfer orders must be placed against the system type/number of the receiving machine.** No orders are to be placed against the donor machine system type/number.

- **5733-NKY** shows the quantity of processors, users and/or Application Server processors that are to be transferred from the donor machine to the receiving machine. It also has features which identify the machine type, location code and serial number of the donor machine. This order updates the LMS entitlement records by moving the existing processor, user and/or Application Server processor entitlements from the donor serial number to the receiving serial number and creating new reduced-quantity keys for the donor machine and new increased-quantity keys for the receiving machine. The increased-quantity keys are not activated or available to users in ESS until the Key Center receives proof that the reduced-quantity keys have been installed on the donor machine.

- **5722/5761/5770-SS1** shows the quantity of processors, users and/or Application Server processors that are being transferred to the receiving machine, bills for the license transfer charges and ships the license transfer document.   If the entitlements are being transferred to an existing machine, this order will have features which identify the machine type, location code and serial number of the receiving machine. If the entitlements are being transferred to a new machine, LMS will determine the machine type, location code and serial number of the new machine by linking the type/system number of the order.

- **5733-SPP** creates the Software Maintenance registration for the transferred processor or Application Server processor entitlements. If you increase coverage to three years, you will get 5733-SPE and 5733-SP3 instead of 5733-SPP.

For guidance on creating IBM i entitlement transfer orders, please refer to the *IBM i License Transfer Configuration and FAQ* document available on the web site IBM i License Topics. Refer to the section "IBM i Processor and User Transfer."

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3.3 Entitled Systems Support (ESS) web site

The Entitled Systems Support web site provides an interface to the IBM License Management System where customers, business partners and IBMers can view entitlement data and software license keys and access a number of software-related functions. After the IBM i entitlement transfer orders have been processed, the reduced-quantity license keys for the donor machine will be available on the ESS web site at http://www.ibm.com/servers/eserver/ess.

The reduced-quantity software keys must be installed in all IBM i partitions on the donor machine and verification submitted to the Key Center before the increased-quantity keys for the receiving machine will be made available on the ESS web site.

3.4 Removing <u>all</u> IBM i entitlements from a donor machine

In the case where <u>all</u> processor entitlements are removed from the donor machine, a 60-day temporary IBM i license key for ***one processor*** will be provided to allow the reduced-quantity keys to be installed on the donor machine.

If <u>all</u> user entitlements are removed from the donor machine, a 60-day temporary IBM i license key for ***one user*** will be provided to allow the reduced-quantity keys to be installed on the donor machine.

If the donor machine is making use of IBM i Application Server processor entitlements and all the IBM i processor entitlements are removed from the donor machine, then the following API call must be run on all IBM i partitions of the donor machine:

    CALL QSYS/QLZASPAS PARM('*RMV5053')

Please refer to the following section for instructions on entering the reduced-quantity keys on the donor machine and submitting the required verification to the Key Center.

4. Entering and Verifying Keys on Donor Machines

4.1 Entering and verifying keys in IBM i 7.1 and later donor partitions

1. Load the new reduced-quantity IBM i software license keys on the donor machine:

Access the ESS web site at http://www.ibm.com/servers/eserver/ess, sign-on to the machine using your current registration Web ID and access the Key management function from the menu on the left. Enter the Machine type/Serial number of the donor machine and locate the 5770-SS1 5051 key on the list of keys displayed. Select the key and choose "Install" from the bottom of the Key Management screen display.

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If manual software key installation is required, use the "ADDLICKEY" command to load the new 5770-SS1 5051 key.   If that doesn't work, use the process below. On an HMC- managed system, the steps are done on the HMC. If the system is not HMC-managed, perform the steps using the **Virtual Partition Manager (VPM) or Integrated Virtualization Manager (IVM).**

For each IBM i partition on the machine, modify the "Desired processing units" shown on the HMC ("Number of partitioned processors" in VPM) and for partitions using shared processors the "Desired virtual processors" ("Shared processor pool units" in VPM). The modifications need to be done so that the sum of the processors across all the IBM i partitions matches the number of processors that the donor machine is now entitled to (the new reduced-quantity IBM i entitlement).

- NOTE: The machine WILL NOT accept a key for less than the quantity of software entitlements.

Once the processor configuration has been done, do the following from the IBM i command line:

ADDLICKEY
      PRDID(5770SS1)
       LICTRM(V7)
       FEATURE(5051)   << '5051' for IBM i processor cores; '5053' for IBM i Application
Server processor cores, '5052' for IBM i Users
       SERIAL(*LOCAL)
       PRCGRP(*ANY)
       LICKEY(nnnnnn nnnnnn nnnnnn)
       USGLMT(nn)
       EXPDATE(*NONE)
       VNDDTA(*NONE)

2. Verify the donor key installation:

The key installation verification step is performed using WRKLICINF. WRKLICINF will display the values associated with the installed keys for the current partition. This information must be gathered from **each** IBM i partition.

The following WRKLICINF command should be run on each IBM i partition on the donor machine after the new, reduced-quantity software keys has been installed. A screen capture of the 'Work with License Information' screen will serve as proof of installation.

The following command will show the machine serial number, usage limit, and the key for an IBM i 7.1 or later partition:

WRKLICINF
    PRDID(5770SS1)

IBM i program object QLZAVXFR is an alternate key installation verification tool available after January 2013. For IBM i 7.1 the program is available in PTF SI52042 and is available in the

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base operating system for IBM i 7.2 and later. The program is invoked from the IBM i command line in the following manner (no input parameters are required):

CALL QSYS/QLZAVXFR

3. Send the screen captures from WRKLICINF or from QLZAVXFR to the Key Center using the email address below:

WWSWKEYS@dk.ibm.com

Once proof of entry of the reduced-quantity keys on the donor machine has been received and verified, the Key Center will make the increased-quantity keys for the receiving machine available on the ESS web site.

4.2 Entering and verifying keys in IBM i 6.1 donor partitions

1. Install required PTF:

Before attempting to install the new reduced-quantity software license key on the donor machine, it will be necessary to download PTF SI49221 (Version 6).

Download the PTF from www.ibm.com, click on Support & downloads, and load PTF with command LODPTF and apply with command APYPTF.

2. Load the new reduced-quantity IBM i software license key on the DONOR machine:

Access the ESS web site at http://www.ibm.com/servers/eserver/ess, sign-on to the machine using your current registration Web ID and access the Key management function from the menu on the left. Enter the Machine type/Serial number of the donor machine and locate the 5761-SS1 5051 key on the list of keys displayed. Select the key and choose "Install" from the bottom of the Key Management screen display.

If manual software key installation is required, use the "ADDLICKEY" command to load the new 5761-SS1 5051 key.   If that doesn't work, use the process below. On an HMC-managed system, the steps are done on the HMC. If the system is not HMC-managed, perform the steps using the **Virtual Partition Manager (VPM) or Integrated Virtualization Manager (IVM).**

For each IBM i partition on the machine, modify the "Desired processing units" shown on the HMC ("Number of partitioned processors" in VPM), and for partitions using shared processors the "Desired virtual processors" ("Shared processor pool units" in VPM). The modifications need to be done so that the sum of the processors across all the IBM i partitions matches the number of processors that the donor machine is now entitled to (the new reduced-quantity for IBM i entitlement).

- NOTE: The machine WILL NOT accept a key for less than the quantity of software entitlements.

Once the processor configuration has been done, do the following from the IBM i command line:

    ADDLICKEY
        PRDID(5761SS1)
        LICTRM(V6)
        FEATURE(5051)   << '5051' for IBM i processor cores; '5053' for IBM i Application
Server processor cores, '5052' for IBM i Users
        SERIAL(*LOCAL)
        PRCGRP(*ANY)
        LICKEY(nnnnnn nnnnnn nnnnnn)
        USGLMT(nn)
        EXPDATE(*NONE)
        VNDDTA(*NONE)

3. Verify the donor key installation:

The key installation verification step is performed using WRKLICINF. WRKLICINF will display the values associated with the installed keys for the current partition. This information must be gathered from **each** IBM i partition.

The following WRKLICINF command should be run on each IBM i partition on the donor machine after the new, reduced-quantity software keys has been installed. A screen capture of the 'Work with License Information' screen will serve as proof of installation.

The following command will show the machine serial number, usage limit, and the key for an IBM i 6.1 partition:

    WRKLICINF
      PRDID(5761SS1)

IBM i program object QLZAVXFR is an alternate key installation verification tool available after January 2013. For IBM i 6.1 the program is available in PTF SI52037. The program is invoked from the IBM i command line in the following manner (no input parameters are required):

    CALL QSYS/QLZAVXFR

4. Send the screen captures from WRKLICINF or from QLZAVXFR to the Key Center using the email address below:

    WWSWKEYS@dk.ibm.com

Once proof of entry of the reduced-quantity keys on the donor machine has been received and verified, the Key Center will make the increased-quantity keys for the receiving machine available on the ESS web site.

4.3 Entering and verifying keys in IBM i 5.4 donor partitions

1. Install required PTF:

Before attempting to install the new, reduced-quantity software license key on the donor machine, it will be necessary to download PTF SI44873 (Version 5).

Download the PTF from www.ibm.com, click on Support & downloads, and load PTF with command LODPTF and apply with command APYPTF**.**

2. Load the new, reduced-quantity IBM i software license key on the donor machine:

Access the ESS web site at http://www.ibm.com/servers/eserver/ess, sign-on to the machine using your current registration Web ID and access the Key management function from the menu on the left. Enter the Machine type/Serial number of the donor machine and locate the 5722-SS1 5051 key on the list of keys displayed. Select the key and choose "Install" from the bottom of the Key Management screen display.

If manual software key installation is required, use the "ADDLICKEY" command to load the new 5722-SS1 5051 key. If that doesn't work, use the process below. On an HMC-managed system, the steps are done on the HMC. If the system is not HMC-managed, perform the steps using the **Virtual Partition Manager (VPM) or Integrated Virtualization Manager (IVM).**

For each IBM i partition on the machine, modify the "Desired processing units" shown on the HMC ("Number of partitioned processors" in VPM) and for partitions using shared processors the "Desired virtual processors" ("Shared processor pool units" in VPM). The modifications need to be done so that the sum of the processors across all the IBM i partitions matches the number of processors that the donor machine is now entitled to (the new, reduced-quantity for IBM i entitlement).
- NOTE: The machine WILL NOT accept a key for less than the quantity of software entitlements.

Once the processor configuration has been done, do the following from the IBM i command line:

    ADDLICKEY
        PRDID(5722SS1)
         LICTRM(V5)
         FEATURE(5051)   << '5051' for IBM i processor cores; '5053' for IBM i Application Server processor cores, '5052' for IBM i Users
          SERIAL(*LOCAL)
          PRCGRP(*ANY)
          LICKEY(nnnnnn nnnnnn nnnnnn)
        USGLMT(nn)
         EXPDATE(*NONE)
         VNDDTA(*NONE)

3. Verify the donor key installation:

The key installation verification step is performed using WRKLICINF. WRKLICINF will display the values associated with the installed keys for the current partition. This information must be

gathered from **each** IBM i partition.

The following WRKLICINF command should be run on each IBM i partition on the donor machine after the new, reduced-quantity software keys has been installed. A screen capture of the 'Work with License Information' screen will serve as proof of installation.

The following command will show the machine serial number, usage limit, and the key for an IBM i 5.4 partition:

> **WRKLICINF**
>   PRDID(5722SS1)

IBM i program object QLZAVXFR is an alternate key installation verification tool available after January 2013. For IBM i 5.4 the program is available in PTF SI49043. QLZAVXFR takes one input parameter which reflects the IBM i install code to verify. If you have entered reduced-quantity keys for both processors and users you will need to run the tool more than once, e.g., once with the '5051' parameter and a second time with the '5052' parameter. The program is invoked from the IBM i command line in the following manner (the input parameter is for the IBM i processor core feature code):

> **CALL QSYS/QLZAVXFR PARM('5051')** for processors
> **CALL QSYS/QLZAVXFR PARM('5052')** for users
> **CALL QSYS/QLZAVXFR PARM('5053')** for Application Server processors

4. Send the screen captures from WRKLICINF or from QLZAVXFR to the Key Center using the email address below:

> WWSWKEYS@dk.ibm.com

Once proof of entry of the reduced-quantity keys on the donor machine has been received and verified, the Key Center will make the increased-quantity keys for the receiving machine available on the ESS web site.

4.4 Sample WRKLICINF and QLZAVXFR output

Below are examples of the output of the WRKLICINF command and the QLZAVXFR program on a system or partition running IBM i 5.4. The output is similar for IBM i 6.1 and later. Screen capture images of the "Display License Information" screens or the output from the QLZAVXFR program should be sent to the Key Center to provide proof that the reduced-quantity keys has been installed on the donor machine. Note: the screen captures can be sent to the Key Center in one of the following formats: jpg, .png, .bmp, .gif, .tif, .doc, .docx, or a PDF (.pdf) file. However, not "print as pdf" as this will result in a text file and not an image.

WRKLICINF example output for a V5R4M0 partition:

```
                       Work with License Information               ZZZZZZ1
                                                       07/29/11  10:57:01
 System serial number . . . . . . . . . :   1000000
 Processor group . . . . . . . . . . . :     P20

 Type options, press Enter.
   1=Add license key   2=Change   5=Display detail   6=Print detail
   8=Work with license users  ...

                 License
 Opt   Product   Term     Feature   Description
 __    5722SS1   V5R4M0   5050      i5/OS
 5_    5722SS1   V5       5051      i5/OS
 __    5722SS1   V5R4M0   5103      Media and Storage Extensions
 __    5722SS1   V5R4M0   5112      PSF for i5/OS 1-55 IPM Printer Support
 __    5722SS1   V5R4M0   5113      PSF for i5/OS 1-100 IPM Printer Support
 __    5722SS1   V5R4M0   5114      PSF for i5/OS Any Speed Printer Support
 __    5722SS1   V5R4M0   5116      HA Switchable Resources
                                                                   More...
 Parameters or command
 ===>_____
 F3=Exit          F5=Refresh    F11=Display Usage Information   F12=Cancel
 F17=Position to    F23=More options
 (C) COPYRIGHT IBM CORP. 1980, 2007.
 MA  c                     MW                                      13/003
```

```
                       Display License Information                ZZZZZZ1
                                                       07/29/11  11:01:22
 Product ID . . . . . . . . . . :   5722SS1
 License term . . . . . . . . :   V5
 Feature . . . . . . . . . . :   5051
 Description . . . . . . . . :   i5/OS

 Compliance type . . . . . . :   *KEYED
 Usage type . . . . . . . . . :   *PROCESSOR

 Usage limit . . . . . . . . :   1
 Last update . . . . . . . . :   07/29/11  08:26:23

 Threshold . . . . . . . . . :   1

 Usage Count Information:
   All partitions  . . . . . :   1.00
   Local partition . . . . . :   1.00

 Peak Usage Information:
   Peak usage  . . . . . . . :   1.00
   Last peak . . . . . . . . :   07/29/11  04:45:32

 Log violations . . . . . . . :   *NO

 Message queue/Library . . . :   *NONE

 Keyed compliance information:
   Expiration date . . . . . :   09/09/11
   Grace period  . . . . . . :   0
   Date grace period expires :   *NONE


                                                                   Bottom

 F3=Exit    F5=Refresh    F12=Cancel
```

QLZAVXFR example output for a V7R1M0 partition:
Note: if you are running IBM i 6.1 or later you do not need to enter any parameters when calling program QLZAVXFR.

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```
                          Command Entry                            PART0001
                                                      Request level:    1
Previous commands and messages:
   > CALL PGM(QSYS/QLZAVXFR)
     >>>> Serial number : 10-1111A **** Model type : 9406 **** Model number :
       520 **** Number partitions : 1 **** HMC flag: 1
     >>>> Product ID : 5770SS1 **** License term : V7 **** Feature code : 5051
     >>>> License key : B0B1B2B3B4B5B6B701 **** Key usage limit : 1 **** Last
       update (YYMMDD) : 140610 **** Key expiration date (YYMMDD) : 140710
       **** Global usage count : 1.00 **** Peak usage count : 2.00




                                                                   Bottom
Type command, press Enter.
===> _


F3=Exit    F4=Prompt    F9=Retrieve    F10=Include detailed messages
F11=Display full       F12=Cancel      F13=Information Assistant   F24=More keys
```

5. For more information and help

A variety of software product-specific information can be found on the IBM "Planning - Customer Notices and Information" web site at: http://www-947.ibm.com/systems/support/planning/index.html.

For guidance on creating IBM i entitlement transfer orders, please refer to the *IBM i License Transfer Configuration and FAQ* document available on the web site "Planning - Customer Notices and Information " at http://www-947.ibm.com/systems/support/planning/ibmi_license.html. Refer to the section "IBM i Processor and User Transfer."

The Entitled Systems Support (ESS) web site address is http://www.ibm.com/servers/eserver/ess. Refer to the "Help" from the menu for the following:
   - *ESS Users Guide*
   - *ESS Registration IBM Customers Guidelines*
   -*ESS Registration IBM Internal Users Guidelines*
These documents provide a detailed overview of ESS web site functions and usage. For further help accessing or using the ESS web site, select '"Help" or "Contacts" from the menu on the left side of the introductory screen at http://www.ibm.com/servers/eserver/ess.

For assistance with donor or receiving machine operation or setup support questions, please contact: 1-800-IBM-SERV (U.S. only) or use the support web site: http://www14.software.ibm.com/webapp/set2/sas/f/handbook/contacts.html#worldwide.

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Appendix

IBM i User Licensing Notes

"IBM i user":
A user is a person who accesses IBM i and exchanges credentials directly with IBM i or indirectly with an application running on IBM i

IBM i special entitlements for user-based licensing:
"External Access" entitlement provides access to individuals who are NOT employees or similar personnel of your enterprise and/or NOT individuals to whom you provide hosted services

"Unlimited Collaboration Users" entitlement provides entitlement for an unlimited number of users who access IBM i solely for the use of collaboration products and for no other purpose. For example:

> IBM Lotus Domino
> IBM Lotus Sametime
> IBM Lotus Quickr (The Domino Version)
> IBM Lotus Quickplace
> IBM WebSphere Portal

For the definition of and terms related to IBM i user licensing options, refer to the terms and conditions:
IBM i License Information (e.g. IBM i 7.3 License Information in English) > "User Based Pricing Authorization"

Power S812 and S922 with 1-core processor Initial Order and Transfer Notes

The Power S812 and S922 with 1-core processor with IBM i has a maximum of one processor entitlement. Therefore a maximum of one IBM i processor entitlement can be transferred to the S812 and S922 with 1-core processor.

The S812 and S922 with 1-core processor have a maximum of 25 IBM i users.

For initial order of the S812 or S922 with 1-core processor…
> Purchase the following:
> - Max quantity of 25 IBM i users
> - External Access entitlement
> - Unlimited Collaboration User entitlement
>
> Transfer the following to the S812 or the S922 with 1-core processor:
> - A quantity of users or the Unlimited User entitlement
> - External Access entitlement, Unlimited Collaboration User entitlement
>
> Not allowed on initial order:
> - Purchase of Unlimited User entitlement

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For any subsequent software-only e-config transfers to the S812 or the S922 with 1-core processor as target…

    If eligibility requirements are met, transfer…
- any quantity of IBM i user entitlement
- Unlimited User entitlement
- External Access entitlement
- Unlimited Collaboration User entitlement

For the S812 or S922 with 1-core processor maximum of 25 IBM i users:
- The External Access and Unlimited Collaboration User entitlements are not restricted to 25 users. Those two types of entitlement have unlimited users.
- Regardless of whether the Unlimited User entitlement or a quantity of users greater than 25 is on the S812 or S922 with 1-core processor, a maximum of 25 users is allowed.

Revision History

Version	Date	Change Description
GI11-9824-19	April 2019	- Section 2.4 clarify groups and associated software tiers; Section 2.7 clarify Pricing table row "~~To same or lower Group~~ To same or lower software tier size within the eligible transfer groups as specified in Section 2.4. (E.g., as indicated in Section 2.4, transfers from P20/P30/P50 to P05/P10 or from P05/P10 to P20/P30/P50 are not supported.)"
GI11-9824-20	July 2020	- Added 9009-41G, 9009-22G, 9009-42G - Added to the section "Power S812 and S922 with 1-core processor Initial Order and Transfer Notes"
GI11-9824-21	September 2021	- Added 9080-HEX
GI11-9824-22	June 2022	- Updated transfer pricing in Section 2.7
GI11-9824-23	July 2022	- Added Power10 scale-out systems