

iSeries On/Off CoD Planning Guide

Temporary Capacity for Model 825, 870, and 890

Dec 25, 2003

IMPORTANT IMPORTANT IMPORTANT

- 1) The latest V5R2 Cumulative PTF package (C3252520) should be loaded and applied on your Model 825, 870, or 890 before entering an enablement code for On/Off CoD (**This level of PTFs ensures the proper accounting for each Processor Day requested**)
- 2) Because no direct interlock between the function to start/stop requests for temporary capacity exists with the LPAR configuration tool on your server, you should avoid executing the following combination of actions in quick succession:
 - A) starting a request for temporary capacity,
 - B) stopping a request for temporary capacity,
 - C) starting a new request for temporary capacity and then changing the LPAR configuration.

This sequence of actions may result in an A6004730 SRC being posted and Unreturned Processor Days being charged to your system. To avoid this from happening, **wait 15 minutes after stopping a request** for temporary capacity before starting a new request

- 3) Prior to assigning any processors to a partition you should **verify that the processor MIN/MAX values for the primary and secondary partition(s) are appropriately set**. The MAX value must be set high enough to accept any temporarily activated processors. If this value is set to low, you will have to change the value and IPL the partition.

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Preface

You knew you might need extra processing power to meet the demands of your e-business and you didn't want to impact your current operational commitments to get it ...

IBM offers a fast, non-disruptive method of activating "extra" processor capacity that is built directly into IBM eServer iSeries.

CUoD or On/Off CoD enable you to activate (no IPL and/or database reconfiguration) one or more central processors of a Model 825, 870 and 890 up to the maximum number of available standby processors.

CUoD for permanent capacity

- 1) Order an activation code to permanently turn on extra capacity

On/Off CoD for temporary capacity

- 1) Enable your server for the use of temporary capacity
- 2) Turn on and off capacity as you need it ... it's immediate!
- 3) Pay for the requested capacity at the end of each quarter

Purpose of Planning Guide

This guide will explain in detail all the aspects of planning for, purchasing, and managing an **IBM eServer iSeries with On/Off Capacity on Demand**. On/Off CoD as defined in this document, is for the Model 825, 870 and 890 announced January 20, 2003 and made generally available Feb 28, 2003. **The latest set of V5R2 PTFs (CUM C3252520) is required.**

This guide is not a capacity planning document ... it will however point out key considerations when using capacity planning tools for a Model 825, 870, and 890.

Where to Get Help

The following information will help you quickly find the assistance you need.

Problem with a Capacity Card (part failure)

- #1) Call your service provider
- #2) IBM service personnel can contact Level II hardware support, in Rochester, to reset the appropriate capacity after the card has been replaced (refreshed Activation/Enablement Codes)

Problem with function of On/Off Capacity on Demand

- #1) Review appropriate sections in this Planning Guide
- #2) Contact product offering support tcod@us.ibm.com
- #3) Work with Level II and/or Techline support in your geography

Problem with selling/marketing On/Off Capacity Upgrade on Demand

- #1) Review appropriate sections in this Planning Guide and other available materials at the following website: <http://www.ibm.com/servers/eserver/iserries/ondemand/cod>
- #2) Work with account teams and/or marketing specialists in your Geography

Planning Guide Feedback

You may directly contact the author of this Planning Guide if you have information that may be of assistance in updating the guide or making it a more useful Planning Guide.

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iSeries Capacity Planning

Capacity planning is a 'business as usual' value-add function of IBM's sales team. Any special considerations specific to iSeries On/Off Capacity on Demand will be pointed out in this section. There is a comprehensive set of tools, resources and offerings available to aid IBMers, customers, and partners with capacity planning assistance.

When doing capacity planning for models offering On/Off CoD, one must plan ahead for any potential disruptive actions that would inhibit the full utilization of temporarily activated processor capacity. Some actions you may want to take prior to ever activating any processors are:

- Perform any I/O conditioning (e.g., new cages, or other I/O infrastructure)
- Perform memory upgrades
- Prepare LPAR partitions (Set MIN/MAX values appropriately)

Planning Ahead

By planning ahead, customers can accommodate the growth of existing workloads as well as handle new workloads without requiring a server outage.

Simply activating standby processors may not provide you with the full potential of capacity improvements you require. Other components of a server affect performance and overall throughput of workloads. By planning ahead and taking into account the complete server configuration, a customer can ensure they get the full benefit of processor activations.

iSeries Benchmark Center

IBM facilitates bench marking of customer and solution provider application environments. For more information, see their website at <http://www.as400.ibm.com/developer/cbc>.

iSeries Solutions Center -- Capacity Planning Services

Information regarding an IBM consulting service which can assist customers with their capacity planning needs can be found at the following website: <http://www-1.ibm.com/services/its/us/as400solutionctr.html>

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

CUoD was first introduced for the iSeries in the fall of 2002. At that time, CUoD was synonymous with permanent processor capacity. CUoD provided iSeries customers who purchased an iSeries model with standby capacity (un-activated at the time of purchase). This standby capacity, could be permanently activated for Planned Growth by purchasing a processor activation feature and entering the generated key at the server whenever the capacity was needed.

Now, we have introduced something entirely new ... On/Off CoD. This offering provides temporary capacity for a customer's business peaks!

What's new in 2003

- CUoD and On/Off CoD is available on iSeries Model 825, 870, 890 (new processor features)
- On/Off CoD ... ability to temporarily activate processor capacity
- Low cost processor activations for Linux
- Simpler fulfillment process for permanent activations (no field VPD required)
- Capacity BackUp Offering
- On/Off CoD for Software

With the introduction of the 2003 product line, iSeries once again will be among the leaders in this space by complementing the exiting offering called CUoD with a brand new capability called On/Off CoD. On/Off CoD, means a customer, can turn processor capacity on/off to satisfy business peaks. You simply request a number of processors be temporarily made available for a specific number of days ... you will be billed for whatever you requested at the end of each calendar quarter. Like renting, this flexibility is more expensive in the long run than buying, the approximate break-even point is 45 Processor Days (if you request/pay for 45 Processor Days you will have paid approximately the same price you would have paid for permanently activating a processor).


An added benefit of the new function called On/Off CoD, are Bonus Processor Days. There is nothing else like it in the market today. With the initial order and fulfillment of a TCOE Enablement Feature (no charge feature) comes fourteen bonus days of temporary capacity ... you will not be billed for the first 14 days of temporary capacity you request from the server.

On/Off CoD (aka. temporary capacity on demand)

Temporary capacity is available on the new iSeries Model 825, 870, and 890:

- 1) It can be turned on/off to match a customer's peak periods
- 2) It allows you to request a variable number of days as well as a variable number of processors
- 3) It is "immediate" ... no IPL, no re-configuring, no ordering, no waiting

IBM eServer iSeries



Enable, use, and bill temporary capacity

Enable -- server is enabled for temporary capacity

- Customer signs a contract with IBM
- Sales Channel (IBM or Business Partner) places a customer order for a TCOD Enablement Feature
- Customer enters the resulting TCOD Enablement Code on the server

Request -- temporary capacity is requested and then used



- Electronically report temporary capacity activity (minimum of once per month)
- Request temporary capacity via server screen (specify units)

Bill -- temporary capacity is monitored, billed, and paid for

- IBM consolidates reported information
- IBM notifies the Sales Channel about customer activity related to temporary capacity
- Sales Channel places an "after-the-fact" configurator order for TCOD Billing Features
- Sales Channel bills their customer

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Special Purpose Processor Days





Prepaid, Bonus, and Complementary Processor Days

Prepaid, Bonus, and/or Complementary Processor Days credited to a customer's machine records will reduce the number of Billable Processor Days to be charged at the end of each calendar quarter.

Prepaid Processor Days
Thirty processor days will be credited to a customer's machine records each time an On/Off CoD Prepaid Feature is purchased.

Bonus Processor Days
Fourteen processor days (this will vary on models purchased with the Capacity BackUp offering) will be credited to a customer's machine records the first time a TCOD Enablement Code is applied to the server. If and when the machine is upgraded (processor feature is changed), and a new TCOD Enablement Code is applied to the server, the number of credit days will be set to 14.

Complementary Processor Days
Complementary Processor Days can, **at IBM's option**, be credited to a customer's machine records for special purposes (e.g., customer incentive to "try" new workloads) ... an e-mail from the IBM GEO pricer approving such action must be forwarded to the TCOD Administrator at tcod@us.ibm.com.



Pricing

IBM eServer iSeries

"Back-End" pricing -- TCOD Billing Features

You pay full price for each Processor Day you request (qty of processors x quantity of days). If you request a processor to be temporarily activated for 45 days, you will have pay approximatly the same price it would cost you to permanently activate that processor.

- Customer Value: Only pay for what you activate when you need it
- Billing Process: Back-end billing (pay after request/use)
- Procesor Day Price: Full Price

Model	Processor Feature	Startup Processors	Standby Processors	TCOD Enablement Features	TCOD Billing Features
825	2495	1	5	1779	1797
825	2473	3	3	1773	1782 and 1783
870	2496	2	14	1780	1798
870	2489	5	3	1774	1784
870	2486	8	8	1776	1785 and 1786
890	2499	4	28	1781	1799
890	2497	16	8	1777	1788 and 1789
890	2498	24	8	1778	1791 and 1792

1) TCOD Enablement Features are no charge MES features
 2) US Prices represent IBM's list price for a TCOD Billing Feature (one Processor Day of temporary capacity)
 3) Additional operating system licensing may be required if using an OS that is licensed by processor (NOT required for OS/400)
 4) Additional software licensing may be required if using SW that is licensed by processor

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On/Off Capacity on Demand is enhanced with a new prepay capability to provide customers additional budgeting flexibility. Customers can now choose to pay for 30 Processor Days prior to activation ("Prepaid Processor Days") at a discounted price. This new capability is an alternative for customers who don't wish to be billed at the end of a quarter for temporary capacity that has been activated.

Prepaid Processor Days will be credited to the customer's On/Off Capacity on Demand account for the applicable serial number system and applied to the records of activated temporary capacity that have been reported for that system. Any Processor Days used beyond the prepaid quantity will be billed to the customer at the regular Processor Day price. Un-used Prepaid Processor Days are not refundable and may not be transferred to another system. As with any processor activations, the customer is responsible for any additional software charges that may apply.

Customers must sign the On/Off Capacity on Demand contracts and have ordered the applicable enablement code before purchasing the prepaid feature.

IBM eServer iSeries

"Up-Front" pricing -- On/Off CoD Prepaid Features

Price is discounted for a prepaid 30 day block of Processor Days .. you actually pay less per Processor Day, but you pay up-front (prior to activation) for use of temporary capacity.

- Customer Value: Budgeting flexibility
- Billing Process: Prepaid block of 30 Processor Days
- Processor Day Price: 25% discount

Model	Processor Feature	Startup Processors	Standby Processors	TCOD Enablement Features	On/OffCoDPrepaid Features
825	2495	1	5	1779	1697
825	2473	3	3	1773	1682 and 1683
870	2496	2	14	1780	1698
870	2489	5	3	1774	1684
870	2486	8	8	1776	1685 and 1686
890	2499	4	28	1781	1699
890	2497	16	8	1777	1688 and 1689
890	2498	24	8	1778	1691 and 1692

1) On/Off CoD Prepaid Features are no charge MES features
 2) US Prices represent IBM's list price for a TOn/Off CoD Prepaid Feature (30 Processor Days of temporary capacity)
 3) Additional operating system licensing may be required if using an OS that is licensed by processor (NOT required for OS/400)
 4) Additional software licensing may be required if using SW that is licensed by processor

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Temporary Capacity Enablement

Prior to requesting temporary capacity on your server, you must "enable" your server. To do this, order a TCOD Enablement Feature (MES only feature) and sign the required customer contract.

Model	Processor Feature	Enablement Feature
825	2495	1779
825	2473	1773
870	2496	1780
870	2489	1774
870	2486	1776
890	2499	1781
890	2497	1777
890	2498	1778

Placing an order for a TCOD Enablement Feature will result in a TCOD Enablement Code being generated and mailed to you, as well as being posted on the Web for you to retrieve and enter on your server.

A TCOD Enablement Code "enables" the server to a limit of Processor Days (up to 192) that can be requested as temporary capacity. This means, you can make requests for temporary capacity over the life of the machine as long you don't exceed this value. When the limit is reached, a new TCOD Enablement Feature must be ordered and a new TCOD Enablement Code entered. Every time a new TCOD Enablement Code is entered it will reset the limit of Processor Days that can be requested as temporary capacity to 192 (TCOD Enablement Codes are not additive)

Enable: Step-by-Step

IBM eServer iSeries

IBM

Enable: Step-by-Step

PRE-REQ #1: Sales Channel (IBM Business Partner) must sign the following contract:
IBM Business Partner Agreement, Attachment for Temporary Capacity On Demand

PRE-REQ #2: Sales Channel (IBM Business Partner or IBM Direct) must register at the following website: <http://www.ibm.com/servers/eserver/series/ondemand/cod>

Step1: Customer asks Sales Channel to enable their machine for temporary capacity

Step2: Customer must complete and sign the following contracts. It is the Sales Channel responsibility to return the signed contract to the GEO CSO organization and fax a copy to IBM at 1-507-253-4553

Required: IBM Customer Agreement, Attachment for Temporary Capacity On Demand

Required: IBM Supplement for Temporary Capacity On Demand

Optional: IBM Addendum for Temporary Capacity on Demand Alternative Reporting

Step3: Sales Channel places an order for the TCOE Enablement Feature

Step4: Sales Channel updates their website registration data (see pre-req #2 above) with information about the customer machine being enabled for temporary capacity.

NOTE: The order for a TCOE Enablement Feature will not be fulfilled until this step is completed

Step5: IBM generates a TCOE Enablement Code and mails/posts it

Step6: Customer retrieves the TCOE Enablement Code and applies it to the server using the appropriate DST/SST Screen (Enable Temporary System Capacity)

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Guidelines for Ordering a TCOD Enablement Feature

ibm.com/eserver/series

Guidelines for Temporary Capacity Enablement

New Box Orders

the order for the new server **cannot** include a TCOD Enablement Feature because a TCOD Enablement Feature is MES only

Package-to-Package Conversion, Processor-to-Processor Conversion, or Model-to-Model Upgrades

- => All records of TCOD Enablement Features ordered prior to the conversion/upgrade are removed from the machine records
(will need to order a new TCOD Enablement Feature for new hardware)
- => You can include a TCOD Enablement Feature on these types of orders (see warning) and have your TCOD Enablement Code mailed to you as well as posted on the web, so it is ready to enter on your server as part of the conversion/upgrade.



Warning: Delays can occur in the scheduling/fulfillment of this type of order because a TCOD Contract must first be signed

Enablement Feature Orders

- => For orders that have TCOD Enablement Features but don't contain a Processor or Package Feature .. if the Machine Serial# and/or the Capacity Card Serial# have not been altered outside of the IBM manufacturing or field maintenance process, **then a TCOD Enablement Code will be generated and mailed/posted without requiring CUoD Data (VPD) to be collected from the server and sent to IBM**



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How to retrieve a TCOD Enablement Code from the Web

Customer retrieves the TCOD Enablement Code from the web or waits for the TCOD Enablement Code to be sent by mail. The TCOD Enablement Code will be posted on the web usually within one business day of receiving the order on the manufacturing floor. To retrieve the TCOD Enablement Code follow these steps:

- 1) Go to the following Web-site: <http://www.ibm.com/servers/eserver/series/ondemand/cod>
- 2) Enter the Machine Type and Serial number of the target server on the web page
- 3) Print and/or record the TCOD Enablement Code displayed on the web page

How to enter a TCOD Enablement Code on the Server

Customer enters the TCOD Enablement Code at the System Console for the target server:

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with Function 21 on the control panel (key in manual position)
- 2) Sign on using service tools user profile of System capacity - administration
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 3) Select the option to ENABLE ON/OFF CAPACITY ON DEMAND
- 4) Enter TCOD Enablement Code and press Enter
- 5) Press Enter to confirm change and exit the System Capacity service function

NOTE: If the server is in bypass mode for the System Password, DST option 12 may not be available (no access to the DST screens associated with the CUoD functionality). If this is the case, you should obtain a valid System Password by contacting you IBM business partner or IBM Sales rep.

After entering a TCOD Enablement Code, the server must be run for 15 minutes to insure that the TCOD Enablement Activation Code is persistently stored (remembered) within the server. If you enter a TCOD Enablement Code and shut down the server before it has run for 15 minutes, on your next IPL, the TCOD Enablement Code **may be forgotten by the sever and have to be re-entered**

How to Collect Machine Information In Case an Enablement Code does not Work

If something has gotten out of sync, and the TCOD Enablement Code provided to you by IBM does not work properly, contact the TCOD Administrator and request a new TCOD Enablement Code. The TCOD Administrator will ask you to follow these steps to access the exact machine information needed to generate a proper code.

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the option to ENABLE ON/OFF CAPACITY ON DEMAND
- 5) Press PF10 to DISPLAY MACHINE INFORMATION

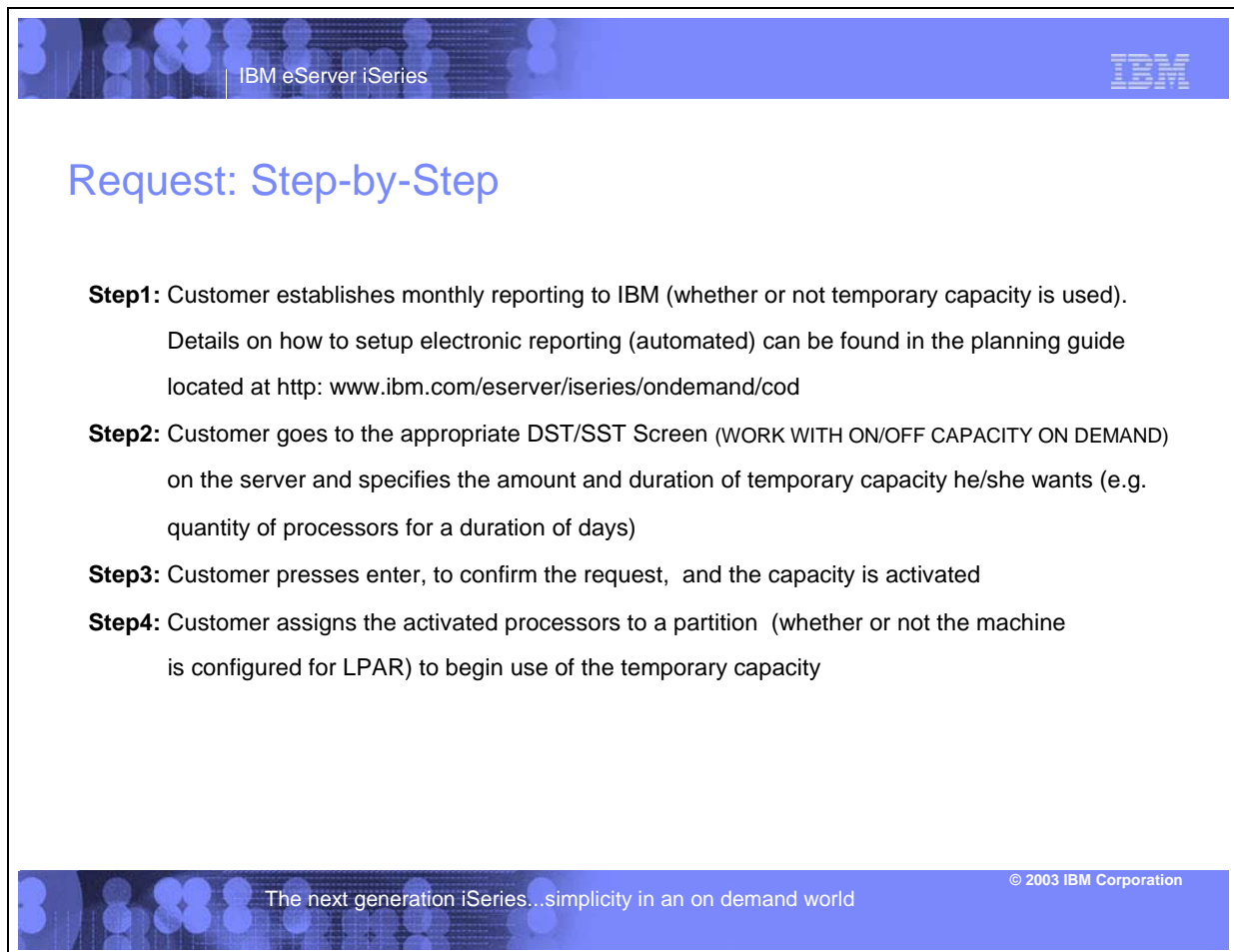
Temporary Capacity Request

When you decide you actually need to use temporary capacity ... you simply go to the temporary capacity screen on the server and specify how many of the standby (currently not activated) processors you would like activated and for how many days you would like them activated.

You will be billed for the processor days you request, so it is important to assign the processors to a partition as soon as they are activated to get the full benefit of the temporary capacity.

At the end of the temporary period (days you requested), you must make the temporarily activated processors "available" (LPAR state) to be re-claimed by the server, or you will be billed (per On/Off CoD contract you signed) for any Un-Returned processor days.

Request: Step-by Step



The slide features a blue header with the text "IBM eServer iSeries" and the IBM logo. The main content is white with blue text for the title and steps. The footer is blue with white text: "The next generation iSeries... simplicity in an on demand world" and "© 2003 IBM Corporation".

Request: Step-by-Step

- Step1:** Customer establishes monthly reporting to IBM (whether or not temporary capacity is used).
Details on how to setup electronic reporting (automated) can be found in the planning guide located at <http://www.ibm.com/eserver/series/ondemand/cod>
- Step2:** Customer goes to the appropriate DST/SST Screen (WORK WITH ON/OFF CAPACITY ON DEMAND) on the server and specifies the amount and duration of temporary capacity he/she wants (e.g. quantity of processors for a duration of days)
- Step3:** Customer presses enter, to confirm the request, and the capacity is activated
- Step4:** Customer assigns the activated processors to a partition (whether or not the machine is configured for LPAR) to begin use of the temporary capacity

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What is a Processor Day ?

Temporary capacity is activated, measured, and billed in units called "Processor Days" ...

Requested Processor Days: number of processors multiplied by the number of days specified on a request for temporary capacity

Un-Returned Processor Days: number of processors multiplied by the number of days that remain available for use beyond the expiration of the request for temporary capacity

How is a Processor Day counted?

Scenario-1: When a request for temporary capacity is made (once the confirmation screen is pressed), a request is considered "started". Once the request is started, a 24 hour period (Processor Day) begins. At the beginning of each 24 hour period that the processor is in use, the server will record one Requested Processor Day.

Scenario-2: A request for temporary capacity can be stopped at any time, when the request is stopped, the server recorded information will be adjusted to reflect the appropriate number of Requested Processor Days (number of processors multiplied times the number of days that the temporary capacity was actually available for use). If a request for temporary capacity is stopped anytime before a 24 hour period has expired ... the server will have recorded a Requested Processor Day for each processor that was specified on the request and made available for use per the previous paragraph (Note: Each time a request is started for a processor, a Requested Processor Day is recorded .. if the request is stopped and a new request is then started within the same 24 hour period, the result will be the recording of an additional Processor Day).

Scenario-3: If processors remain available for use beyond the number of days specified on a request for temporary capacity, the server will record Un-Returned Processor Days. One Un-Returned Processor Day will be recorded for each processor that is still available for use (customer has not removed the processors from the assigned partitions and made them available to be re-claimed by the server) at the expiration of the request . An additional Un-Returned Processor Day will be recorded for each processor that is still available for use at the beginning of each subsequent 24 hour period. (Note: Multiple warning messages will be provided on the server alerting the customer to the pending expiration of a request for temporary capacity)

Start a Request for Processor Days

Please be aware that only a single request for temporary capacity can be active at any time

To request an amount of temporary capacity, simply follow these steps:

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the option to WORK WITH ON/OFF CAPACITY ON DEMAND
- 5) Enter a number of processors and a number of days ... then press ENTER
- 6) Press enter on the confirm screen (text is shown to re-affirm the customer's understanding of the contract he/she signed prior to the enablement of this specific server for temporary capacity)

- 7) Assign the Activated Processors to a partition ... **you must do these steps even if your machine is not configured for LPAR!**

- A) Start the Work with system partitions option in DST or SST
- B) Enter Option 3 (Work with partition configuration)
- C) Enter Option 2 (Change partition processing resources) next to the PRIMARY
- D) Enter a value for "New number of processors" (The value should represent TOTAL active processors) ... press Enter

Note: *If a configuration error is signaled at the bottom of the screen, refer to LPAR trouble shooting article at*

<http://publib.boulder.ibm.com/series/v5r2/ic2924/info/rzaj8/rzaj8overview.htm>

- E) Press Enter to confirm the change
- F) Exit SST or DST

How to Stop a Request before it Expires

To stop a request before it expires you must perform two steps. **If both of these steps are not completed in the proper order, the machine may display SRC A6004730 and the machine will continue to count a quantity of Un-Returned Processor Days (you will be billed for these days at the end of the quarter).**

FIRST: Use LPAR configuration interface to remove the temporarily activated processors from the partitions they were assigned to and remove them from the shared pool to make them available

to be re-claimed by the server.

To verify the proper number of processors are available to be reclaimed, use the “Display Partition Processing Configuration” screen to review the value in the field called “Number of available system processors”.

SECOND: Use the following steps to actually “stop” your request for temporary capacity (number of processors for a number of days)

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the option to WORK WITH ON/OFF CAPACITY ON DEMAND
- 5) Select the option to stop the request and confirm the change

WARNING: Because no direct interlock between the function to start/stop requests for temporary capacity exists with the LPAR configuration interfaces on your server, you should avoid executing the following combination of actions in quick succession 1) starting a request for temporary capacity, 2) stopping a request for temporary capacity, 3) starting a new request for temporary capacity and then changing the LPAR configuration. **This may result in an A6004730 SRC being posted and Unreturned Processor Days being charged to your system. To avoid this behavior, wait 15 minutes after stopping a request for temporary capacity before starting a new request.**

What Happens When a Request Expires?

One of two scenarios can happen ...

SCENARIO-1: If you make the temporary capacity available to be re-claimed before the request expires ...then the request will expire and be removed from the WORK WITH ON/OFF CAPACITY ON DEMAND Screen.

Use the LPAR configuration interface to remove the temporarily activated processors from the partitions and the shared pool they were assigned to which makes them available to be re-claimed by the server.

To verify the proper number of processors are available to be reclaimed, use the “Display Partition Processing Configuration” screen to review the value in the field called “Number of available system processors”.

SCENARIO-2: If you do not make the temporary capacity available to be re-claimed before the request expires .. then the request will expire and be removed from the WORK WITH ON/OFF CAPACITY ON DEMAND Screen.

WARNING: The server will treat the temporary capacity that is still assigned to partitions or The shared pool as Un-Returned Processor Days (you will be charged for Un-Returned Processor Days at the same rate you would have been charged for Requested Processor Days).

How to Display Temporary Capacity Information?

Information about how many standby processors are activated can be reviewed by using the following steps:

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the option to DISPLAY SYSTEM CAPACITY INFORMATION
- 5) Select the PF Key to DISPLAY ON/OFF CAPACITY ON DEMAND

Temporary Capacity Billing

The contract signed by the customer prior to receiving the enablement code, requires the customer to report billing data, at least once per month (whether there is activity or not). This data is used to determine the proper amount to bill the customer for at the end of each billing period (calendar quarter).


Processor days of credit (prepaid, bonus, and/or complementary) will be applied against any Requested and/or Un-Returned processor days of temporary capacity. This will happen automatically, until they are used up.

Failure to report billing data during a Billing Quarter for which the machine has been enabled (TCOD Enablement Feature has been ordered and the resulting TCOD Enablement Code has been shipped), will result in estimated bill for 90 Processor Days of temporary capacity .

The Sales Channel will be notified of customer requests for temporary capacity. As a result, the Sales Channel is required to place an order for a quantity of TCOD Billing Features (One Feature = One Processor Day).

Model	Processor Feature	Package Feature	Billing Feature
890	2498	7427	1792
		7425	1791
890	2497	7424	1789
		7422	1788
890	2499	7439	1797
870	2486	7421	1786
		7419	1785
870	2489	7431	1784
		7433	1795
870	2496	7440	1798
825	2473	7418	1783
		7416	1782
825	2495	7439	1797

Bill: Step-by Step

IBM eServer iSeries 

Bill: Step-by-Step

Step1: Customer must report billing data (Requested and Un-Returned Processor Days) at a minimum of once per month (per signed contract)

Step2: At the end of each billing period (calendar quarter), IBM will process the reported data collected in the IBM database (MRPD), make adjustments for credit days (prepaid, bonus, and/or complementary) and then notify the sales channel, so the proper billing can take place.

Step3: Sales Channel places an order for a quantity of TCOD Billing Features (One billing feature = One processor day)

Step4: IBM will ship a notice to the "Ship-to-Address" outlining the activity IBM has recognized for the billing period. The notice contains the same info that has been forwarded to the e-mail addresses of the Sales Channel ... no pricing information!. The actual shipping of this notice to the "Ship-to-Address" on the order represents the fulfillment of the TCOD Billing Features from a manufacturing perspective.

Step5: Customer pays the Sales Channel and the Sales Channel pays IBM for the fulfillment of the TCOD Billing Features (Note: The customer can review a history log on the server, that contains a record for each request of temporary capacity that can be used to verify billing values)

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How to Report Temporary Processor Activations via Electronic Service Agent

Information about your requests for temporary capacity must be reported to IBM (minimum of once per month per the TCOD Contract). Electronic Service Agent can be used to “electronically” transfer information to IBM on a regularly scheduled basis.

Exercise the steps found in Chapter 2 of the IBM Electronic Service Agent for iSeries Simplified Activation User Guide -- Release V5R2, found at URL:

<http://publib.boulder.ibm.com/isrvagt/sdsadoc.html>

Using Simplified Activation (green screen), the **collection/transmission is daily**. Once a customer activates it, that's what they get. They turn it on, and leave it. The Simplified Activation was provided to eliminate as many setup steps as possible, so during the set-up, we pick the time of day, and then schedule jobs which run daily to collect and send the inventory. The user can adjust the time of day (Simplified Activation Guide: Chapter 4, Q5), but not the frequency.

If you need help, call IBM Support Line and request help for Electronic Service Agent there is no charge for this support, so don't worry if you don't have a SupportLine contract. If you are in the US, the SupportLine number is 1-800-426-7378 (Option 2).

How to Report Temporary Processor Activations via Fax

Information about your requests for temporary capacity must be reported to IBM (minimum of once per month per the TCOD Contract). The data that must be reported can be collected by following the steps outlined below:

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the option to DISPLAY SYSTEM CAPACITY INFORMATION
- 5) Select the option to DISPLAY ON/OFF CAPACITY ON DEMAND
- 6) Print the screen and fax a copy of the printed screen to the TCOD Administrator at 1-507-253-4553

How to Report Temporary Processor Activations via e-Mail

Information about your requests for temporary capacity must be reported to IBM (minimum of once per month per the TCOD Contract). The data that must be reported can be collected by following the steps outlined below:

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the option to DISPLAY SYSTEM CAPACITY INFORMATION
- 5) Select the option to DISPLAY ON/OFF CAPACITY ON DEMAND

6) Copy an electronic image of the screen and e-mail to the TCOD Administrator at tcod@us.ibm.com

How to Review the History Log

If there are concerns with a bill or the customer simply wants to review the history of temporary capacity requests on the server, follow these steps:

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the [PF key to DISPLAY HISTORY LOG](#)

How to Resolve a Customer Issue with their Bill

Here are the levels of customer bill resolution that should be followed:

Level-1: Partner answers customer's questions

Level-2: Partner and customer jointly review the History Log (on the server) and validate that the appropriate bill has been generated

Level-3: Partner contacts TCOD administrator (e-mail) with explanation of customer issue and a copy of the History Log.

TCOD Administrator resolves situation with one of the following:

- A) Partner/Customer are resolved of the Processor Days in question
- B) Partner/Customer are resolved of all Processor Days for this quarter
- C) Partner/Customer are resolved of all Processor Days for this quarter and a TCOD Termination Code is generated and applied to the server (server is no longer enabled for temporary capacity)

Termination

To stop future use of temporary capacity, a TCOD Termination Code must be applied to the server.

Scenario #1: Customer requests a TCOD Termination Code because he/she does not want the server enabled for temporary capacity any longer

Required Steps:

- Step1: Customer makes a request to the TCOD Administrator (tcod@us.ibm.com)
- Step2: TCOD Administrator uses the TCOD Application to generate a TCOD Termination Code for the customer's server, using "9999" as the Activation Feature , Units of Activated Capacity = "00000", and a Sequence Number greater than "0020
- Step3: TCOD Administrator provides the Termination Code to the customer
- Step4: The customer enters the TCOD Termination Code on the same screen used to enter a TCOD Enablement Code
- Step5: IBM has the TCOD Enablement Feature removed from machine records (RPO by CSO)

Scenario #2: Customer/Partner requests a TCOD Termination Code because they are selling their machine (Note: customer is required to have a TCOD Termination Code applied to the server before being sold to avoid billing for temporary capacity due to a failure to report machine activity during future TCOD Billing Periods)

Required Steps:

- Step1: Customer/Partner makes a request to the TCOD Administrator (tcod@us.ibm.com)
- Step2: TCOD Administrator uses the TCOD Application to generate a TCOD Termination Code for the customer's server, using "9999" as the Activation Feature , Units of Activated Capacity = "00000", and a Sequence Number greater than "0020
- Step3: TCOD Administrator provides the Termination Code to a CE , IBM specialist, or Channel Partner (not the customer) that can make a site visit
- Step4: The TCOD Termination Code is entered on the same screen used to enter a TCOD Enablement Code
- Step5: IBM has the TCOD Enablement Feature removed from machine records (RPO by CSO)

Scenario #3: Partner requests a TCOD Termination Code because customer is not paying for temporary capacity

Required Steps:

- Step1: Partner makes a request to the TCOD Administrator (tcod@us.ibm.com)
- Step2: TCOD Administrator uses the TCOD Application to generate a TCOD Termination Code for the customer's server, using "9999" as the Activation Feature, Units of Activated Capacity = "00000", and a Sequence Number greater than "0020"
- Step3: TCOD Administrator provides the Termination Code to the Partner
- Step4: The partner enters the TCOD Termination Code on the same screen used to enter a TCOD Enablement Code
- Step5: IBM has the TCOD Enablement Feature removed from machine records (RPO by CSO)

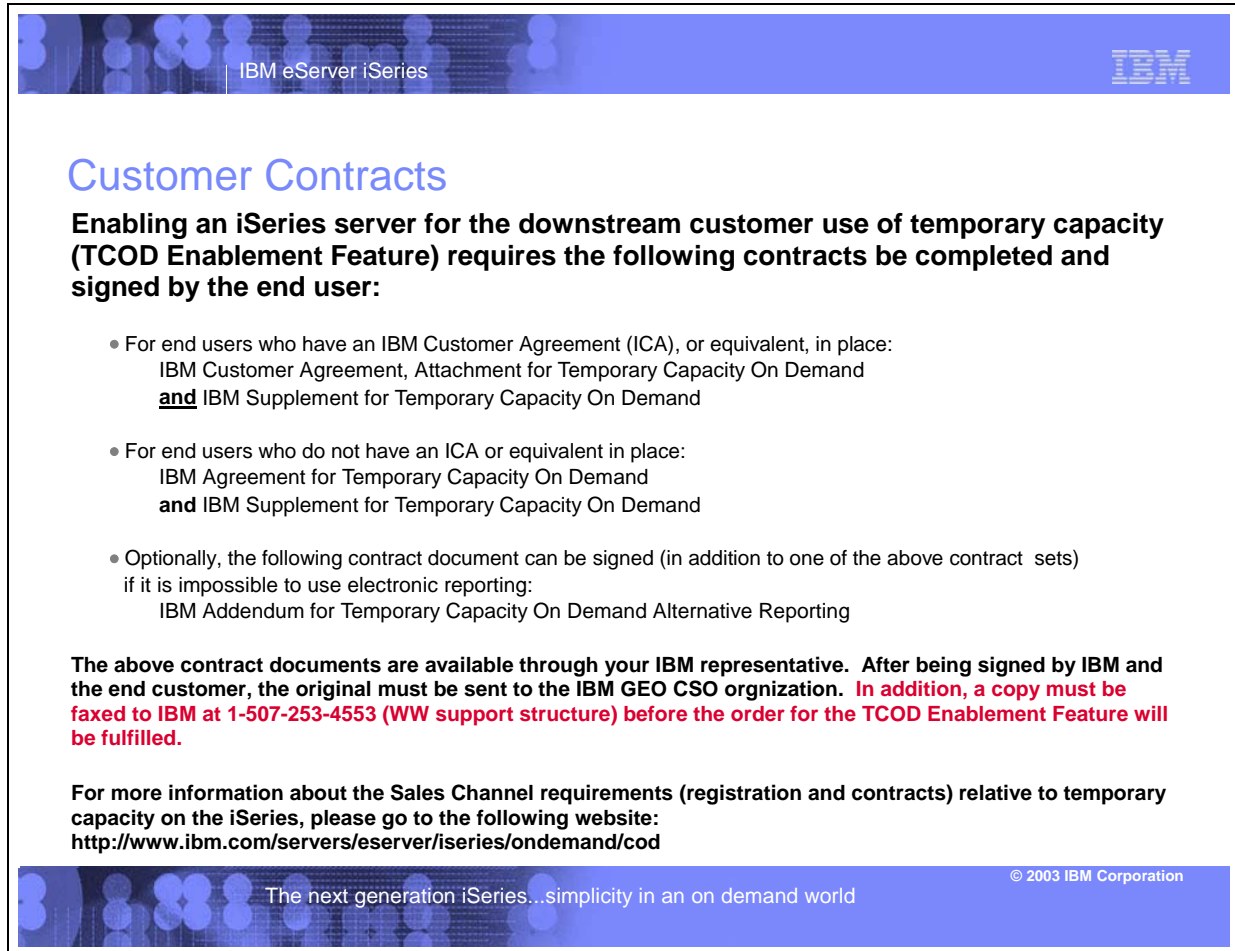
Scenario #4: IBM or Partner requests a TCOD Termination Code because customer is in noncompliance with The TCOD contract that was signed prior to enabling temporary capacity on the server

Required Steps:

- Step1: IBM or Partner makes a request to the TCOD Administrator (tcod@us.ibm.com)
- Step2: TCOD Administrator uses the TCOD Application to generate a TCOD Termination Code for the customer's server, using "9999" as the Activation Feature, , Units of Activated Capacity = "00000", and a Sequence Number greater than "0020"
- Step3: TCOD Administrator provides the Termination Code to a CE , IBM specialist, or Channel Partner (not the customer) that can make a site visit
- Step4: The TCOD Termination Code is entered on the same screen used to enter a TCOD Enablement Code
- Step5: IBM has the TCOD Enablement Feature removed from machine records (RPO by CSO)

Customer Contracts/Responsibilities

Customer Contracts



IBM eServer iSeries

Customer Contracts

Enabling an iSeries server for the downstream customer use of temporary capacity (TCOD Enablement Feature) requires the following contracts be completed and signed by the end user:

- For end users who have an IBM Customer Agreement (ICA), or equivalent, in place:
IBM Customer Agreement, Attachment for Temporary Capacity On Demand
and IBM Supplement for Temporary Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
IBM Agreement for Temporary Capacity On Demand
and IBM Supplement for Temporary Capacity On Demand
- Optionally, the following contract document can be signed (in addition to one of the above contract sets) if it is impossible to use electronic reporting:
IBM Addendum for Temporary Capacity On Demand Alternative Reporting

The above contract documents are available through your IBM representative. After being signed by IBM and the end customer, the original must be sent to the IBM GEO CSO organization. In addition, a copy must be faxed to IBM at 1-507-253-4553 (WW support structure) before the order for the TCOD Enablement Feature will be fulfilled.

**For more information about the Sales Channel requirements (registration and contracts) relative to temporary capacity on the iSeries, please go to the following website:
<http://www.ibm.com/servers/eserver/iseries/ondemand/cod>**

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Customer Responsibilities

IBM eServer iSeries

Customer Responsibilities

Enable:

A) Order a TCOD Enablement Feature from your Sales Channel

- 1) The TCOD Enablement Feature is good for 192 Processor Days (temporary capacity that can be requested before a new TCOD Enablement Feature would have to be ordered)
- 2) TCOD Enablement Features are not additive .. if you order a new one and apply the TCOD Enablement Code, the new limit will be set to 192 Processor Days, no matter how many Processor Days were left on the old limit

B) Sign the proper contract

- For end users who have an IBM Customer Agreement (ICA), or equivalent, in place:
IBM Customer Agreement, Attachment for Temporary Capacity On Demand **and** IBM Supplement for Temporary Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
IBM Agreement for Temporary Capacity On Demand **and** IBM Supplement for Temporary Capacity On Demand
- Optionally, the following contract document can be signed (in addition to one of the above contract sets) if it is impossible to use electronic reporting:
IBM Addendum for Temporary Capacity On Demand Alternative Reporting

C) Retrieve and enter the TCOD Enablement Code on the server

Request:

- A) Report to IBM a minimum of once per month using Electronic Service Agent (Exception: FAX or eMail) the billing data that reflects the quantity of Requested and Un-Returned Processor Days for your server
- B) Specify a quantity of processors and a quantity of days to be activated as temporary capacity
- C) Return requested processors at the end of the temporary period so they can be re-claimed by the server

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Customer Responsibilities (continued ..)

Bill:

Accept and pay your bill for the number of Requested and Un-Returned Processor Days that occurs during each billing period

- 1) If you fail to report activity during a billing period (calendar quarter), accept the terms of the contract that explain that you will be charged a flat rate of 90 Processor Days of temporary capacity
- 2) Understand that you will receive (first time the hardware is enabled) at no charge, 14 Bonus Days that will be applied by IBM to your machine records and subsequently will result in a reduction in the number of actual Processor Days you will be billed for by your Sales Channel
- 3) Return requested processors at the end of the temporary period, so they can be re-claimed by the server, or accept the terms of the contract that explain you will be charged for Un-Returned Processor Days at the same rate as Requested Processor Days

Terminate:

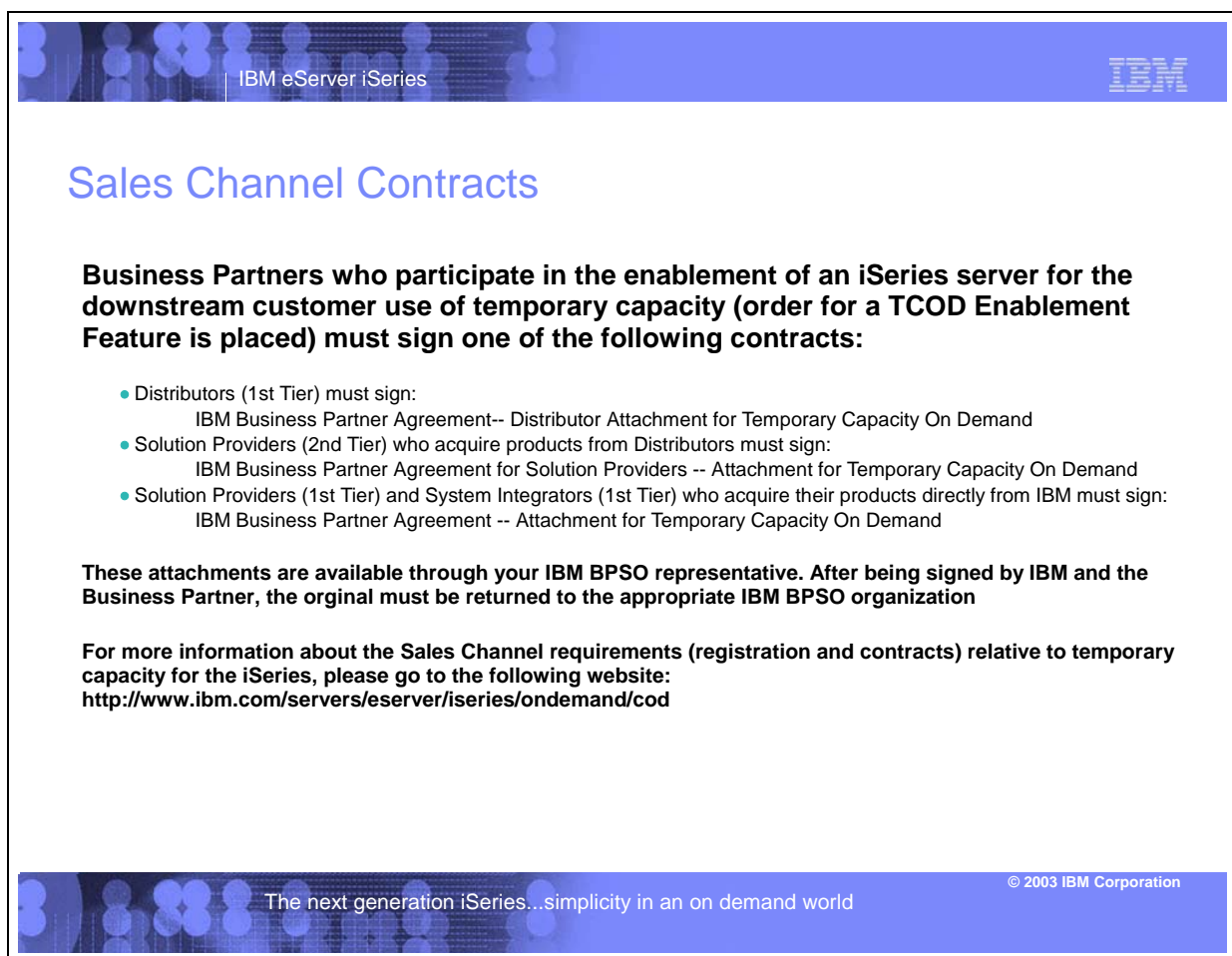
Request a TCOB Termination Code from tcod@us.ibm.com and allow IBM/partner to enter the code prior to the machine being sold or returned from lease

- 1) Understand that it is the customer's responsibility to request a TCOB Termination Code and allow machine access so that it may be applied prior to the machine being sold (Failure to do so will result in on going Processor Day billing equal to 90 Processor Days due to the fact that the original customer is no longer reporting machine activity)

Allow a TCOB Termination Code be entered by IBM/partner if you, the customer, is not paying the bills and/or is found to be in noncompliance with the contracts you have signed

Sales Channel Contracts/Responsibilities

Sales Channel Contracts



IBM eServer iSeries

Sales Channel Contracts

Business Partners who participate in the enablement of an iSeries server for the downstream customer use of temporary capacity (order for a TCOD Enablement Feature is placed) must sign one of the following contracts:

- Distributors (1st Tier) must sign:
IBM Business Partner Agreement-- Distributor Attachment for Temporary Capacity On Demand
- Solution Providers (2nd Tier) who acquire products from Distributors must sign:
IBM Business Partner Agreement for Solution Providers -- Attachment for Temporary Capacity On Demand
- Solution Providers (1st Tier) and System Integrators (1st Tier) who acquire their products directly from IBM must sign:
IBM Business Partner Agreement -- Attachment for Temporary Capacity On Demand



These attachments are available through your IBM BPSO representative. After being signed by IBM and the Business Partner, the original must be returned to the appropriate IBM BPSO organization

**For more information about the Sales Channel requirements (registration and contracts) relative to temporary capacity for the iSeries, please go to the following website:
<http://www.ibm.com/servers/eserver/series/ondemand/cod>**

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Distributor Responsibilities



Distributor Responsibilities

Pre-Requisite:

- A) Request the **IBM Business Partner Agreement-- Distributor Attachment for Temporary Capacity On Demand** from your GEO BPSO organization, sign it, and return it to BPSO organization
 - Note1: This is a one time activity and it is IBM's objective to accomplish this for 100% of the Distributors on a WW basis in the February 2003 timeframe
 - Note2: Each GEO's BPSO organization will handle this two-party signed attachment in a business as usual fashion, standard processes for "requesting" the attachment and standard processes for ensuring it is signed and returned
- B) Request the **IBM Business Partner Agreement for Solution Providers -- Attachment for Temporary Capacity On Demand** from your GEO BPSO organization on behalf of the Solution Provider, facilitate the signing of it by the Solution Provider, and ensure it gets returned to BPSO organization
 - Note1: This is a one time activity that is only necessary when/if a Solution Provider has actually identified an opportunity to enable On/Off CUoD for a specific customer's machine. IBM is not necessarily expecting, nor requiring large numbers of Solution Providers to take this step in 2003.
 - Note2: Each GEO's BPSO organization will handle this two-party signed attachment in a business as usual fashion, standard processes for "requesting" the attachment and standard processes for ensuring it is signed and returned
- C) Ensure the Solution Provider who signs the contract in PRE-REQ "B", is aware of their requirement to register themselves as a Sales Channel at this website (www.ibm.com/eserver/series/hardware/ondemand/cod) by providing a unique/IBM recognizable identifier for the Solution Provider and the Solution Provider's Distributor, along with three e-mail addresses one of them being their Distributor's e-mail address) who will receive customer activity information at the end of each quarter and follow through with the appropriate customer billing and IBM order/payment

Enable:

- A) Ensure the Solution Provider who signs the contract in PRE-REQ "B" and registers at the website per PRE-REQ "C" also records the machine serial number information at the same website (www.ibm.com/eserver/series/hardware/ondmeand) for the machine they are ordering a TCOD Enablement Feature ... **if this does not occur, the order for the TCOD Enablement Feature will not be fulfilled!**

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Distributor Responsibilities

Bill:

- A) Work with the Solution Provider to place an order for a quantity of TCOD Billing Features in IBM's configurator (treat them like any other order for a qty of hardware features against a specific serial number).
- B) Work with the Solution Provider to bill the customer for a quantity of TCOD Billing Features (one billing feature per Processor Day)

Note1: The contract signed between the customer and IBM (two-party contract) prior to the enablement of On/Off CUoD for the customer's machine obligates him/her to pay for the request/use of temporary capacity.

Customer Contract Wording:

You agree that you are liable to IBM for payment for each TCOD Unit (both Requested and Unreturned Units) on your TCOD Machine. This liability is discharged when you order and pay IBM or your designated participating IBM Business Partner for the TCOD Units. The amount due will be at IBM's or your IBM Business Partner's, as applicable, then current prices and payment terms for the TCOD Billing Feature for the applicable TCOD Billing Quarter.

Note2: If it is deemed necessary to have a PO in place to facilitate action "A" and "B", then one could consider an open PO approach initiated at the time the customer signs the contract for temporary capacity or a PO that is put in place following the e-mail notification to the Solution Provider that activity has actually happened within a quarter that requires billing to take place

Solution Provider (buy from distributor) Responsibilities

IBM eServer iSeries

Solution Provider (buys from distributor) Responsibilities

Pre-Requirement:

A) Work with your Distributor to request the **IBM Business Partner Agreement for Solution Providers -- Attachment for Temporary Capacity On Demand** from your GEO BPSO organization, sign it, and ensure it gets returned to BPSO organization

Note1: This is a one time activity that is only necessary when/if a Solution Provider has actually identified an opportunity to enable On/Off CoD for a specific customer's machine. IBM is not necessarily expecting, nor requiring large numbers of Solution Providers to take this step in 2003.

Note2: Each GEO's BPSO organization will handle this two-party signed attachment in a business as usual fashion, standard processes for "requesting" the attachment and standard processes for ensuring it is signed and returned

B) Register your company as a Sales Channel at this website (www.ibm.com/eserver/series/hardware/ondemand/cod) by providing a unique/IBM recognizable identifier for your company, a unique/IBM recognizable identifier for your Distributor, and three e-mail addresses

Note1: The three e-mail addresses will be the recipients of customer activity information collected and sent by IBM at the end of each calendar quarter to be used for customer billing and IBM order/payment of temporary capacity

Note2: As part of the registration process, you will see the **IBM Business Partner Agreement for Solution Providers -- Attachment for Temporary Capacity On Demand** on a screen and will be asked to confirm you agree with the T&Cs and that they have signed a hardcopy of the attachment that has been returned to the IBM BPSO organization

Enable:

A) Facilitate the signing (IBM and Customer signatures are required) of the proper customer contract

- For end users who have an IBM Customer Agreement (ICA), or equivalent, in place:
IBM Customer Agreement, Attachment for Temporary Capacity On Demand and IBM Supplement for Temporary Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
IBM Agreement for Temporary Capacity On Demand and IBM Supplement for Temporary Capacity On Demand
- Optionally, the following contract document can be signed (in addition to one of the above contract sets) if it is impossible to use electronic reporting:
IBM Addendum for Temporary Capacity On Demand Alternative Reporting

B) Fax a copy of the signed customer contract (customer keeps original) to IBM TCOD Administrator at 1-507-253-4553

C) Update your registration information at the CoD website (www.ibm.com/eserver/series/hardware/ondemand/com) each time a TCOD Enablement Feature is being ordered for a new machine (serial#)

Note1: The order for a TCOD Enablement Feature will not be fulfilled (it will not even be scheduled) until a signed customer contract has been received by IBM and you have recorded the machine serial# at the CoD website under your Sales Channel registration information

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Solution Provider (buys from distributor) Responsibilities

Bill:

- A) Receive customer activity data from IBM at the end of each calendar quarter (e-mail based on addresses provided at time of your registration at the CoD website)
- B) Work with your Distributor to place an order for a quantity of TCOD Billing Features in IBM's configurator (treat them like an other order for a qty of hardware features against a specific serial number).
- C) Bill the customer for a quantity of TCOD Billing Features (one billing feature per Processor Day)

Note1: The contract signed between the customer and IBM (two-party contract) prior to the enablement of On/Off CUoD for the customer's machine obligates him/her to pay for the request/use of temporary capacity.

Customer Contract Wording:

You agree that you are liable to IBM for payment for each TCOD Unit (both Requested and Unreturned Units) on your TCOD Machine. This liability is discharged when you order and pay IBM or your designated participating IBM Business Partner for the TCOD Units. The amount due will be at IBM's or your IBM Business Partner's, as applicable, then current prices and payment terms for the TCOD Billing Feature for the applicable TCOD Billing Quarter.


Note2: If it is deemed necessary to have a PO in place to facilitate action "B" and "C", then one could consider an open PO approach initiated at the time the customer signs contract or a PO that is put in place following the e-mail notification to the Solution Provider that activity has actually happened within a quarter that requires billing to take place

Terminate:

- A) Request a TCOD Termination Code (make the request to TCOD@US.IBM.COM) when/if one of the following situations occur:
 - 1) Customer wants it because they don't want the ability to activate temporary capacity anymore
 - 2) Customer wants it because they are obligated by TCOD Contract to terminate temporary capacity before selling the machine or ending a lease
 - 3) Distributor/Solution Provider wants it because they aren't getting paid by customer
 - 4) Distributor/Solution Provider wants it because they have detected customer non-compliance with the TCOD contract

Solution Provider or Systems Integrator (buys from IBM) Responsibilities

IBM eServer iSeries



Soluton Provider or System Integrator (buys from IBM) Responsibilities

Pre-Requsite:

A) Request the **IBM Business Partner Agreement-- Attachment for Temporary Capacity On Demand** from your GEO BPSO organization, sign it, and return it to BPSO organization

Note1: This is a one time activity that is only necessary when/if a Partner has actually identified an opportunity to enable On/Off CoD for a specific customer's machine. IBM is not necessarily expecting, nor requiring large numbers of Solution Providers to take this step in 2003.

Note2: Each GEO's BPSO organization will handle this two-party signed attachment in a business as usual fashion, standard processes for "requesting" the attachment and standard processes for ensuring it is signed and returned

B) Register your company as a Sales Channel at this website (www.ibm.com/eserver/iseries/hardware/ondemand/cod) by providing your unique IBM partner identifier and three e-mail addresses

Note1: The three e-mail addresses will be the recipients of customer activity information collected and sent by IBM at the end of each calendar quarter to be used for customer billing and IBMorder/payment of temporary capacity

Note2: As part of the registration process, you will see the **IBM Business Partner Agreement -- Attachment for Temporary Capacity On Demand** on a screen and will be asked to confirm you agree with the T&Cs and that they have signed a hardcopy of the attachment that has been returned to the IBM BPSO organization

Enable:

A) Facilitate the signing (IBM and Customer signatures are required) of the proper customer contract

- For end users who have an IBM Customer Agreement (ICA), or equivalent, in place:
IBM Customer Agreement, Attachment for Temporary Capacity On Demand and IBM Supplement for Temporary Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
IBM Agreement for Temporary Capacity On Demand and IBM Supplement for Temporary Capacity On Demand
- Optionally, the following contract document can be signed (in addition to one of the above contract sets) if it is impossible to use electronic reporting:
IBM Addendum for Temporary Capacity On Demand Alternative Reporting

B) Fax a copy of the signed customer contract (customer keeps original) to IBM TCOD Administrator at 1-507-253-4553

C) Update your registration information at the CUoD website (www.ibm.com/eserver/isereis/hardware/ondemand/cod) each time a TCOD Enablement Feature is being ordered for a new machine (serial#)

Note1: The order for a TCOD Enablement Feature will not be fulfilled (it will not even be scheduled) until a signed customer contract has been received by IBM and you have recorded the machine serial# at the CUoD website under your Sales Channel registration information

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Soluton Provider or System Integrator (buys from IBM) Responsibilities

Bill:

- A) Receive a customer activity data from IBM at the end of each calendar quarter (e-mail based on addresses provided at time of your registration at the CoD website)
- B) Place an order for a quantity of TCOD Billing Features in IBM's configurator (treat them like an other order for a qty of hardware features against a specific serial number).
- C) Bill the customer for a quantity of TCOD Billing Features (one billing feature per Procesor Day)

Note1: The contract signed between the customer and IBM (two-party contract) prior to the enablement of On/Off CoD for the customer's machine obligates him/her to pay for the request/use of temporary capacity.

Customer Contract Wording:

You agree that you are liable to IBM for payment for each TCOD Unit (both Requested and Unreturned Units) on your TCOD Machine. This liability is discharged when you order and pay IBM or your designated participating IBM Business Partner for the TCOD Units. The amont due will be at IBM's or your IBM Business Partner's, as applicable, then current prices and payment terms for the TCOD Billing Feature for the applicable TCOD Billing Quarter.


Note2: If it is deemed necessary to have a PO in place to facilitate action "B" and "C", then one could consider an open PO approach initiated at the time the customer signs contract or a PO that is put in place following the e-mail notification to the IBMpartner that activity has actually happened within a quarter that requires billing to take place

Terminate:

- A) Request a TCOD Termination Code (make the request to TCOD@US.IBM.COM) when/if one of thefollowing situations occur:
 - 1) Customer wants it because they don't want the ability to activate temporary capacity anymore
 - 2) Customer wants it because they are obligated by TCOD Contract to terminate temporary capacity before selling the machine or ending a lease
 - 3) Partner wants it because they aren't getting paid by customer
 - 4) Partner wants it because they have detected customer noncompliance with the TCOD contract

IBM Direct Sales Responsibilities

IBM eServer iSeries



IBM Direct Sales Responsibilities

Pre-Requisite:

A) Register yourself as the Sales Channel at this website (www.ibm.com/eserver/series/hardware/ondemand/cod) by providing your unique IBM serial# and three e-mail addresses

Note1: The three e-mail addresses will be the recipients of customer activity information collected and sent by IBM at the end of each calendar quarter to be used for customer billing and IBM order/payment of temporary capacity

Enable:

A) Facilitate the signing (IBM and Customer signatures are required) of the proper customer contract

- For end users who have an IBM Customer Agreement (ICA), or equivalent, in place:
IBM Customer Agreement, Attachment for Temporary Capacity On Demand **and** IBM Supplement for Temporary Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
IBM Agreement for Temporary Capacity On Demand **and** IBM Supplement for Temporary Capacity On Demand
- Optionally, the following contract document can be signed (in addition to one of the above contract sets) if it is impossible to use electronic reporting:
IBM Addendum for Temporary Capacity On Demand Alternative Reporting

B) Fax a copy of the signed customer contract (customer keeps original) to IBM TCOD Administrator at 1-507-253-4553

C) Update your registration information at the CUoD website (www.ibm.com/eserver/series/hardware/ondemand/cod) each time a TCOD Enablement Feature is being ordered for a new machine (serial#)

Note1: The order for a TCOD Enablement Feature will not be fulfilled (it will not even be scheduled) until a signed customer contract has been received by IBM **and** you have recorded the machine serial# at the CUoD website under your Sales Channel registration information

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IBM Direct Sales Responsibilities

Bill:

- A) Receive a customer activity data from IBM at the end of each calendar quarter (e-mail to each address provided at time of your Sales Channel registration at the CoD website)
- B) Place an order for a quantity of TCOD Billing Features in IBM's configurator (treat them like any other order for a qty of hardware features against a specific serial number).
- C) Bill the customer for a quantity of TCOD Billing Features (one billing feature per Processor Day)

Note1: The contract signed between the customer and IBM (two-party contract) prior to the enablement of On/Off CoD for the customer's machine obligates him/her to pay for the request/use of temporary capacity.

Customer Contract Wording:

You agree that you are liable to IBM for payment for each TCOD Unit (both Requested and Unreturned Units) on your TCOD Machine. This liability is discharged when you order and pay IBM or your designated participating IBM Business Partner for the TCOD Units. The amount due will be at IBM's or your IBM Business Partner's, as applicable, then current prices and payment terms for the TCOD Billing Feature for the applicable TCOD Billing Quarter.

Note2: IBM Direct will work with their CSO organizations business-as-usual (just like an order for any hardware feature against a specific machine serial#) to ensure an order is placed and the customer is billed. This may require the creation of an open-ended PO as part of the contract arrangement or a unique PO each quarter their is customer activity relative to temporary capacity

Terminate:

- A) Request a TCOD Termination Code (make the request to TCOD@US.IBM.COM) when/if one of the following situations occur:
 - 1) Customer wants it because they don't want the ability to activate temporary capacity anymore
 - 2) Customer wants it because they are obligated by TCOD Contract to terminate temporary capacity before selling the machine or ending a lease
 - 3) IBM wants it because they aren't getting paid by customer
 - 4) IBM wants it because they have detected customer non-compliance with the customer signed contract

Converting Hardware Features

ibm.com/eserver/series

Converting Hardware Features

- A two step process is used to convert Model 825, 870, and 890 Processor Features
 - Step1: All standby processors must be activated
 - ▶ the possible paths for feature conversions will not be shown in the configurator until enough POD Activation Features have been ordered to activate 100% of the standby processors
 - ▶ The Processor Feature conversion price in Step2 will take into account the price paid for all standby processors to be activated in Step1
 - Step2: Processor Feature to Processor Feature Conversion
 - ▶ What happens to machine records
 - Old POD Activation Features will not be carried forward
 - Old TCOD Enablement Features will not be carried forward
 - Old TCOD Billing Features will be carried forward but no TCOD Data will remain on the server (**customer is required, per contract, to report any temporary capacity activity prior to the conversion**)

- A one step process is used to convert Model 825, 870, and 890 Package Features
 - Step1: Package Feature to Package Feature Conversion
 - ▶ What happens to machine records
 - Old POD Activation Features will be carried forward and a new Activation Code will be generated
 - Old TCOD Enablement Features will not be carried forward
 - Old TCOD Billing Features will be carried forward but no TCOD data will remain on the server (**customer is required, per contract, to report any temporary capacity activity prior to the conversion**)



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Processor Failures

Standby processors **CAN** be used as REPLACEMENTS for failed processors (**Note: If the customer has activated all the standby processors, then obviously there aren't any to be used as spares**). Starting with V5R1, this capability is offered on iSeries servers with CUoD to help minimize the impact to server performance caused by a failed processor . **By re-IPLing the server after a processor fails**, the customer can re-establish required performance levels without waiting for parts to arrive on-site. If a stand-by processor is not currently activated, it will automatically be assigned as a REPLACEMENT processor and the customer can continue processing .

WARNING: It is the responsibility of the customer to request a service call to have failed processors replaced. If a repair action is not executed, a request/order for 100% activation (permanent or temporary) of the server's Standby processors will only result in the following number of processors actually being activated: Standby Processors - Failed Processors

Moving Hardware

iSeries server to iSeries server interchange of processor and/or package features is iSeries system password protected. iSeries server to iSeries server interchange of processor and/or package features outside IBM standard practices and procedures, may void the server warranty or service contracts.

Any unauthorized (Non IBM conversion/upgrade) movement of processor features (processor parts) and/or package features (capacity card) will disable any previously activated/enabled standby processor capacity.

Any physical addition/removal of processor features (processor parts) and/or package features (capacity card) that results in an invalid configuration will make the server itself unusable (server will not IPL without a valid configuration).

Parts resulting from the fulfillment of an order for a processor conversion are directly tied to a target server (serial number), the parts are not transferable to a server with a different serial number. Installing the parts on a server with a different serial number is not supported by IBM.

IBM eServer iSeries

Results of Moving iSeries Hardware

- Adding/Removing just the Processor Feature (**Processor Parts**)
 - A) Non-CoD Models: Removing hardware from machine "A" and putting it into machine "B":
NOT POSSIBLE TO GET A VALID CONFIGURATION ON MACHINE "A" WHEN ADDING ONLY PROCESSOR PARTS (machine will not IPL)
 - B) CoD Models: Removing Hardware from machine "A" and putting it into machine "B":
NOT POSSIBLE TO GET A VALID CONFIGURATION ON MACHINE "A" WHEN ADDING ONLY PROCESSOR PARTS (machine will not IPL)
- Adding/Removing a Processor Feature (**Processor Parts**) with associated Edition Feature (**Capacity Card**)
 - A) Non-CoD Models: Removing hardware from machine "A" and putting it into machine "B":
 - 1) If machine "B" ends up with a **valid** configuration and it's **original** serial number ...
then machine "B" will IPL with 100% of the installed processor capacity as well as 100% of the function associated with the Edition Feature (Capacity Card)
NOTE: the machine will IPL in 70 day bypass mode and a new system password will be required (because the hardware changed)
 - 2) If machine "B" ends up with an **invalid** configuration (not something that could be ordered in the iSeries configurator) ... then machine "B" will not IPL
 - B) CoD Models: Removing hardware from machine "A" and putting it into machine "B":
 - 1) If machine "B" ends up with a **valid** configuration and it's **original** serial number ...
then machine "B" will IPL (SRC A6004713 will be displayed warning of invalid capacity card) with significantly less than 100% of the startup processor capacity, 0% of any previously activated standby processor capacity, and 100% of the function associated with the Edition Feature (Capacity Card)
NOTE1: To get rid of the SRC A6004713 and refresh activations on Machine Ban IBM maintenance action (billable to the customer) would be required to replace the Capacity Card. As part of the maintenance action, any previously purchased activations on Machine B would be refreshed by Level II (WARNING: Activation Codes will not be refreshed if Machine B's Capacity Card is not returned .. Level II will validate the Serial # of the returned part with the Serial # of Capacity Card stored in the IBMCoD application that is used to generate Activation Codes)
NOTE2: To get rid of the SRC A6004713 and no activations on Machine B need to be refreshed... an IBM maintenance action (billable to the customer) would be required to replace the Capacity Card.
NOTE3: A new system password (machine will IPL in 70 day bypass mode) is required to be requested via IBM Hardware Support because the hardware configuration has changed. To receive a new password from IBM, the IBM machine records must be updated as part of the process.
NOTE4: To purchase new activation/enablement features for Machine B, an order would have to be placed with IBM in the iSeries configurator.
 - 2) If machine "B" ends up with an **invalid** configuration (not something that could be ordered in the iSeries configurator) ... then machine "B" will not IPL
- Exchanging an Entire Server (**Frame, Processor Parts, and Capacity Card**)
 - A) Non-CoD Models: Machine will IPL with 100% of installed processor capacity as well as 100% of the function associated with the Edition Feature (Capacity Card)
 - B) CoD Models: Machine will IPL with 100% of startup processor capacity, 100% of any previously activated standby processor capacity, and 100% of the function associated with the Edition Feature (Capacity Card)
NOTE: To purchase new activation/enablement features, an order would be placed in the iSeries configurator

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Logical Partitions

Assign Processors

Starting with V5R1, every server has a primary partition (whether or not a customer is actively using logical partitions). As a result, it is necessary to assign any activated processors to the primary (or a secondary) partition to utilize the processors.

WARNING: Prior to assigning any processors to a partition you should verify that the processor MIN/MAX values for the primary and secondary partition(s) are appropriately set. The MAX value must be set high enough to accept any temporarily activated processors. If this value is set to low, you will have to change the value and IPL the partition.

STEP1: Standby processors must be activated to become available to the server

STEP2: Activated processors must be assigned to a partition.

If your server is logically partitioned, refer to your logical partition plan and assign the newly activated processors accordingly.

If your server is not logically partitioned, perform the following steps (Service tools authority is required with operator authority to system partitions).

- A) Start the Work with system partitions option in DST or SST
- B) Enter Option 3 (Work with partition configuration)
- C) Enter Option 2 (Change partition processing resources) next to PRIMARY
- D) Enter a value for "New number of processors" (The value should represent TOTAL active processors) ... press Enter

Note: *If a configuration error is signaled at the bottom of the screen, refer to LPAR trouble shooting article at <http://publib.boulder.ibm.com/series/v5r2/ic2924/info/rzaj8/rzaj8overview.htm>*

- E) Press Enter to confirm the change

5250 OLTP Capacity

5250 OLTP capacity is allocated across partitions by specifying a percentage of the overall available capacity.

The methodology to allocate 5250 OLTP capacity to an LPAR partition works the same on all models, whether or not the models have standby processors or not.

- For servers with Interactive Features, you can allocate a percentage of the Interactive Feature capacity to be made available for 5250 OLTP processing
- For servers with Enterprise Editions, you can allocate a percentage of the active processor capacity to be made available for 5250 OLTP processing
- For servers with Standard Editions, there is zero 5250 OLTP processing capacity to allocate (Single Job Exception: Up to 100% of the active processor capacity is automatically available to any partition with a single job doing 5250 OLTP processing)

LPAR does impose a maximum 5250 OLTP percentage allocation to prevent the customer from wasting 5250 OLTP capacity by restricting you from assigning more 5250 OLTP capacity to a partition than the assigned processor capacity in the same partition.

Example: For a server with six installed/activated processors, each processor has approximately 16.7% of the total server capacity (Processor CPW). For a single-processor partition on this server with an Enterprise Edition, the maximum 5250 OLTP allocation could be 17% of the total 5250 OLTP capacity, which would allow you to allocate slightly more 5250 capacity than the partition's processor capacity (Note: LPAR would not allow you to allocate 17% across six, one processor partitions because the total would exceed 100%)

Software Licenses

There are many ways to license software for the iSeries. The following chart outlines the various approaches used by IBM and non-IBM vendors. The pink highlights at the bottom of the page identify the new On/Off CoD for Software announcements made by IBM Server Group.

	Server Purchase	CuoD (Permanent Activations)	On/Off CoD (Temporary Activations)
Per User (Quantity)	One Time Charge Quantity of user entitlements are purchased when the server is purchased	No Charge User entitlement doesn't change when standby processors are permanently activated	No Charge User entitlement doesn't change when standby processors are temporarily activated
SW Tier (Performance)	One Time Charge Tier entitlement is purchased when the server is purchased	No Charge Tier entitlement doesn't change when standby processors are permanently activated	No Charge Tier entitlement doesn't change when standby processors are temporarily activated
Per Processor (Total-capacity)	One Time Charge One processor entitlement is purchased for each startup processor when the server is purchased	One Time Charge One processor entitlement is purchased for each permanently activated standby processor	No Charge: Processor entitlement doesn't change when standby processors are temporarily activated One Time Charge: One processor entitlement must be purchased the first time a standby processor is temporarily activated
Per Processor (Sub-capacity)	One Time Charge One processor entitlement must be purchased for each startup processor assigned to a partition that will use the software when the server is purchased	One Time Charge One processor entitlement must be purchased for each permanently activated standby processor assigned to a partition that will use the software	Daily Use Charge-A: One processor day of entitlement must be purchased for each day the software was used by a temporarily activated standby processor assigned to a partition Daily Use Charge-B: One processor day of entitlement must be purchased each time, any number of standby processors are temporarily activated

On/Off Capacity on Demand for Software (2003 IBM SWG announcement)

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Software Licensing Option: Software Tier

Many partners use the Processor Feature Code value available on the server to set SW licensing fees. This value continues to be available for all iSeries servers. It is important to understand that this value does not change, no matter how many standby processors get permanently or temporarily activated. The Processor Feature Code value (QPRCFEAT) can be displayed using the command WRKSYSVAL or retrieved using the RTVSYSVAL command.

Software Licensing Option: Per Processor

With each permanent or temporary processor activation, it remains the customer's responsibility to comply with SW licensing requirements of individual vendors.

IBM: When a permanent processor activation (POD Activation Feature) is ordered, any required charges for IBM software which is orderable in e-config (licensed by processor), is automatically initiated via IBM configurator

IBM: When a temporary processor activation is requested on the server, daily charges for IBM software that is

licensed by processor, are required to be paid on a quarterly basis (On/Off CoD for Software)

Note: There are no additional OS/400 licensing charges associated with a temporary processor activation (the license for temporary use is included with the processor activation).

IBM On/OffCoD for Software

On/Off CoD per processor day pricing introduced for selected IBM software products

- "Per Processor Day " price varies by product
- Quarterly Charge = (Per Processor Day Price) * (Qty or Temporarily Activated Processors) * (Qty of Days Activated)

Customer must sign multipledocuments

- CoD attachment to ICA (IBM Customer Agreement)
- CoD addendum to IPLA (IBM Software License Agreement)

Customer must report quarterly to IBM

- Temporarily activated processor information (existing processes documented for hardware)
- IBM Licensed Software Products (new processes for software ... Fax or email)

Details: IBM On/Off CoD for Software

- Software licensed for On/Off CoD is now available from IBM for iSeries and pSeries servers enabled for On/Off Capacity on Demand
- Customers must sign an addendum to their IPLA software contract, agreeing to pay usage charges associated with software licensed for On/Off CoD
- The customer must pay software usage charges, for all software (programs) licensed for On/Off CoD, each time a processor is temporarily activated via the On/Off CoD function of the server
- Customer must purchase standard licensing for 100% of startup processors as a pre-req to licensing software for On/Off CoD
- On/Off CoD software charges may not be accrued against IPLA/OTC products
- The customer has no separate software maintenance entitlement requirements with the introduction of this new offering
- On/Off CoD charges for software are applied on a per day basis; a day is any period of time up to 24 contiguous hours
- On/Off CoD charges for software have no effect on or from standard program offerings, special arrangements or Passport Advantage (PA) accumulation entitlements
- Educational Allowance is the only software pricing discount offering that is applicable toward On/Off CoD charges
- Customers must report data that reflects the temporary activations of processors, on a quarterly basis to their reseller/IBM direct representative utilizing reporting tools when available.
- On/Off CoD software usage must be purchased after the fact, in accordance with the reported usage information
- No prepayments permitted; the customer must pay at the prevailing price.

Making Copies of IBM Software

IBM license agreements allow the customer to make a backup copy of the program and use it on another machine when the primary machine is inoperable. This constitutes a temporary transfer of the license from the primary machine to the backup machine and terminates the right to use the program on the primary machine. The IPLA agreement allows this license transfer without notification to IBM.

IBM defines three scenarios for backup situations: "cold"; "warm"; "hot". In the first two scenarios, separate licensing for the backup machine is not needed. In a "hot" backup or "High Availability" scenario, the customer must obtain a separate license for any product that is being used concurrently on the primary and the backup machine. At a minimum, a Base Operating System (OS/400) license is required for the "High Availability" or "Hot Backup" machine. Additional product licenses, if in use concurrently with the primary machine, are required.

COLD -- a copy of the program may reside on a backup machine that is not powered up. There is no license requirement for this copy.

WARM -- a copy of the program may reside on a backup machine that is powered up, is "idling", but is not doing any productive work (including mirroring transactions, development of applications, or testing). There is no license requirement for this copy.

HOT -- a copy of the program may reside on a backup machine that is doing work. However, a license is required for any product that is being used concurrently with the primary machine (at a minimum, a Base Operating System OS/400 license). "Work" means mirroring of transactions, updating of log tapes/data, development, testing of programs and applications, any synchronization of programs, active linking with another machine, any activity that would allow an active hot-switch to occur, etc.

Software Maintenance

One year of Software Maintenance will be included with all NEW system purchases regardless of the use of the system, including High Availability or Capacity Backup machines.

Software Maintenance may optionally be renewed prior to the expiration in one year. If allowed to expire without renewal, purchasing Software Maintenance later is subject to an "After License Fee."

Program Access to CoD information on the server

IBM eServer iSeries

MATMATR option OXO 1F4

Permanent: Check the field at offset 5638, to determine how many processors have been permanently activated **(this field represents the quantity of permanently activated processors at any point in time)**

Temporary: Check the field at offset 8656, to determine how many processors have been temporarily activated **(this field represents the quantity of temporarily activated processors at any point in time)**

Offset	Field Name	Data Type and Length		
8	8 System type	Char(4)	Information relative to Permanent Capacity	
12	C System serial number	Char(10)		
22	16 Capacity card CCIN	Char(4)		
26	1A Capacity card serial number	Char(10)		
36	24 Capacity card unique identifier	Char(16)		
52	34 Activation feature (pcod)	Char(4)		
56	38 Activated pcod units	Char(4)		
60	3C Sequence number (pcod)	Char(4)	Information relative to Temporary Capacity	
64	40 Entry check (pcod)	Char(2)		
66	42 Maximum processors that can be purchased	Char(4)		
70	46 tcod enabled	Char(1)		
71	47 tcod active	Char(1)		
72	48 Activation feature (tcod)	Char(4)		
76	4C Activated tcod units	Char(4)		
80	50 Sequence number (tcod)	Char(4)		
84	54 Entry check (tcod)	Char(2)		
86	56 Processors currently requested (tcod)	Char(4)		
90	5A Days currently requested (tcod)	Char(4)		
94	5E Requested processor-days expired (tcod)	Char(4)		
98	62 Requested processor-days remaining (tcod)	Char(4)		
102	66 Enablement counter (tcod)	Char(4)		
106	6A Standby processors available for request	Char(4)		
110	6E History of requested processor-days	Char(4)		
114	72 History of Un-Returned processor-days	Char(4)		
118	76 Current date/time	Char(8)		
126	7E Reserved	Char(26)		
152	98 --- End			

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ISeries for Capacity BackUp Offering

ISeries for Capacity BackUp is a new offering from IBM .. targeted at customers who are looking for a disaster recovery solution.

- New server offering
- Priced for disaster recovery
- Not intended for "non-disaster" production use

	Standard		Capacity Backup
890 24/32-W	\$1,440	\$2,550	
890 16/24-W	\$ 900	\$1,970	
890 4/32-W			\$ 900
870 8/16-W	\$ 400	\$1,330	
870 5/8-W	\$ 345	\$ 965	
870 2/16-W			\$ 375
825 3/6-W	\$ 80	\$ 330	
825 1/6-W			\$ 150

Capacity BackUp Workloads

- No Permanent Processor Activations are available on Capacity BackUp hardware
- To receive no charge Processor Days -- enable server for On/Off CoD
 - 1) Sign On/Off CoD contract
 - 2) Sign Capacity BackUp Amendment
 - 3) Order TCOE Enablement Feature
 - 4) Apply TCOE Enablement Code
- No Charge Processor Days for Disaster Testing
 - ◆ 825 -- 14 processor days
 - ◆ 870 -- 42 processor days
 - ◆ 890 -- 84 processor days
- No Charge Processor Days for Disaster Situations
 - ◆ Up to 90 Processor Days will be credited at time of disaster declaration
(see Planning Guide for declaration process details at www.ibm.com/server/eserver/series/ondemand/cod)
 - ◆ For details about what qualifies as a disaster, see Planning Guide at www.ibm.com/server/eserver/series/ondemand/cod)
- Priced Processor Days are available at published prices for non-disaster related workloads

Capacity BackUp Features

Capacity BackUp Offering: 3 new server, processor, and edition features

Model	n-Way	CPW	Server FC	Proc FC	Package FC (CBU Edition)	POD Activ	Enable FC	Billing FC	Prepaid FC
890	4/32	5600-37400	0892	2499	7441	NA	1781	1799	1699
870	2/16	3200-20000	0891	2496	7440	NA	1780	1798	1698
825	1/6	1250-6600	0890	2495	7439	NA	1779	1797	1697

High Availability Offering: 5 new edition features

Model	n-Way	CPW	Server FC	Proc FC	Package FC (HA Edition)	POD Activ	Enable FC	Billing FC	Prepaid FC
890	24/32	29300-37400	0898	2498	7438	1613	1778	1792	1692
890	16/24	20000-29300	0897	2497	7437	1612	1777	1789	1689
870	8/16	11500-20000	0886	2486	7436	1611	1776	1786	1686
870	5/8	7700-11500	0889	2489	7435	1614	1774	1795	1695
825	3/6	3600-6600	0873	2473	7434	1609	1773	1783	1683


Declaring a Disaster

Step 1: Customer contacts IBM Service via the locally published number. The customer should inform the agent that they want to declare a disaster and request the Duty Manager

Note: The following steps should be performed by the Duty Manager. If the Duty Manager has questions regarding the process, the geography Hardware Support Center should be contacted for assistance.

Step 2: The Duty Manager validates that the customer has installed a Capacity BackUp Server
Model 825 Processor Feature 2495 or
Model 870 Processor Feature 2496 or
Model 890 Processor Feature 2499

Step 3: The Duty Manager validates that the situation meets the definition of disaster:
“Disaster” is defined as an event that is recoverable from an off-site location only and has resulted from the unforeseen loss of a Production Server’s computing capability due solely to forces beyond your control. To qualify as a Disaster, such outage must be anticipated to last more than four (4) hours, and must not be caused by, or otherwise related to, hardware or software defect.



Examples of Disaster and Non Disaster Outages

Non Disaster Outages	Disaster Outages
<p>Typical Planned outages</p> <ul style="list-style-type: none">• Backups• PTF and OS installs• Application maintenance• Hardware/Software Upgrades <p>Typical Unplanned outages</p> <ul style="list-style-type: none">• Application failure• Operator error• Power outages• Network failure• Hardware failure	<p>Typical Disaster outages :</p> <ul style="list-style-type: none">• Outages that are caused by natural disasters or other catastrophes that damage the production facilities beyond usability.• Outages that require a recovery procedure at an off-site location• Failure of regional power grid (8/14 power failure in NE US/Canada)• Outages not caused by hardware or software defects• A disaster is a rare event that most customers will never experience

Pre-Announce Material – Subject to Change

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Step 4: If customer has not yet loaded the Disaster Enablement Code (See Note 1 below) and activated the temporary capacity on the Capacity BackUp Server, the Duty Manager will instruct customer to immediately do so. (See Note2 if customer has not enabled the Capacity BackUp Server for On/Off CoD). Service instructs customer to capture a screen image of the BackUp Server's History Log which is to be forwarded with the Declaration of Disaster Form.

- 1) Start System Service Tools (SST) with the STRSST command or start Dedicated Service Tools (DST) with F21 on the control panel
- 2) Sign on using service tools user profile of System capacity - administration or System capacity - operator
- 3) Select the option to WORK WITH SYSTEM CAPACITY
- 4) Select the PF key to DISPLAY HISTORY LOG

The processor days reported on this image will be used to calculate the number of billable processor days prior to the start of the disaster. Note: The initial credit days allocated under the offering will be applied to the reported processor days to calculate whether any processor days are billable.

Step 5: The Duty Manager assists the customer in completing the Declaration of Disaster Form posted at the Capacity on Demand Web site (<http://www.ibm.com/servers/eserver/series/ondemand/cod>). A copy of the form is also attached for reference purposes.

Step 6: The Declaration of Disaster Form must be signed by the customer and the IBM forwarded to the IBM Duty Manager validating that the situation meets the definition of a disaster

Step 7: Once completed and signed, an image of the form and the image of the capacity screen can be sent via e-mail to TCOD@us.ibm.com or the forms can be faxed to 507-253-4553.

Step 8: The CoD Administrator will credit the customer's On/Off Capacity on Demand account for the credit days granted under the iSeries for Capacity BackUp offering. The maximum number of credit days granted per disaster is 90 days per processor permanently active on the primary server less the processors permanently active on the Capacity BackUp server. Below are examples for reference:

- Example 1: Primary Server: Model 825 with 4 permanently active processors
Maximum credit processor days allowed per disaster: 270 processor days
90 processor days x (4 active processors on primary - 1 active processor on Capacity BackUp Server)
- Example 2: Primary Server: Model 870 with 10 permanently active processors
Maximum credit processor days allowed per disaster: 720 processor days
90 processor days x (10 active processors on primary - 2 active processors on Capacity BackUp Server)
- Example 3: Primary Servers: 2 Model 870's with 5 processors permanently active on each
Maximum credit processor days allowed per disaster: 720 processor days
90 processor days x (10 active processors on primary systems - 2 active processors on Capacity BackUp Server)

Step 9: The CoD Administrator will follow up with the IBM representative and/or Business Partner registered on the Capacity on Demand Web site to make them aware of the declaration. The registered Business Partner is responsible for monitoring the situation.

Disaster Form and a screen image the *Work with Temporary Capacity* screen must be routed to the Support Center prior to an On/Off Enablement Code being generated.

The Rochester Product Support Center generates an On/Off Enablement Code

Step 10: The customer must notify IBM when the primary server is operational by sending a note to TCOD@us.ibm.com. An image of the *Display On/Off Capacity on Demand* screen from the Capacity BackUp Server (taken at the point when the primary server has become operational) must be forwarded with the note. The capacity information will be used to determine the total number of processor days that have been used during the declared disaster period. The customer's account will be adjusted for the actual number of credit days used up to the maximum granted per disaster incidence. If the number of processor days exceed the credit days granted under the offering, the customer is responsible for paying for the additional days at the published price per processor day.

NOTE #1: A disaster enablement code was sent to the customer with the initial enablement of the system. If customer does not have a disaster enablement code, a request should be submitted to TCOD@us.ibm.com for the code. The disaster enablement code allows a higher number of processor days to be requested versus the standard 192 processor days

NOTE #2: In rare circumstances, the customer will not have yet signed the appropriate contracts for On/Off Capacity on Demand and therefore, the Capacity BackUp Server will not have been enabled for temporary capacity. In those situations, after steps 1 through 7 have been completed, country service should contact the Rochester Product Support Center who will assist in generating the On/Off Enablement Code. A copy of the completed and signed Declaration of Disaster Form and a screen image of the *Display On/Off Capacity on Demand* screen must be routed to the Support Center prior to an On/Off Enablement Code being generated

The Rochester Product Support Center generates an On/Off Enablement Code using the *Speedy Activation* option in the CoD application. This code is forwarded to the country service representative handling the service request.

The Rochester Product Support Center notifies TCOD@us.ibm.com that an On/Off Enablement Code has been issued and forwards a copy of the Declaration form and the *Display On/Off Capacity on Demand* screen image. The CoD Administrator will followup with the Customer and/or the IBM Representative to ensure that the appropriate contracts are signed.

Declaration of Disaster Form

To be eligible for the free processor days under the Capacity BackUp Server Offering, the nature of the outage must meet the definition of disaster as follows:

“Disaster” is defined as an event that is recoverable from an off-site location only and has resulted from the unforeseen loss of a Production Server’s computing capability due solely to forces beyond your control. To qualify as a Disaster, such outage must be anticipated to last more than four (4) hours, and must not be caused by, or otherwise related to, hardware or software defect.

Temporary activations of standby processors on the Capacity BackUp Server for situations not meeting the above definition will be charged at the current published prices.

Customer Name	_____
Customer Address	_____

Customer Contact Name	_____
Contact Telephone #	_____
Contact e-Mail	_____
Primary System Serial Number	_____
Primary System Location	_____
Street Address	_____
City, State, Country	_____
Backup System Serial Number	_____
Backup System Location	_____
Street Address	_____
City, State, Country	_____
Describe Nature of Disaster	_____
Estimated Length of Outage	_____
Customer Signature	_____
Title	_____
IBM Duty Manager	_____
Telephone Number	_____
E-Mail Address	_____

Performance Considerations

CPW

Relative performance measurements are derived from commercial processing workloads (CPW) running on iSeries servers. CPW is representative of commercial applications, particularly those that do significant database processing in conjunction with journaling and commitment control. CPW values may not be realized in all environments.

IBM will publish the Processor CPW value for the start-up number of processors as well as a Processor CPW value that represents the full capacity of the server when all processors are active (Start-up + Stand-by). IBM is not publishing Processor CPW values associated with each incremental processor activation. If needed, for capacity planning purposes, one could calculate the approximate CPW associated with each activated processor by subtracting the Processor CPW published for the start-up number of processors from the maximum Processor CPW for the server and then dividing by the number of stand-by processors.

CPU Utilization

Standby processors are **NOT** considered within the various system functions that report CPU utilization percentages until they are activated and assigned to a partition.

CPU percent is a calculated metric based on the amount of time the processor was active within an elapsed time. This is normally reported as a percentage where 100% indicates the processor was busy for the entire sample interval. When multiple processors are present, CPU time must be adjusted to be the average usage of all processors so that utilization is always reported as the percentage of total available capacity.

5250 OLTP (“interactive”) capability is determined by the edition feature purchased. This capability is not impacted by the number of standby processors and does not change when standby processors become active. Interactive utilization reported as a percentage of interactive capability is not affected by the Capacity on Demand technology. Within Management Central, this metric is called “CPU Utilization (Interactive Feature)”.

Interactive CPU utilization is also reported as a percentage of total system CPU. Within Management Central this metric is called “CPU Utilization (Interactive Jobs)”.

TOOLS

There are several tools that can be used to help project which model/processor is appropriate for an initial installation and for projecting when standby processors should be activated. The Workload Estimator is typically used for sizing an initial installation. PATROL is a capacity planner that can often be used for both initial planning and upgrade planning. PM/400 is a trending tool that helps predict growth across workloads. Management Central is a monitoring tool that can be used to identify workload growth. In addition, IBM offers a variety of service options to assist with capacity planning tasks.

Workload Estimator

The Workload Estimator supports models with CUoD. However, only the performance capacity for startup processors will be represented. Capacity for standby processors **is not represented in the tool**. This tool is designed for initial sizing estimates and is not intended to achieve single-processor granularity with its estimates. When the Workload Estimator “recommends” a server as having sufficient capacity to contain a set of workloads, it includes a pull-down list of other supported servers that have at least the same capacity as the recommended server.

The Workload Estimator and associated on-line documentation can be found at:
<http://www.ibm.com/eserver/iserries/support/estimator>

PM/400

For more detailed information about PM/400e, visit their website at <http://www.ibm.com/eserver/iserries/pm400>

Management Central

Use of Management Central to aid in Capacity Planning and point out where an activation of standby processors should be considered can be illustrated in the following example:

Consider the model 840-2416 with eight startup processors and four standby processors. The maximum CPU utilization attainable would be 8/12 or approximately 67%. Typical thresholds for system CPU monitoring would be 70% and 90% of total capacity. Sustained usage above 70% is an indicator that additional capacity should be considered. Usage above 90% indicates the system is reaching its capacity maximum.

Applying the above thresholds to the Model 840 with one of these Processor Features (FC 2416, 2417, or 2419) would yield thresholds of 47% and 60% respectively. These values can be seen in the following Management Central Monitor example.

When the initial threshold is reached, assuming the tool has been set up correctly, the line graph goes red indicating that additional processors may be needed. In addition, a message can be triggered and logged when the thresholds are reached, so that an accounting can be done over time of how often the thresholds are crossed. If it reaches the final threshold value often, an upgrade should definitely be considered.

License, Warranty, Maintenance

LICENSE

BUILT-IN-CAPACITY

A machine may include computing resources or capabilities that are to remain inactive, or whose use is restricted, until the right to access and use the resources or capabilities is purchased (Built-in-Capacity). Examples of such computing resources and capabilities include but are not limited to processors, memory, storage, processing capacity identified as interactive processing capacity, and/or workload specific resources or capabilities (such as limitations on the use for a specific operating system, programming language or application). You are licensed to use the Program only to the extent of authorizations you have acquired for access to and use of Built-in-Capacity. You agree that if your use of Built-in-Capacity exceeds the authorizations you have acquired, you will be liable to IBM for the full price of permanent, unrestricted use of the Built-in-Capacity at IBM's current list price.

BUILT-IN-CAPACITY RESTRICTIONS

Built-in-Capacity is protected by certain technological measures. As a condition for your license to the Program under the Agreement, you may not circumvent such technological measures, or use a third party or third party product to do so, or otherwise access or use unauthorized Built-in-Capacity. In the event IBM determines that changes are necessary to the technological measures designed to limit access or use of Built-in-Capacity to that which has been purchased or otherwise authorized, IBM may provide you with changes to such technological measures. As a condition for your license to the Program hereunder, you agree, at IBM's option, to apply or allow IBM to apply such changes.

IBM SUPPLIED PROGRAM TEMPORARY FIXES (PTFs)

Application of PTFs may disable or render ineffective programs that use system memory addresses not generated by the IBM translator, including programs that circumvent control technology designed to limit interactive capacity to purchased levels. By applying PTFs you authorize and agree to the foregoing.

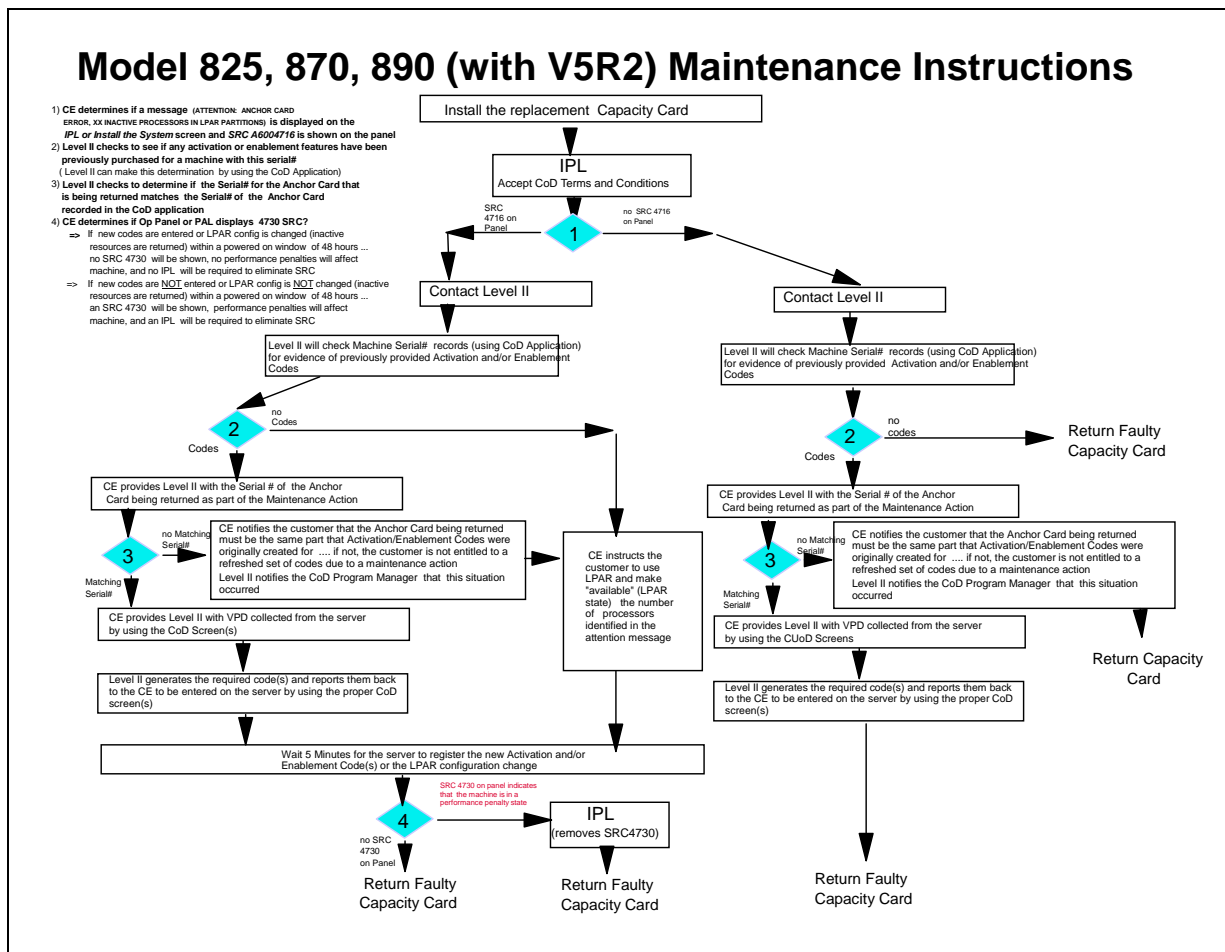
WARRANTY

Warranty for all processors (start-up and stand-by) begin when the server is installed. By having the Warranty/Service start immediately upon installation, the customer is better positioned to receive prompt service for the repair/replacement of any failing parts, ensuring the full complement of stand-by processors are available for immediate activation.

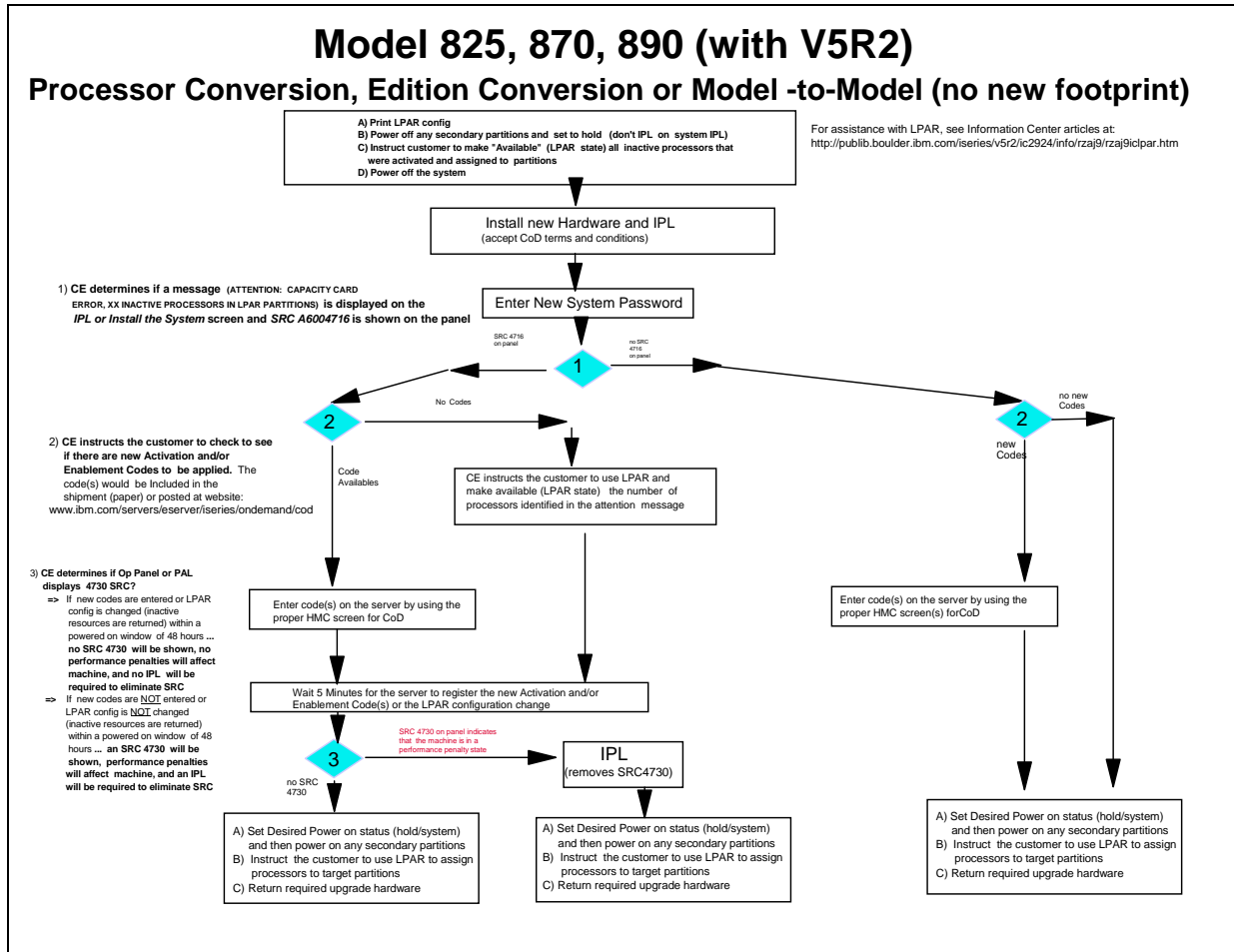
MAINTENANCE

Maintenance agreement charges are based on the number of processors actually activated, maintenance prices will be adjusted for each processor activation, just like any other hardware feature add. (Note: temporary activations do not affect maintenance pricing)

CE: Maintenance Instructions



CE: Conversion Instructions



CE: Upgrade Instructions

Model 825, 870, 890 (with V5R2) Model to Model (new footprint) Upgrade Instructions

Manufacturing will load CoD Codes if CoD features have been ordered. In addition, the CoD codes will be shipped swith order (paper) and posted posted at the following CoD website (www.ibm.com/eserver/series/hardware/ondemand)

1) CE determines if Op Panel or PAL displays 4730 SRC?
 => if new codes are entered or LPAR config is changed (inactive resources are returned) within a powered on window of 48 hours ... no SRC 4730 will be shown, no performance penalties will affect machine, and no IPL will be required to eliminate SRC
 => if new codes are NOT entered or LPAR config is NOT changed (inactive resources are returned) within a powered on window of 48 hours ... an SRC 4730 will be shown, performance penalties will affect machine, and an IPL will be required to eliminate SRC

