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Capacity on Demand

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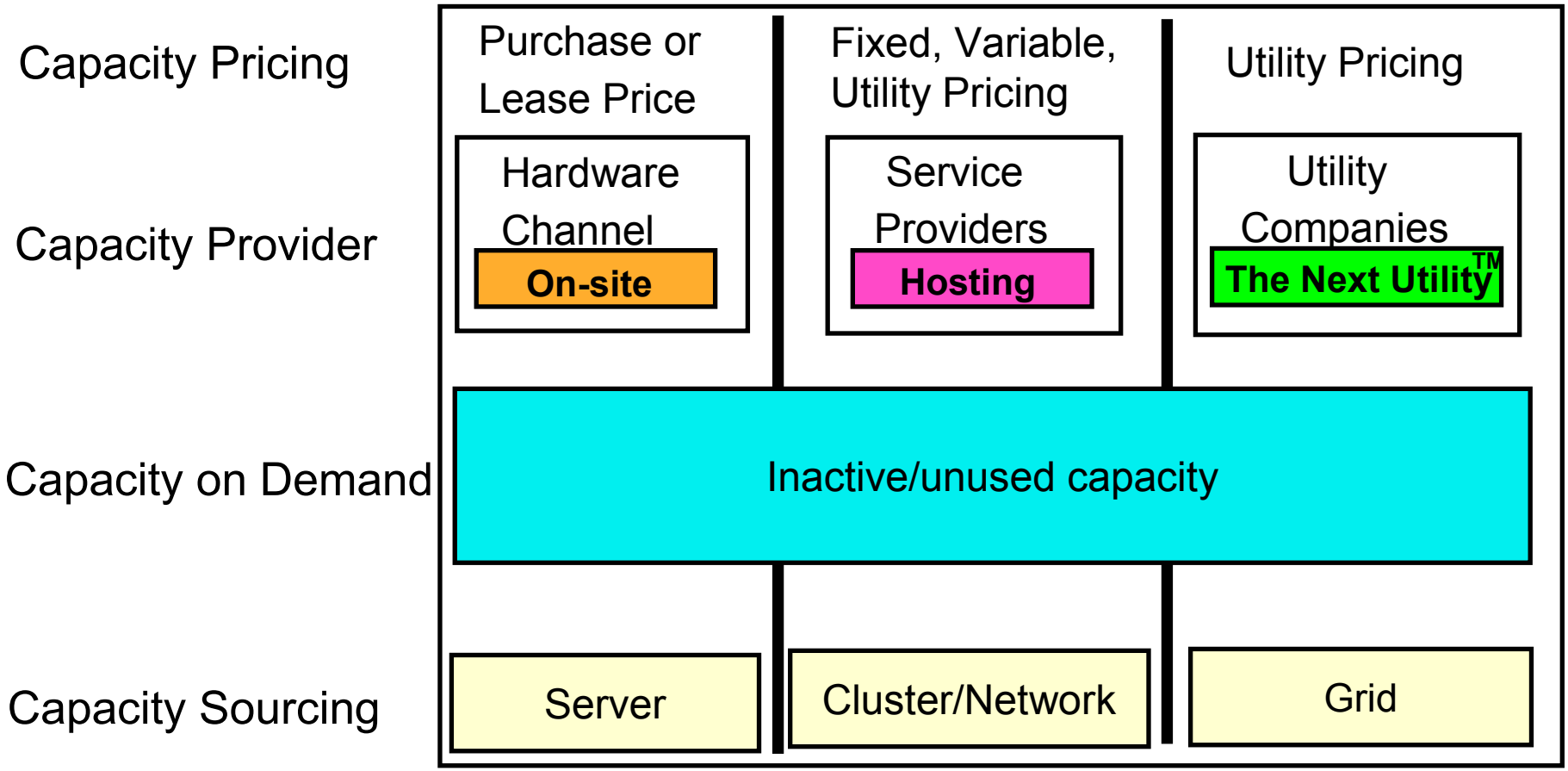
Where can customers get on demand capacity?



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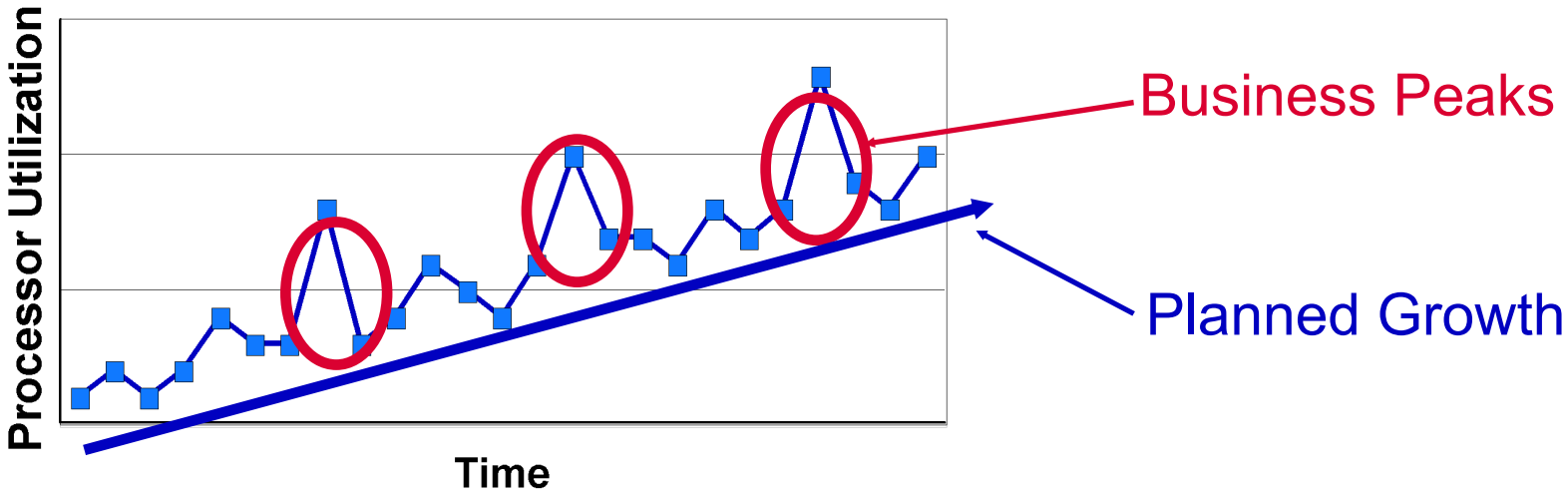
May 4, 2004: CUoD and On/Off CoD



- **Capacity Upgrade on Demand (CUoD)**
  - Permanent capacity for planned growth
  - Pay when processor activations are purchased
- **On/Off Capacity on Demand (On/Off CoD)**
  - Temporary capacity for business peaks
  - Pay after the use of requested processor days

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What's new in 2nd half 2004

Permanent Capacity:

- Capacity Upgrade on Demand … activated capacity for planned growth

Temporary Capacity:

- On/Off Capacity on Demand … requested capacity for business peaks

✓ Reserve Capacity on Demand … pooled capacity for on demand business

✓ Trial Capacity on Demand … special purpose capacity (testing, benchmarks, etc.)

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Introducing on demand memory

Permanent Capacity:

- CUoD … pay when purchased (processors **& memory)**

Temporary Capacity:

- On/Off CoD … pay after use (processors **& memory)**
- Reserve CoD … pay before use (processors)
- Trial CoD … no-charge for use (processors **& memory)**

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Introducing Reserve Capacity on Demand

Reserve CoD represents an "automatic" way to leverage temporary capacity.

No contracts and no reporting to IBM is required for Reserve CoD.

The purchase of Reserve CoD activation time is prepaid, in blocks of 30 Processor Days.

Reserve CoD enables the user to place a quantity of inactive processors into the server's Shared Processor Pool which then become available to the pool's resource manager.

When the server recognizes that the number of base (purchased/active) processors assigned across uncapped partitions has been 100% utilized, and at least 10% of an additional processor is needed, then a Processor Day (good for 24 hours) is charged against the Reserve CoD account balance.

Another Processor Day will be charged for each additional processor put into use based on the 10% utilization rule. No charging will occur when the 24 hour clock expires and there is no longer a need for additional processors.

The break-even pricing for Processor Days is approximately 90 Processor Days.

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Introducing Trial Capacity on Demand

It's quick, it's easy, and ready when you are. Use it for whatever purpose you want. Ask for trial processor capacity or trial memory capacity or ask for both ... you really can't go wrong, because it is offered at no additional charge!

All you do is go to the CoD website and make a request We will provide you with a code ("key") to start the trial. The code is good for 30 consecutive powered on days, after it is entered at the server console.

A request for trial processor (up to 2 processors) or trial memory (up to 4 GBs) capacity can be made after initial install, after a processor upgrade, or after the purchase of one or more permanent processor activations.

You must make the trial capacity available to be re-claimed by the server at the end of the Trial Period.

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“Trial capacity” is offered differently by model

Pre-2003 hardware (830, 840, and 890), ***trial capacity*** is available as part of the CUoD option, it represents a means of "trying" on demand capacity before permanently activating it. Trial capacity, allows you to temporarily activate 100% of your inactive processors for a period of 14 elapsed days by starting the trial period at the server console.

2003 hardware, the new models (i825, i870, and the new processors of the i890), **do not offer trial capacity** as part of the CUoD option. Instead, Bonus Days (14 Processor Days of credit) are available for use when/if a customer enables their machine for temporary capacity ... On/Off CoD.

2004 hardware, the new models (550 and 570), **do not offer trial capacity** as part of the CUoD option and **do not offer Bonus Days** (14 Processor Days of credit) as part of the On/Off CoD option. Instead, the new CoD option called **Trial CoD,** allows you to activate capacity (memory and/or processors) at no-charge, for a pre-determined number of consecutive powered on days, by making a request at the CoD website.

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More information

Please refer to the following URL to obtain the latest version of this presentation as well as the very useful Planning Guides for permanent and temporary capacity:

www.ibm.com/servers/eserver/iseries/ondemand/cod

This same URL is where customers can retrieve CoD activation codes, partners can register to particpate in the sale of On/Off CoD, and customers can make requests for trial capacity .

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Capacity Upgrade on Demand

Capacity Upgrade on Demand (CUoD)

It's very simple ... whether you purchase an Activation Feature to permanently activate a processor or memory, when the server is initially purchased or sometime later ... you pay the then current list price for the Activation Feature ...

Once you have determined that you want to permanently activate some or all of your inactive capacity (processors or memory), you must contact your IBM Business Partner or IBM Sales rep to place an order for the purchase of a quantity of Activation Features.

Once an order reaches the IBM manufacturing site, an Activation Code unique to the target server is generated, mailed, and posted at the following web-site for quick access ... http:/ibm.com/servers/eserver/iseries/ondemand/cod

Several days should be allowed for order processing and the resulting Activation Code posting to take place.

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2003: Permanent processor capacity pricing

Processor Activation Features are priced to permanently activate one processor, no software licensing is included with a permanent activation of hardware.

Model	Server Feature	Processor Feature	Startup Processors	Inactive Processors	Processor Activation Feature	Processor Activation Price
825	0873	2473	3	3	1609	$4500
870	0889	2489	5	3	1614	$9000
870	0886	2486	8	8	1611	$9000
890	0897	2497	16	8	1612	$13500
890	0898	2498	24	8	1613	$13500

1) When a processor is permanently activated, additional software licensing is required (OS or other) if using SW that is licensed by processor
2) When an iSeries or i5 server is purchased with an Enterprise Edition, an additional “no-charge” processor activation is included

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2004: Permanent processor capacity pricing

Processor Activation Features are priced to permanently activate one processor, no software licensing is included with a permanent activation of hardware.

Model	Server Feature	Processor Feature	Startup Processors	Inactive Processors	Processor Activation Feature	Processor Activation Price
570	0926	8971 x 8	13	3	8452	$7700
570	0924	8971 x 6	9	3	8452	$7700
570	0922	8971 x 4	5	3	8452	$7700
570	0921	8971 x 2	2	2	8452	$7700
570	0930	8971 x 1	1	1	8452	$7700
570	0920	8961 x 2	2	2	8452	$7700
570	0919	8961 x 1	1	1	8452	$7700
550	0915	8958 x 1	1	3	8450	

1) When a processor is permanently activated, additional software licensing is required (OS or other) if using SW that is licensed by processor
2) When an iSeries or i5 server is purchased with an Enterprise Edition, an additional “no-charge” processor activation is included

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Permanent memory capacity pricing

Memory Activation Features are priced to permanently activate one GB of memory, no software licensing is included with a permanent activation of hardware.

Model	Memory Feature/Price	Startup Memory	Inactive Memory	Memory Activation Feature/Price (per GB)
570	7890/????	4	4	7950/????

1) No on demand memory is available on the Model 550

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Ordering permanent capacity

Once you have determined that you want to permanently activate some or all of your inactive capacity (processors and/or memory), you must contact your IBM Business Partner or IBM Sales rep and ask to purchase one or more Activation Features.

Once an order reaches IBM manufacturing, an Activation Code unique to the target server is generated, mailed, and posted at the following web-site for quick access:

http://www.ibm.com/servers/eserver/iseries/ondemand/cod

Several days should be allowed for order processing and the resulting Activation Code posting to take place. This is an important consideration when determining if you should leverage On/Off CoD or Reserve CoD to have access to temporary capacity. Temporary capacity can be used to satisfy any peak workload requirements while an order for the activation of permanent capacity is being fulfilled.

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Step by Step

Step1: Customer determines the number of inactive processors they wish to permanently activate

Step2: Customer contacts their Sales Channel (IBM or Distributor/Partner) to place an order for a quantity of Activation Features

Step3: Sales Channel places an order in the IBM configurator for a specific quantity of Activation Features.

=> If the Machine Serial# and/or the Anchor/Capacity Card Serial# have not been altered outside of the IBM manufacturing/field maintenance process ... then go directly to Step4

=> If the Machine Serial# and/or the Anchor/Capacity Card Serial# have been altered outside of the IBM manufacturing/field maintenance process ... then print CoD Data (VPD) from the server and FAX to 507-253-4553

Step4: Customer retrieves the Activation Code from the web or waits for the Activation Code to be sent by mail. The Activation Code will be posted on the web usually within one business day of receiving the order on the IBM manufacturing floor. To retrieve the Activation Code follow these steps:

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

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Step-by-Step (continued)

Step5:

For iSeries servers (Pre-2004): Customer enters the Activation Code at the System Console

1) Start System Service Tools (SST) with the STRSST command or start 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
4) Enter POD Activation Code and press Enter
5) Press Enter to confirm change and exit the System Capacity service function

For i5 servers (2004): Customer enters the Activation Code at the Hardware Management Console (HMC)

Step6:

For iSeries servers (Pre 2004) Assign the activated processors to a partition to use the new permanently activated capacity

You must do steps A through F, 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)
Note: If a configuration error is signaled at the bottom of the screen, it means that the default Primary partition has been altered (logical partitioning is actively being used) and it is necessary to refer to your logical partition plan to properly assign the activated processors to the server.
E) Press Enter to confirm the change
F) Exist DST or SST

For i5 servers (2004): Assign the activated processors to a partition to use the new permanently activated capacity

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On/Off Capacity on Demand

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

On/Off CoD is perfect for spikes in needed capacity (a.k.a. peak loads). You will be required to pay for each Processor or Memory Day you request, but you only request what you need when you need it.

The number of Processor and/or Memory Days you will be billed for is determined by how many processors or memory you want temporarily activated over what period of time (qty of capacity X qty of days).

Customers are required to sign a contract and then report activity on a monthly basis. IBM will collect the reported information, consolidate it, and then send it to the registered IBM Business Partner. The IBM Business Partner places an order with IBM for a quantity of billing features (equal to the number of processor or memory days requested) and then bills the customer accordingly.

The break-even pricing for Processor Days (Note: includes temporary licensing for I5/OS and 5250 OLTP) on i5 servers is approximately 90. In other words, you could permanently activate a processor for the same price it would cost you to request 90 Processor Days of On/Off CoD capacity.

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2003: On/Off CoD Enablement and Billing Features for processors

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 90 days, you will pay approximatly the same price it would have cost you to permanently activate that processor.

Model	Server Feature	Startup Processors	Inactive Processors	On/Off Processor Enablement Features	On/Off Procesor Day Billing Features	US Prices
825	0890	1	5	1779	1797	$550
825	0873	3	3	1773	1782 and 1783	$550
870	0891	2	14	1780	1798	$600
870	0889	5	3	1774	1784	$600
870	0886	8	8	1776	1785 and 1786	$600
890	0892	4	28	1781	1799	$650
890	0897	16	8	1777	1788 and 1789	$650
890	0898	24	8	1778	1791 and 1792	$650

1) On/Off Processor Enablement Features are no charge MES features
2) US Prices represent IBM's list price for a On/Off Processor Day 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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2004: On/Off CoD Enablement and Billing Features for processors

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 90 days, you will pay approximatly the same price it would have cost you to permanently activate that processor.

Model	Server Feature	Startup Processors	Inactive Processors	On/Off Processor Enablement Features	On/Off Procesor Day Billing Features	US Prices
570	0926	13	3	7951	7952	
570	0924	9	3	7951	7952	
570	0922	5	3	7951	7952	
570	0921	2	2	7951	7952	
570	0930	1	1	7951	7952	
570	0920	2	2	7951	7952	$550
570	0919	1	1	7951	7952	$550
550	0915	1	3	7930	7931	$550

1) On/Off Processor Enablement Features are no charge MES features
2) US Prices represent IBM's list price for a On/Off Processor Day 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 CoD Enablement and Billing Features for memory

You pay full price for each Memory Day you request (GBs of memory x quantity of days). If you request a GB of memory to be temporarily activated for 90 days, you will have pay approximatly the same price it would have cost you to permanently activate that memory.

Model	Memory Feature	Startup Memory	Inactive Memory	On/Off Memory Enablement Features	On/Off Memory Day Billing Features	US Prices
570	7890	4	4	7954	7957	$

1) On/Off Memory Enablement Features are no charge MES features
2) US Prices represent IBM's list price for a On/Off Memory Day Billing Feature (one Memory Day of temporary capacity)

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What is a Processor or Memory Day?

Temporary capacity is activated, measured, and billed in units called "Processor Days" or “Memory Days”...

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

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

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How is a Processor or Memory 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 or Memory Day) begins. At the beginning of each 24 hour period the capacity is in use, the server will record one Requested Processor Day or one Requested Memory Day depending on which capacity was requested.

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 paragragh (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)

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Prepaid, Bonus, and Complementary Days

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

Prepaid Days – NOT available on @server i5 announced in 2004 (See Reserve CoD)

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

Bonus Days -- NOT available on @server i5 announced in 2004 (See Trial CoD)

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 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 icod@us.ibm.com.

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Enable, use, and bill temporary capacity

- **Enable – temporary capacity is enabled on the server**
  - Customer signs a contract with IBM
  - Sales Channel (IBM or Business Partner) places a customer order for an Enablement Feature
  - Customer enters resulting Enablement Code (either processor or memory) on the server
- **Request -- temporary capacity is requested and then used**
  - Request temporary capacity via server screen (specify units of processor or memory)
  - Electronically report temporary capacity activity (minimum of once per month)
- **Bill -- temporary capacity is monitored, billed, and paid for**
  - IBM consolidates the customer reported information
  - IBM notifies the Sales Channel about customer activity related to temporary capacity
  - Sales Channel places an "after-the-fact" configurator order for Billing Features
  - Sales Channel bills their customer

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Temporary Capacity Enablement

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

Placing an order for an Enablement Feature will result in an 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.

An Enablement Code "enables" the server to a limit of Processor Days (up to 192 for iSeries servers and up to 360 for i5 servers) 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 Enablement Feature must be ordered and a new Enablement Code entered. Every time a new Enablement Code is entered it will reset the limit of Processor Days that can be requested to 192 for iSeries servers or 360 for i5 servers (Enablement Codes are not additive!)

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Guidelines for Temporary Capacity Enablement

New Box Orders

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

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

=> All records of Enablement Features ordered prior to the conversion/upgrade are removed from the machine records (you will need to order a new Enablement Feature for the new hardware)

=> You can include an Enablement Feature on these types of orders (see warning) and have your 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.

Enablement Feature Orders

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

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Enable: Step-by-Step

PRE-REQ #1: Sales Channel (IBM Business Partner) must sign the following contract:

IBM Business Partner Agreement, Attachment for On/Off Capacity On Demand

PRE-REQ #2: Sales Channel (IBM Business Partner or IBM Direct) must register themselves at the following website:

http:/www.ibm.com/servers/eserver/iseries/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 On/Off Capacity On Demand
- **Required:** IBM Supplement for On/Off Capacity On Demand
- **Optional:** IBM Addendum for On/Off Capacity on Demand Alternative Reporting

Step3: Sales Channel places an order for an 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 an Enablement Feature will not be fulfilled until this step is completed!

Step5: IBM generates an Enablement Code and mails/posts it

Step6: Customer retrieves the Enablement Code and applies it to the server using the appropriate DST/SST Screen or for i5 servers, the appropriate HMC screen

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Temporary Capacity Requests

When you decide you actually need to use temporary capacity ... you simply go to the proper screen on the server console (HMC for i5 servers) and specify how many of the inactive 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 LPAR 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 the contract you signed) for any Un-Returned processor days.

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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).

For iSeries servers, any Prepaid, Bonus or Complementary Days will automatically be applied against customer Requested and/or Un-Returned processor days of temporary capacity (Note: These types of days are not available for i5 servers).

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

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.

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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/iseries/ondemand/cod

Step2: Customer goes to the appropriate DST/SST Screen (WORK WITH ON/OFF CAPACITY ON DEMAND), or for i5 servers, the customer will use the appropriate HMC screen to specify 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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Bill: Step-by-Step

Step1: Customer must report blling 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 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 Billing Features from an IBM manufacturing perspective.

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

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Terminate: Step-by-Step

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

Step1: Send e-mail to CoD Administrator (ICOD@US.IBM.COM)

Step2: The CoD Administrator provides a Termination Code

Step3: The Termination Code is entered on the same screen used to enter an Enablement Code

Step4: IBM will remove the Enablement Feature from Machine History Records

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

Scenario #2: Customer/Partner requests a Termination Code because the customer is selling their machine **(Note: A customer is required to have a Termination Code applied to the server before it is sold or comes off lease to avoid future billing for temporary capacity due to the customers failure to continue reporting use of temporary capacity)**

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

Scenario #4: IBM or Partner requests a Termination Code because customer is in noncompliance with the On/Off CoD contract that was signed by the customer

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Reserve Capacity on Demand

Reserve Capacity on Demand (Reserve CoD)

Reserve CoD represents an "automatic" way to activate temporary capacity. Reserve CoD enables the user to place a quantity of inactive processors into the server's Shared Processor Pool which then become available to the pool's resource manager. When the server recognizes that the number of base (purchased/active) processors assigned across uncapped partitions has been 100% utilized, and at least 10% (multiple hits over a measured period) of an additional processor is needed, then a Processor Day (good for 24 hours) is charged against the Reserve CoD account balance. Another Processor Day will be charged for each additional processor put into use based on the 10% utilization rule. No additional charging will occur when the 24 hour clock expires and there is no longer a need for the extra processors.

Reserve CoD is a great way to handle peak loads that occur on a limited basis. But unlike On/Off CoD, no contracts and no reporting to IBM is required. The purchase of Reserve CoD activation time is prepaid, in blocks of 30 Processor Days (multiple blocks can be purchased at one time, or additional blocks can be purchased at a later date to increase the number of Processor Days available on the server)

The break-even pricing for Processor Days (Note: includes temporary licensing for I5/OS) on i5 servers is approximately 90 Processor Days. In other words, you could permanently activate a processor for the same price it would cost you to prepay for 90 Processor Days of Reserve CoD capacity.

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Reserve Capacity Prepaid Features

One low price is paid “up-front” for a 30 day block of Processor Days … if you bought three of these features, the price you paid would be equivalent to permanently activating a single processor (90 day break-even pricing)

Model	Server Feature	Reserve Capacity Prepaid Features	Quantity of Days	US Prices
570	0926	7956	30	$
570	0924	7956	30	$
570	0922	7956	30	$
570	0921	7956	30	$
570	0930	7956	30	$
570	0920	7956	30	$
570	0919	7956	30	$
550	0915	7934	30	$

1) Reserve Capacity Prepaid Features can be purchased on new orders or as an MES
2) US Prices represent IBM's list price for a Reserve Capacity Prepaid Feature
3) Additional operating system licensing may be required if using an OS that is licensed by processor (NOT required for i5/OS licensing)
4) Additional software licensing may be required if using SW that is licensed by processor
5) If this feature is on a leased machine, the prepaid processor days are required to be utilized within a 12 month period

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Reserve Capacity Steps

STEP 1: Customer asks his/her Sales Channel to order a quantity of Processor Days

A) Customer orders (HW configurator) a Reserve Capacity Prepaid Feature for 30 Processor Days of capacity

B) MFS (CoD application) uses stored VPD records to generate a Reserve Capacity Prepaid Code (key) based on the quantity of Reserve Capacity Prepaid Features that were ordered

C) The Reserve Capacity Prepaid Code is shipped from mfg (sheet of paper) and posted at a website for customer retrieval

D) Customer enters the Reserve Capacity Prepaid Code at the server .. as a result, the Reserve Counter is set on the server to 30 Processor Days ... no inactive capacity is activated at this point!

STEP 2: Customer assigns a quantity of Inactive Processors to the Shared Pool

A) Customer uses an HMC screen to "request" a quantity of inactive processors to be activated for use in the Shared Processor Pool (the processors are automatically placed in Shared Pool for use by uncapped partitions)

B) The server counts down one Processor Day, each time a reserve processor is called upon to complete work in the Shared Pool (100% of non-reserve capacity across un-capped partitions must be utilized before a Processor Day will be counted)

C) Customer receives "warning" messages when Processor Days have been used and when all of the purchased Processor Days have been used up (the reserve processors are automatically removed from the Shared Pool so no more work can be assigned).

Note: Reserve CoD may also be referred to as "debit" or "metered"

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Trial Capacity on Demand

Trial Capacity on Demand (Trial CoD)

Go to the CoD website and make a request We will provide you with a code ("key") to start the trial. The code is good for 30 consecutive powered on days, after it is entered at the server console.

A request for trial processor (up to 2 processors) or trial memory (up to 4 GBs of memory) capacity can be made after initial install, after a processor upgrade, or after the purchase of one or more permanent processor activations.

A request for trial processor (100% of inactive processors) or trial memory (100% of inactive memory) capacity can be made one time over the life of the server, when and/if needed for unique circumstances.

You must make the trial capacity available to be re-claimed by the server at the end of the Trial Period.

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Software Licensing

How to License?

- Software licensing Per User
- Software licensing Per Tier
- Software licensing Per Processor (Total number of processors in the server)
- Software licensing Per Processor (For each individual processor)

When to License?

- Software licensing at time of initial server purchase
- Software licensing when a processor is permanently activated
- Software licensing when a processor is temporarily activated

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	Server Purchase	CUoD (Permanent Activations)	On/Off, Reserve, & Trial 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 inactive 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 inactive 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 inactive processors are temporarily activated **One Time Charge:** One processor entitlement must be purchased the first time an inactive 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 inactive processors are temporarily activated

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

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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 i5 and iSeries servers. **It is important to understand that this value does not change, no matter how many inactive 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.

Per Processor

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

IBM: When a permanent processor activation (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, 5250 OLTP, or AIX licensing charges associated with a temporary processor activation** (the license for temporary use of these software elements are included with the processor activation).

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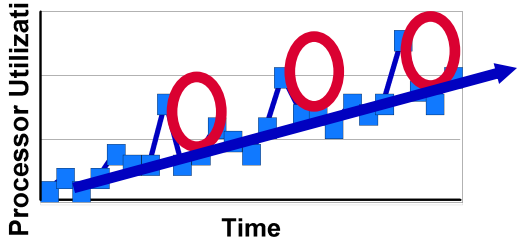
IBM On/Off Capacity on Demand for Software



- **On/Off CoD per processor day pricing is available for selected IBM software products, such as WebSphere Application Server**
  - "Per Processor Day " price varies by product
  - Quarterly Charge = (Per Processor Day Price) * (Qty of Temporarily Activated Processors) * (Qty of Days)

- **Customer must sign a CoD attachment to ICA (IBM Customer Agreement) and a CoD addendum to IPLA (IBM Software License Agreement)**

- **Customer must report quarterly to IBM**
  - Temporarily activated processor information (existing processes for CoD hardware)
  - IBM Licensed Software Products (new processes for CoD software ... Fax or email)

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IBM On/Off Capacity on Demand 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 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
- 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.

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IBM Software License Manager (SLM)

- Integrated as part of OS/400
  - V2R3: Initial availability
  - V4R5: Added cross-partition counting
  - V5R1: Added Sub-capacity support
  - V5RX: New license counting capabilities are planned
- Used by IBM and third party software providers
  - SLM
    - Tracks instrumented product usage
    - Stores the authorized usage limit, grace periods and expiration dates
    - Informs a software product if a limit or date has been exceeded
  - Software being managed
    - Package the software with usage and compliance types
    - Instrument the software with OS/400 license APIs calls at key points
- A version of the strategic replacement for SLM that would be available to software providers is not expected before 2005

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Software License Compliance

- **Licensing requirements**
  - **Customers must license based on what the machine is configured to use**
  - **Customers must license for the Processing Unit quantity for dedicated and capped partitions and the Virtual Processor quantity for uncapped partitions**

12 Way Squadrons Machine

Partition Number	1	2	3	4
Partition Type	**Dedicated**	**Dedicated**	**<-Shared Pool 7 processors-> Capped**	**Uncapped**
Operating System	OS/400	AIX	AIX	OS/400
Config				
Virtual Processors			VP=4	VP=7
Processor Units	PrU=4	PrU=1	PrU=3.00	PrU=4.00

Licenses Required

					Total
OS/400	4			7	11
AIX		1	3		4

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Logical Partitions and Software Licensing

- Customers set partition size, partition type, and max virtual processors at LPAR configuration
- Partition Size
  - Processing Units (PrU) - number of processors assigned to a partition
  - Virtual Processors (VP)
    - Number of physical processors the partition can spread the workload across
    - Also sets upper limit for uncapped partitions
- Partition Type
  - All partition types are guaranteed the Processing Unit level of capacity if needed
  - Dedicated
    - If the partition is idle, other partitions cannot use the assigned Processing Units
  - Shared Pool
    - Capped/Uncapped
      - If the partition is idle, other partitions can use the assigned Processing Units
    - Uncapped
      - If other partitions are idle and an uncapped partition needs additional capacity, it will 'borrow' capacity from other partitions in the shared pool
      - Can 'borrow' to a level of virtual processors configured

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Backup 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 (i5/OS) 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.

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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."

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Summary: What should you do about Software Licensing?

Per User	**Continue to use your existing SW licensing approach (consider SLM)** Permanent and/or Temporary Activations: When the license manager recognizes that a processor has been activated for use with licensed software ... take no customer billing actions
Software Tier	**Continue to use your existing SW licensing approach (consider SLM)** Permanent and/or Temporary Activations: When the license manager recognizes that a processor has been activated for use with licensed software ... take no customer billing actions
Per Processor (Permanent Activations)	**Adjust your SW licensing approach (consider SLM) to recognize processor activations** Permanent Activations: When the license manager recognizes that a processor has been activated for use with licensed software, resolve against customer orders and/or customer reported use ... provide a new license key, and then bill your customer Temporary Activations: When the license manager recognizes that a processor has been activated for use with licensed software ... take no customer billing actions
Per Procesor (Permanent and Temporary Activations)	**Adjust your SW licensing approach (consider SLM) to recognize processor activations** Permanent Activations: When the license manager recognizes that a processor has been activated for use with licensed software, resolve against customer orders and/or customer reported use ... provide a new license key, and then bill your customer Temporary Activations: When the license manager recognizes that a processor has been activated for use with licensed software, resolve against customer orders and/or customer reported use ... then bill your customer

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Details

Hardware Maintenance/Warranty

Processor Failures

- Inactive processors can be used as REPLACEMENTS for failed processors. Starting with V5R1, this capability is offered on iSeries servers to help reduce the impact to server performance caused by a failed processor . By re-IPLing the server after a processor fails, the customer can reestablish required performance levels without waiting for parts to arrive on-site. If an inactive processor is not currently activated, it will automatically be assigned as a REPLACEMENT processor and the customer can continue processing.

Warranty for Processors

- Warranty for all processors (startup and inactive) 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, helping to ensure the full complement of inactive processors are available for immediate activation.
- Maintenance agreement charges are based on the number of processors actually activated, maintenance prices will be adjusted for each permanent processor activation ... just like any other hardware feature add. (Note: Hardware maintenance does not increase with temporary activations)

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License Information

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.

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Cancellation of Orders

Once an Activation or Enablement Code is posted/mailed, the order is considered fulfilled and the downstream billing process will be started. If a customer decides to cancel the order, after a Code is posted/mailed, IBM will dispatch an IBM service representative to the customer location to "invalidate" the posted/mailed Code by performing a maintenance action on the Anchor/Capacity Card.

- Original Anchor/Capacity Card is replaced
- Level II is contacted to generate refreshed Code(s) that will reset the server to the "entitled" levels of capacity
- Original Anchor/Capacity Card is returned to IBM and the machine is re-IPLed

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Logical Partitioning (LPAR)

iSeries (pre 2004)

- Inactive processors are not available to be assigned to partitions
- Inactive processors, once activated, become visible and are initially designated as available processors
- Activated/available processors must be assigned to a partition before the new capacity can be used

i5 (2004)

- Inactive processors are not available to be assigned to partitions
- Inactive processors, once activated, are immediately made available to the shared processor pool
- Permanently (CUoD) or temporarily (On/Off CoD or Trial CoD) activated processor capacity can be assigned to partitions as dedicated or shared processors.
- Processors activated as reserve capacity (Reserve CoD) increases the number of processors in the shared processor pool. Contention for shared processors is reduced and additional processing capacity is available for uncapped partitions

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Server CPU Utilization

- **Performance/Capacity Planning Tools**
  - Inactive processors are **NOT** considered "active" within the various system functions that report CPU utilization percentages ... until they get "activated" (Customer enters an Activation Code or requests temporary capacity)
- **DB2 Symmetric Multiprocessing**
  - Inactive processors are **NOT** considered "active" within the various system functions that report CPU utilization percentages ... until they get "activated" (Customer enters a POD Activation Code or requests temporary capacity)
- **IPL Time**
  - Inactive processors are **NOT** considered "active" within the various system functions that report CPU utilization percentages ... until they get "activated" (Customer enters an Activation Code or requests temporary capacity)

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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 Dec	Hex	Field Name	Data Type and Length	
8	8	System type	Char(4)	
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	Capacity Upgrade onDemand activation feature	Char(4)	
56	38	Activated Capacity Uptrade on Demand units	Char(4)	
60	3C	Capcity Upgrade on Demand sequence number	Char(4)	
64	40	Capacity Upgrade on Dmeand entry check	Char(2)	
66	42	Caapcity Upgrade on Demand maximum processors that can be purchased	Char(4)	
70	46	On/Off Capcity onDemand enabled	Char(1)	Hex 00 = not enabled for On/Off .... Hex 01 = enabled forOn/Off
71	47	On/Off Capacityon Demand active	Char(1)	Hex 00 = no active requests ..... Hex 01 - active requests
72	48	On/Off Capaictyon Demand activation feature	Char(4)	
76	4C	Activated Capacity on Demand units	Char(4)	
80	50	On/Off Capacity on Demand sequence number	Char(4)	
84	54	On/Off Capacity on Demand entry check	Char(2)	
86	56	On/Off Capacity on Demand processors currently requested	Char(4)	
90	5A	On/Off Capacity on Demand days currently requested	Char(4)	
94	5E	On/Off Capacity on Demand processor-days expired	Char(4)	
98	62	On/Off Capacity on Demand processor-days remaining	Char(4)	
102	66	On/Off Capacity on Demand enablement counter	Char(4)	
106	6A	OnOff Capacity on Demand standby processors available for request	Char(4)	
110	6E	Reserved (binary 0)	Char(1)	
111	6F	On/Off Capacity on Demand history of requested processor-days	Char(4)	
115	73	Rseved (binary 0)	Char(1)	
116	74	On/Off Capacity on Demand history of un-returned processor-days	Char(4)	
120	78	Current time of day	Char(8)	
128	80	Reserved (blanks)	Char(42)	
152	98	--- End		

Information relative to CUoD (Permanent Capacity)

Information relative to On/Off CoD Temporary Capacity

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MATMATR option OXO 1F4

Reserve: Check the field at offset 176B0, to determine how many processors have been temporarily activated as reserve capacity

Trial: Check the field at offset 28411C, to determine how many processors have been temporarily activated **as trial capacity**

Offset Dec	Hex	Field Name	Data Type and Length	
170	AA	Reserve Capacity on Demand enabled	Char(1)	Hex 00 = not enabled for Reserve .... Hex 01 = enabled forReserve
171	AB	Rexerve Capacity on Demand active	Char(1)	Hex 00 = no active requests ..... Hex 01 - active requests
172	AC	Reserve Capacity on Demand activation feature	Char(4)	
176	BO	Activated Reserve Capacity on DEmand units	Char(4)	
180	B4	Reseve Caapcity on Demand sequence number	Char(4)	
184	B8	Reserve Capacityon Dmeand entry check	Char(2)	
186	BA	Reserve Caapcity on Dmeand processwors currentyl requested	Char(4)	
190	BE	Reserved (binary 0)	Char(2)	
202	CA	Reserve Capacity on Demand enablement coutner	Char(4)	
206	CE	Reserve Capacity on Demand standvby processors avaialbe for request	Char(4)	
210	D2	Reserved (binary 0)	Char(1)	
211	D3	Reserved Capacity on Demand history of expired processor-days	Char(4)	
215	D7	Reserved (binary 0)	Char(1)	
216	D8	Reserved Capacity on Dmeand history of unretruend processor-days	Char(4)	
220	DC	Reserved (binary 0)	Char(16)	
236	EC	Reserved (blanks)	Char(42)	
278	116	Trial Capacity on Demand enabled	Char(1)	Hex 00 = not enabled for Trial .... Hex 01 = enabled for Trial
279	117	Reserved (binary 0)	Char(1)	
280	118	Trial Capacity on Demand activation feature	Char(4)	
284	11C	Trial Capacity on Demand sequence number	Char(4)	
288	120	Trial Capacity on Demand entry check	Char(2)	
292	124	OnOff Capacity on Demand standby processors available for request	Char(4)	
294	126	Reserved (binary 0)	Char(1)	
302	12E	Trial Caapcity on Demand days expired	Char(4)	
306	132	Trial Cpacity on Dmeand days remaining	Char(4)	
310	136	Reserved (binary 0)	Char(14)	
324	144	Trial Capacity on Dmeand unretruned processors	Char(4)	
328	148	Reserved (blanks)	Char(42)	
370	172	--- End		

Information relative to Reserve CoD Temproary Capacity

Information relative to Trial CoD Temporary Capacity

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On/Off CoD Customer Contacts

Customer Contacts

Enabling a server for the downstream customer use of temporary capacity (On/Off 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 On/Off Capacity On Demand
  and IBM Supplement for TOn/Off Capacity On Demand

- For end users who do not have an ICA or equivalent in place:
  IBM Agreement for On/Off Capacity On Demand
  and IBM Supplement for On/Off 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 On/Off 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 orgnization. In addition, a copy must be faxed to IBM at 1-507-253-4553 (WW support structure) before the order for the On/Off Enablement Feature will be fulfilled.

For more information about the Sales Channel requirements (registration and contracts) relative to temporary capacity, please go to the following website and then choose Sales Channel Information
http://www.ibm.com/servers/eserver/support/ondemand/cod

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On/Off CoD: Customer Responsibilities

Customer Responsibilities

Enable:

A) Order an Enablement Feature from your Sales Channel

1) The Enablement Feature is good for 192 (pre-V5R3) and 360 (V5R3 on i5) Processor Days (temporary capacity that can be requested before a new Enablement Feature would have to be ordered)

2) Enablement Features are not additive .. if you order a new one and apply the Enablement Code, the new limit will be set to 192 (pre-V5R3) or 360 (V5R3 on i5) 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 On/Off 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 On/Off 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 (Excpetion: 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 (only for pre-V5R3 on pre-2004 hardware) 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 Termination Code from icod@us.ibm.com and allow IBM/partner to enter the code prior to the machine being sold or retruned from lease

1) Understand that it is the customer's responsibility to request a 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 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

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On/Off CoD: Sales Channel Contacts

Sales Channel Contacts

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

- Distributors (1st Tier) must sign:
  IBM Business Partner Agreement-- Distributor Attachment for On/Off Capacity On Demand
- Solution Providers (2nd Tier) who acquire products from Distributors must sign:
  IBM Business Partner Agreement for Solution Providers -- Attachment for On/Off 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 On/Off Capacity On Demand

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

For more information about the Sales Channel requirements (registration and contracts) relative to temporary capacity, please go to the following website and then choose Sales Channel Information
http://www.ibm.com/servers/eserver/support/ondemand/cod

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Distributor Responsibilities

Distributor Responsibilities

Pre-Requisite:

A) Request the **IBM Business Partner Agreement-- Distributor Attachment for On/Off 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 On/Off 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 CoD for a specific customer's machine. IBM is not necessarily expecting, nor requring 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/iseries/hardware/ondemand/cod) by providing a unique/IBM recognizable identifier for the Solutoin 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/iseries/hardware/ondmeand) for the machine they are ordering an Enablement Feature ... if this does not occur, the order for the Enablement Feature will not be fufilled!

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Distributor Responsibilities

Bill:

A) Work with the Solution Provider to place an order for a quantity of 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 cusotmer for a quantity of Billing Features (one biling 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 amont due will be at IBM's or your IBM Business Partner's, as applicable, then current prices and payment terms for the Billing Feature for the applicable 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 temproary 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

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Solution Provider (buys from distributor) Responsibilities

Solution Provider (buys from distributor) Responsibilities

Pre-Requisite:

A) Work with your Distributor to request the **IBM Business Partner Agreement for Solution Providers -- Attachment for On/Off 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 requring 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 a unique/IBM recognizable identifier for your company, a unique/IBM recognizable identifier for your Distributor, and three e-mail addrresses

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 On/Off Capacity On Demand** on a screen and will be asked to confrm 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 On/Off Capacity On Demand **and** IBM Supplement for On/Off Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
  IBM Agreement for On/Off Capacity On Demand **and** IBM Supplement for On/Off 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 On/Off Capacity On Demand Alternative Reporting

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

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

Note1: The order for a n 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 Billing Features in IBM's configurator (treat them like an other order for a qty of hardware features against a specific serial number).

C) Billl the customer for a quantity of Billing Features (one biling 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 Billing Feature for the applicable 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 sontract 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 termination Code (make the request to ICOD@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 On/Off 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 On/Off CoD contract

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Solution Provider or System Integrator (buys from IBM) Responsibilities

Solution Provider or System Integrator (buys from IBM) Responsibilities

Pre-Requisite:

A) Request the **IBM Business Partner Agreement-- Attachment for On/Off 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 requring 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 addrresses

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 -- Attachment for On/Off Capacity On Demand** on a screen and will be asked to confrm 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 On/Off Capacity On Demand **and** IBM Supplement for On/Off Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
  IBM Agreement for On/Off Capacity On Demand **and** IBM Supplement for On/Off 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 On/Off Capacity On Demand Alternative Reporting

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

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

Note1: The order for an 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 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 Billing Features in IBM's configurator (treat them like an other order for a qty of hardware features against a specific serial number).

C) Billl the customer for a quantity of Billing Features (one biling 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 Billing Feature for the applicable 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 IBM partner that activity has actually happened within a quarter that requires billing to take place

Terminate:

A) Request a Termination Code (make the request to ICOD@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 on/Off CoD 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 On/Off CoD contract

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IBM Direct Sales Responsibilities

IBM Direct Sales Responsibilities

Pre-Requisite:

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

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 On/Of Capacity On Demand **and** IBM Supplement for On/Off Capacity On Demand
- For end users who do not have an ICA or equivalent in place:
  IBM Agreement for On/Off Capacity On Demand **and** IBM Supplement for On/Off 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 On/Off Capacity On Demand Alternative Reporting

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

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

Note1: The order for an 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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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) Billl the customer for a quantity of TCOD Billing Features (one biling 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 Billing Feature for the applicable Billing Quarter.

Note2: IBM Direct will work with their CSO organizations business-as-usual (just like an order for any hardware feature against a spedcific 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 cusotmer activity relaitve to temporary capacity

Terminate:

A) Request a Termination Code (make the request to ICOD@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 On/Off 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

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Upgrades/Conversions

iSeries (pre-2004): Converting Hardware Features

- A two step process is used to convert Model 825, 870, and 890 Processor Features
  - Step1: All inactive processors must be activated
    - the possible paths for feature conversions will not be shown in the configurator until enough Activation Features have been ordered to activate 100% of the inactive processors
    - The Processor Feature conversion price in Step2 will take into account the price paid for all inactive processors to be activated in Step1
  - Step2: Processor Feature to Processor Feature Conversion (Machine records)
    - Old Activation Features (CUoD, On/Off CoD, Reserve CoD) will not be carried forward
    - Old Enablement Features (On/Off CoD) will not be carried forward
    - Old Billing Features (On/Off CoD) will be carried forward but no On/Off CoD 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 (machine records)
    - Old Activation Features (CUoD, On Off CoD, Reserve CoD) will be carried forward and a new Activation Code will be generated
    - Old Enablement Features (On/Off CoD) will not be carried forward
    - Old Billing Features (On/Off CoD) will be carried forward but no On/Off CoD 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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i5 (pre-2004): Converting Hardware Features

- A one step process is used to convert Model 570 Processor Features
  - Step1: All inactive processors must be activated
    - the possible paths for feature conversions will not be shown in the configurator until enough Activation Features have been ordered to activate 100% of the inactive processors
    - The Processor Feature conversion price in Step2 will take into account the price paid for all inactive processors to be activated in Step1
  - Step2: Processor Feature to Processor Feature Conversion (Machine Records)
    - Old Activation Features (CUoD, Trial CoD, Reserve CoD) will not be carried forward
    - Old Enablement Features (On/Off CoD) will not be carried forward
    - Old Billing Features (On/Off CoD) will be carried forward but no On/Off CoD 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 570 Edition Features
  - Step1: Package Feature to Package Feature Conversion (Machine Records)
    - Old Activation Features (CUoD, Trial CoD, Reserve CoD) will be carried forward and a new Activation Code will be generated
    - Old Enablement Features (On/Off CoD) will not be carried forward
    - Old Billing Features (On/Off CoD) will be carried forward but no On/Off CoD 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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Model upgrades into @server i5

- Model 825, 870 and newer model 890 into @server i5
  - 100% activation of remaining inactive processors is not required (no activations are carried forward)
  - 100% OS/400 licensing of processors is not required (existing licenses are carried forward)

- Model 830, 840, and older model 890 into @server i5
  - 100% activation of remaining inactive processors is not required (no activations are carried forward)
  - OS/400 licensing of processors does not exist on 830, and 840 (previously purchased processor activations will result in a credit toward i5/OS licensing for @server i5)

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iSeries (pre-2004) Hardware Movement

RFA Text Addressing Movement of 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.

What does it mean for CUoD or On/Off CoD?

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

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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 B ....an 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 # ofCapacity Card stored in the IBMCoD application that is used to generate Activation Codes)
      NOTE2: To get rid of the SRC A6004713 and not refresh activations on Machine B... 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 requried 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 par t of the process.
      NOTE4: To purchase new activation/enablement features forMachine 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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i5 (Model 520 and 570) Hardware Movement

What's new with @server i5 hardware?

NOTE1: IBM will allow the number of Processor Parts installed in an @server i5 to be dynamically decreased (parts can be removed without an IPL or changing of Anchor Cards)

NOTE2: IBM will allow the number of Processor Parts installed in an @server i5 to be dynamically increased (parts can be added without an IPL or changing of Anchor Cards) but the number of usable processors will be dictated by the Anchor Card

NOTE3: IBM will allow concurrent maintenance .. meaning a Processor Part can be removed and replaced with a working part (this action can be taken without an IPL or without requiring any Anchor Card change

NOTE4: IBM will no longer require a new System Password when the hardware is changed (there will be no use of System Passwords at all)

NOTE5: IBM does not encourage/recommend that the Anchor Card ever be moved (Will result in the Frame and Electronic Serial number becoming out of sync)

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Approved Movement of Hardware

Any movement of processor cards into an alternate @server i5 will disable any previously activated/enabled processor capacity. No capacity associated with the “additional” parts will be recognized and/or usable in the target machine.

Any movement of anchor cards into an alternate @server i5 will result in an invalid configuration and will make the target server itself unusable (server will not IPL). The anchor card should be returned to the original machine.

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Replacing Parts

Replacing a Processor Part (Concurrent Maintenance)

A) Non-CoD Models: Replacing hardware in machine "A""
=> IT IS POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "A" WHEN REPLACING PARTS (machine will require an IPL)

B) CoD Models: Replacing hardware in machine "A"
=> IT IS POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "A" WHEN REPLACING PARTS (machine does not require an IPL and will continue running with existing Anchor Card)

Replacing an Anchor Card (Concurrent Maintenance)

A) Non-CoD Models: Replacing hardware in machine "A""
=> IT IS POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "A" WHEN REPLACING PARTS (machine requires an IPL when Anchor Card is replaced)

B) CoD Models: Replacing hardware in machine "A"
=> IT IS POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "A" WHEN REPLACING PARTS (machine requires an IPL when Anchor Card is replaced and CoD codes must be re-applied)

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Swapping Parts

Swapping a Processor Part (3rd Party Parts Business)

A) Non-CoD Models: Removing hardware from machine "A" and putting it into machine "B":
=> IT IS POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "B" WHEN ADDING PROCESSOR PARTS (machine does not require IPL, number of usable processors will be dictated by installed Anchor Card)
=> IT IS POSSIBLE TO GET A VALID CONFIGRUATION on MACHINE "A" WHEN REMOVING PROCESSOR PARTS (machine does not require an IPL and will continue running with existing Anchor Card)

B) CoD Models: Removing Hardware from machine "A" and putting it into machine "B":
=> IT IS POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "B" WHEN ADDING PROCESSOR PARTS (machine does not require IPL, , number of usable processors will be dictated by installed Anchor Card)
=> IT IS POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "A" WHEN REMOVING PROCESSOR PARTS (machine does not require and IPL and will continue running with existing Anchor Card)

Swapping a Processor Part and the Anchor Card (3rd Party Parts Business)

A) Non-CoD Models: Removing hardware from machine "A" and putting it into machine "B":
=> IT IS NOT POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "B" WHEN ADDING PROCESSOR PARTS & ANCHOR CARD (return the Anchor Card to the original machine)
=> IT IS NOT POSSIBLE TO GET A VALID CONFIGRUATION on MACHINE "A" WHEN REMOVING ANCHOR CARD (machine will not IPL because it has no Anchor Card)

B) CoD Models: Removing Hardware from machine "A" and putting it into machine "B":
=> IT IS NOT POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "B" WHEN ADDING PROCESSOR PARTS & ANCHOR CARD (return the Anchor Card to the original machine)
=> IT IS NOT POSSIBLE TO GET A VALID CONFIGURATION on MACHINE "A" WHEN REMOVING THE ANCHOR CARD (machine will not IPL because it has no Anchor Card)

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Transferring Features or Changing Servers

Transferring an Activation Feature (Capacity Exchange)

A) Non-CoD Models: Removing activations from machine "A" and putting it into machine "B":
=> NA

B) CoD Models: Removing activations from machine "A" and putting it into machine "B":
=> IT IS NOT CURRENTLY POSSIBLE TO DO A LIKE-FOR-LIKE EXCHANGE (Remove form Machine "A" and add to Machine "B") ANY QUANTITY OF ACTIVATIONS WITH NO IPL

Changing an Entire Server (Frame, Processor Parts, and Anchor 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 (Anchor Card)

B) CoD Models: Machine will IPL with 100% of startup processor capacity, 100% of any previously activated inactive processor capacity, and 100% of the function associated with the Edition Feature (Anchor Card) NOTE: To purchase new activation/enablement features, an order would be placed in the @server i5 configurator

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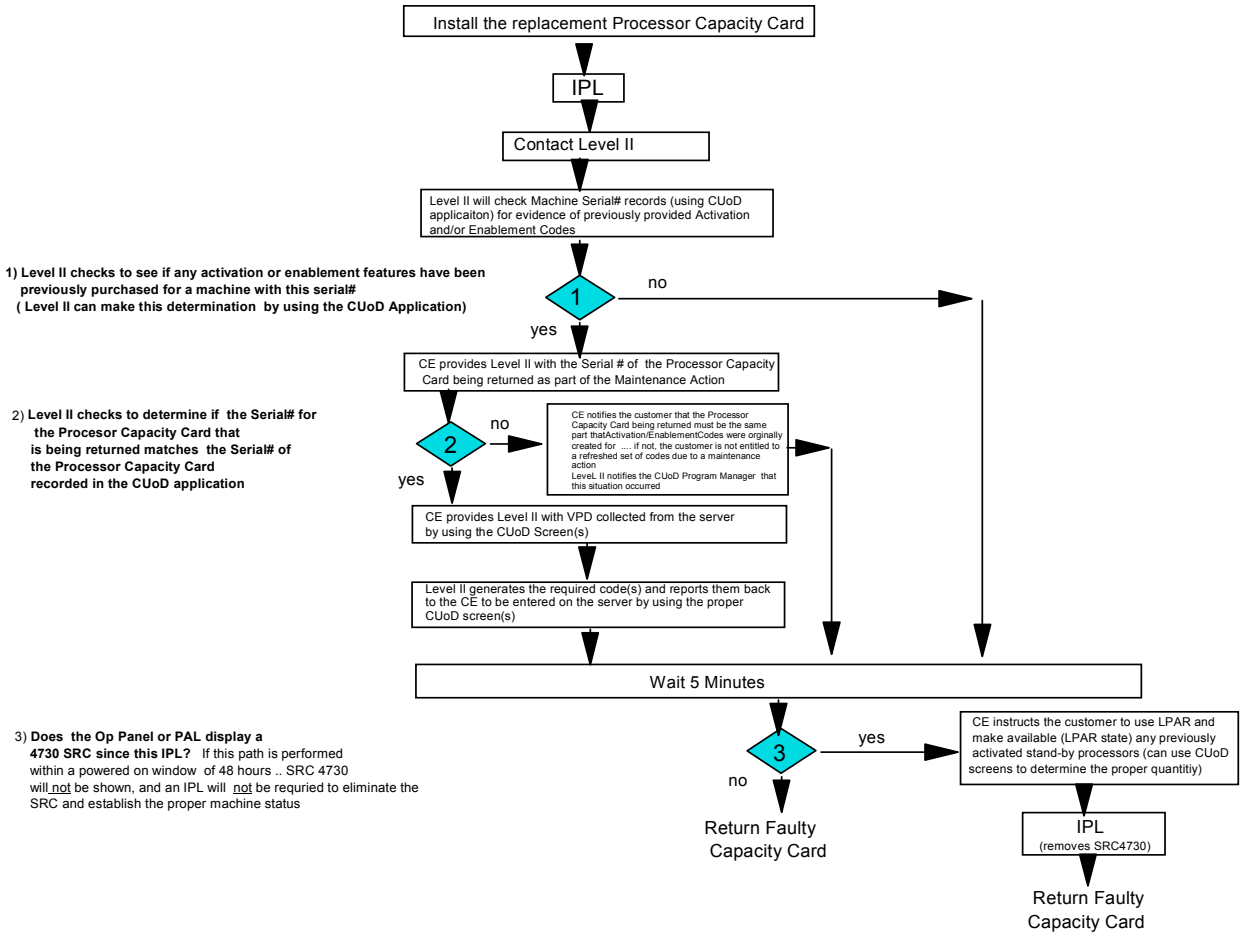
Field Maintenance Instructions

Special Maintenance Instructions for CoD
Model 830, 840, 890-2487/2488 with V5R1, V5R2, or V5R3



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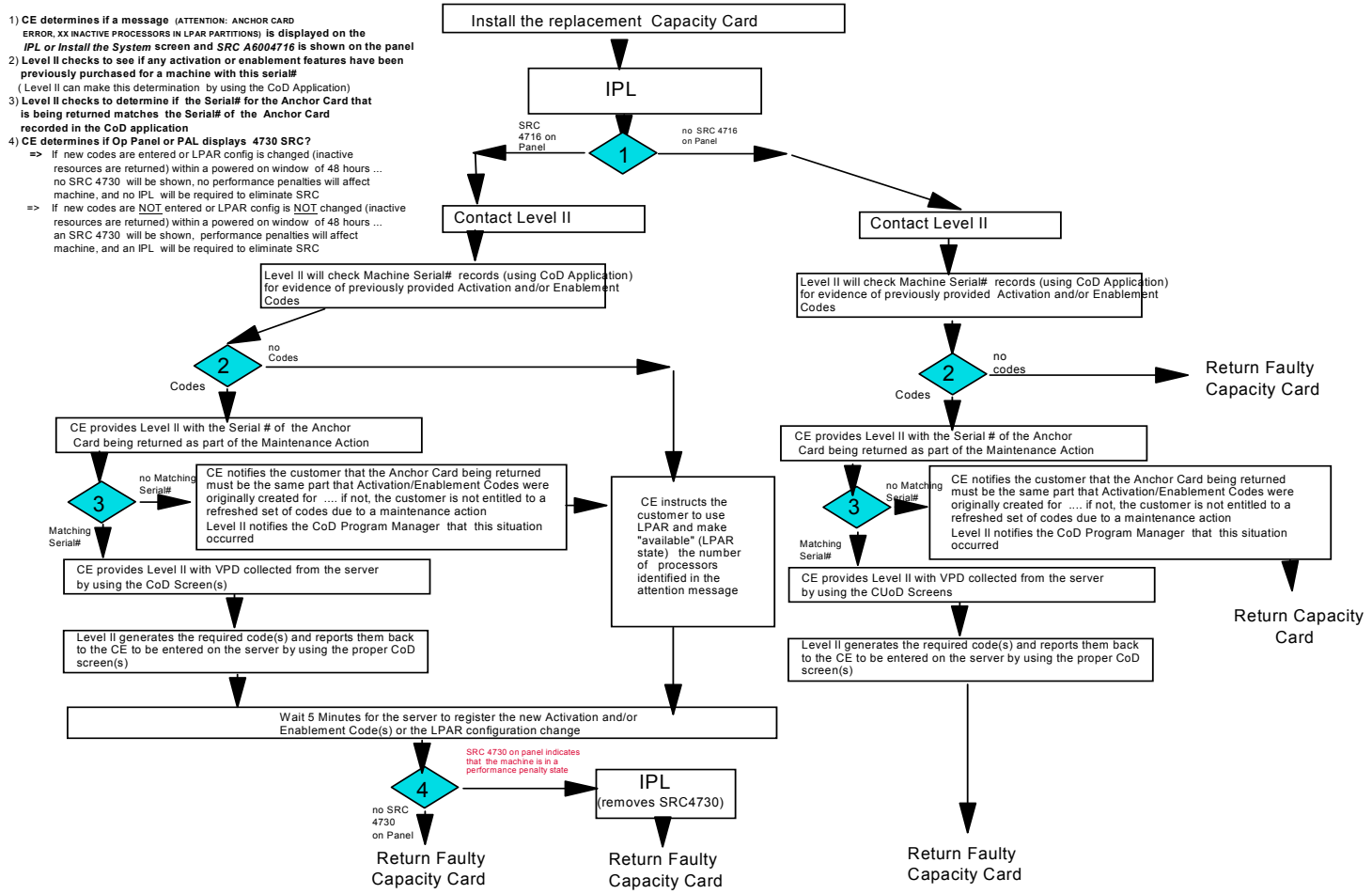
CoD Maintenance Instructions for Model 825, 870, 890 (with V5R2 or V5R3)



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CoD Maintenance Instructions for Model 550, 570

1) HMC will prompt for possible CoD codes. If the LPAR configuration is greater than the active system resources then contact Level II and get the CoD codes the customer is entitled to

CUoD => After maintenance, there are no remaining permanent activations on the server. CE must regenerate the codes.
(CUoD Processor and Memory Activation Features)

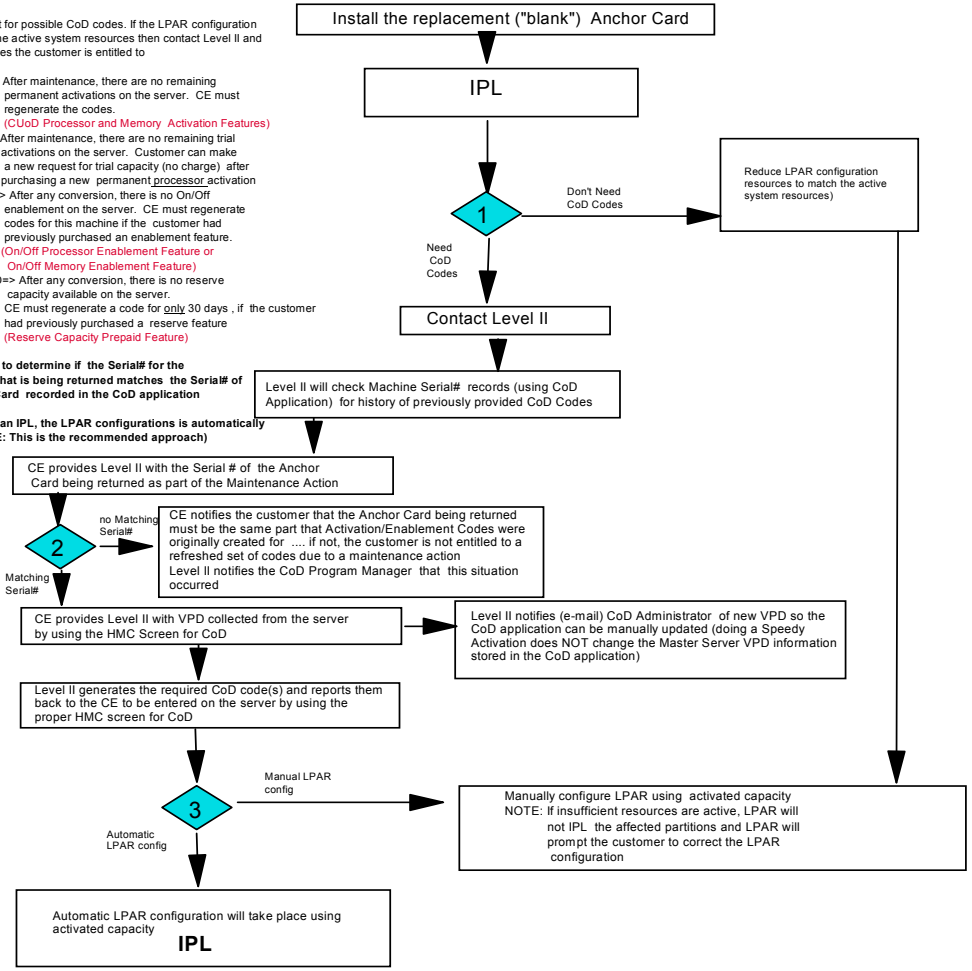
Trial CoD => After maintenance, there are no remaining trial activations on the server. Customer can make a new request for trial capacity (no charge) after purchasing a new permanent processor activation

On/Off CoD=> After any conversion, there is no On/Off enablement on the server. CE must regenerate codes for this machine if the customer had previously purchased an enablement feature.
(On/Off Processor Enablement Feature or On/Off Memory Enablement Feature)

Reserve CoD=> After any conversion, there is no reserve capacity available on the server.
CE must regenerate a code for only 30 days , if the customer had previously purchased a reserve feature
(Reserve Capacity Prepaid Feature)

2) **Level II checks to determine if the Serial# for the Anchor Card that is being returned matches the Serial# of the Anchor Card recorded in the CoD application**

3) **By performing an IPL, the LPAR configurations is automatically restored (NOTE: This is the recommended approach)**



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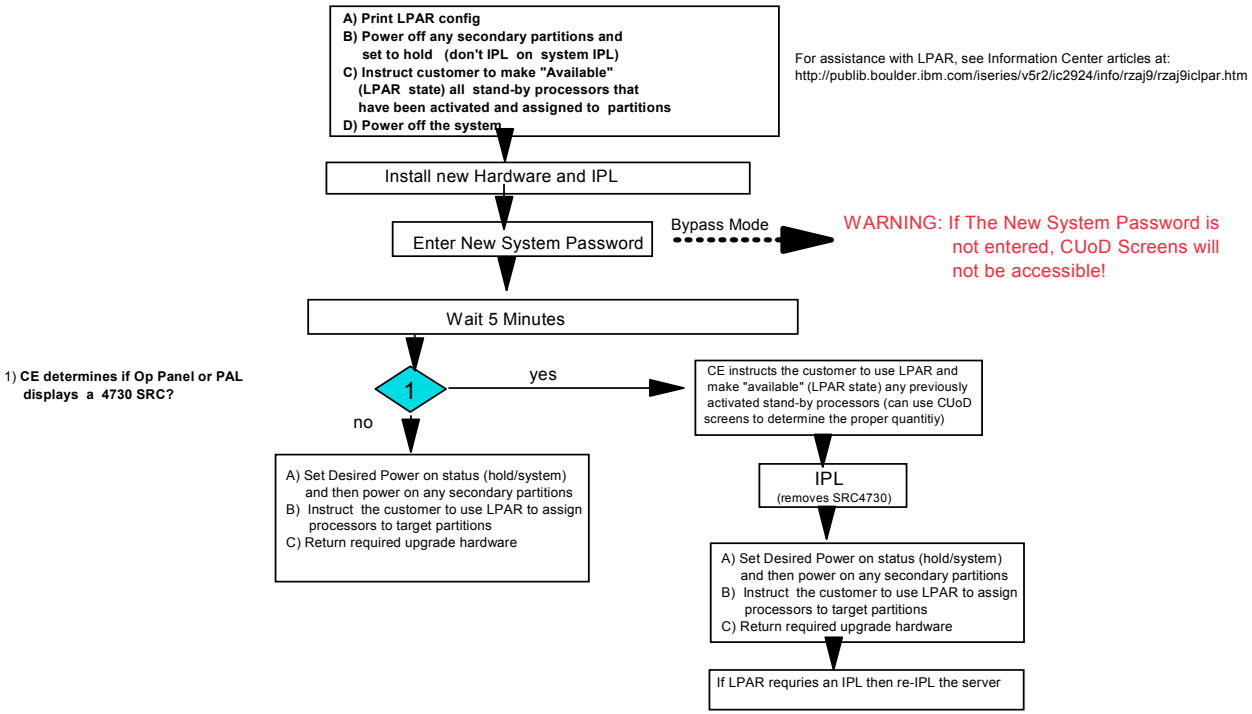
Feature Conversion Instructions

Special Processor Feature Conversion Instructions for CoD

Models 830, 840, 890-2487/2488 with V5R1, V5R2, V5R3



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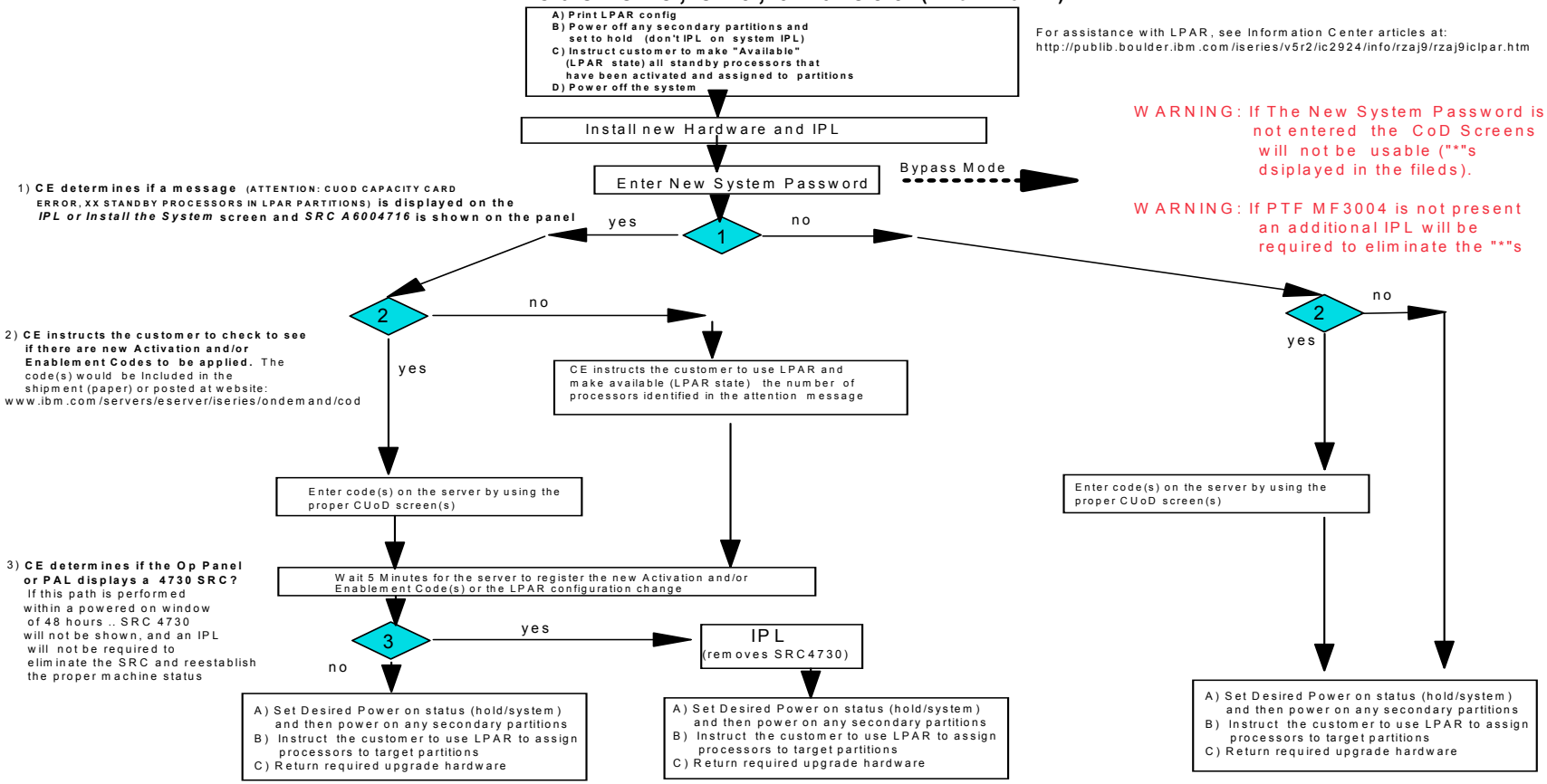
Processor or Edition Feature Conversion Instructions unique to CoD Model 825, 870, and 890 (with V5R2)



For assistance with LPAR, see Information Center articles at:
http://publib.boulder.ibm.com/iseries/v5r2/ic2924/info/rzaj9/rzaj9iclpar.htm

WARNING: If The New System Password is not entered the CoD Screens will not be usable ("*"s dsiplayed in the fileds).

WARNING: If PTF MF3004 is not present an additional IPL will be required to eliminate the "*"s

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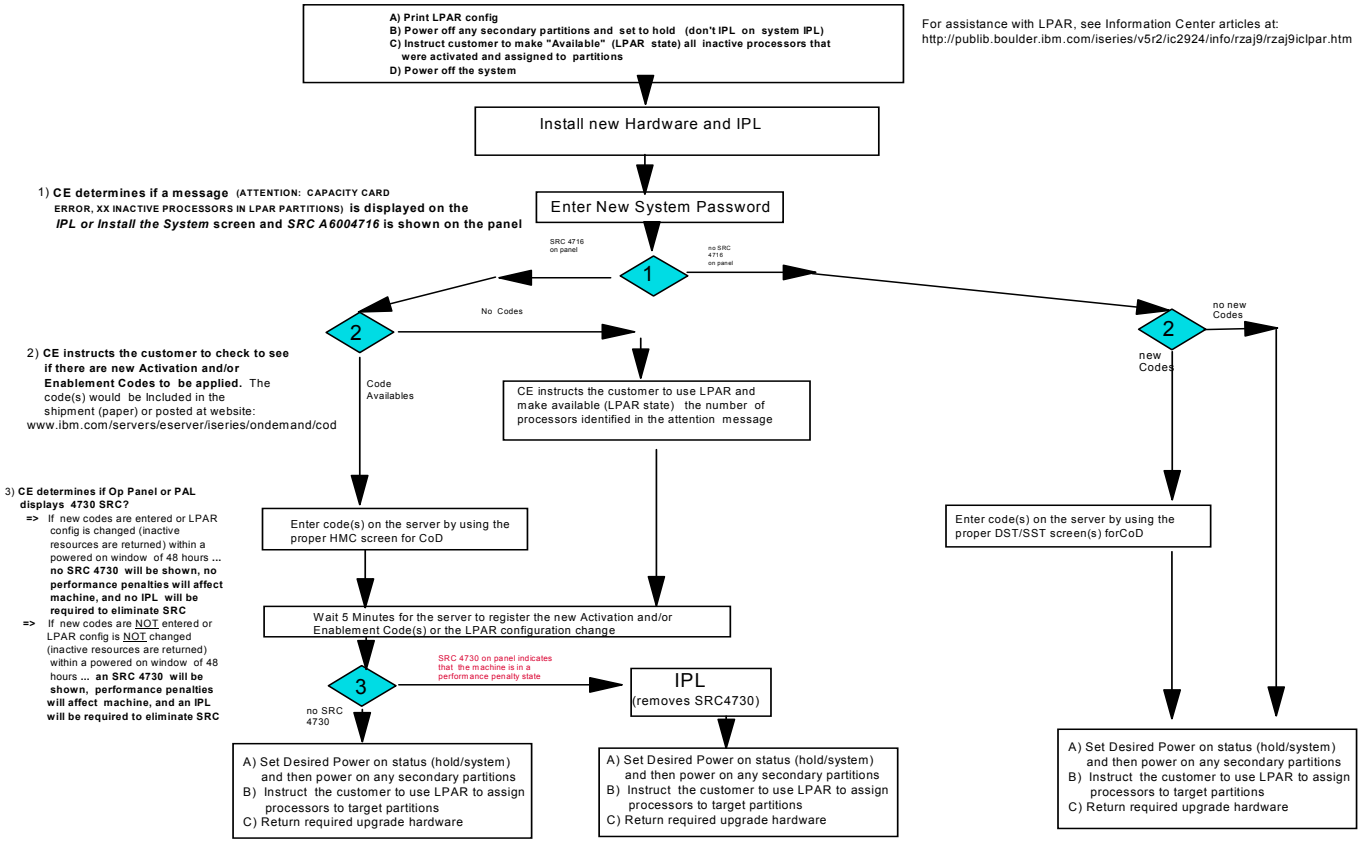
Processor or Edition Feature Conversion Instructions unique to CoD

Model 825, 870, and 890 (with V5R3)



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Processor or Edition Feature Conversion Instructions unique to CoD

Model 550, 570 (with V5R3)

1) HMC will prompt for possible CoD codes. If LPAR configuration is greater than the active system resources then get the CoDcodes for this machine.

The CoDcode(s) would be included in the shipment (paper) or posted at the following CoD website:
www.ibm.com/servers/eserver/iseries/ondemand/cod

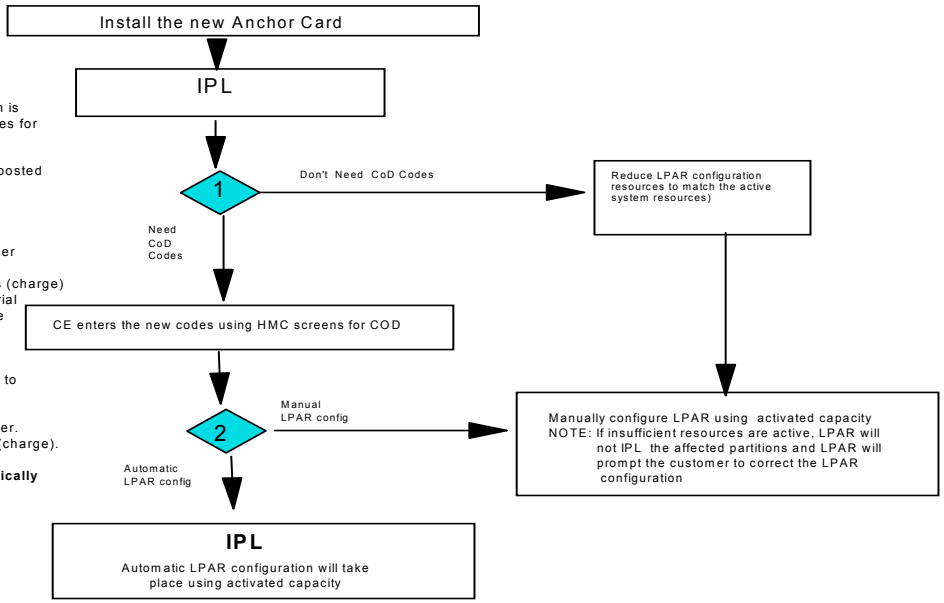
CUoD => After any conversion, there are no remaining permanent activations on the server. Customer can upgrade previously purchased activation features or purchase new activation features (charge)

Trial CoD => After any conversion, there are no remaining trial activations on the server. Customer can make a new request for trial capacity (no charge)

On/Off CoD => After any conversion, there is no On/Off enablement on the server. Customer can order a new enablement feature (no charge) to allow requests for temporary capacity

Reserve CoD => After any conversion, there is no reserve capacity available to be activated on the server. Customer can order a new reserve feature (charge).

2) **By performing an IPL, the LPAR configurations is automatically restored (NOTE: This is the recommended aproach)**



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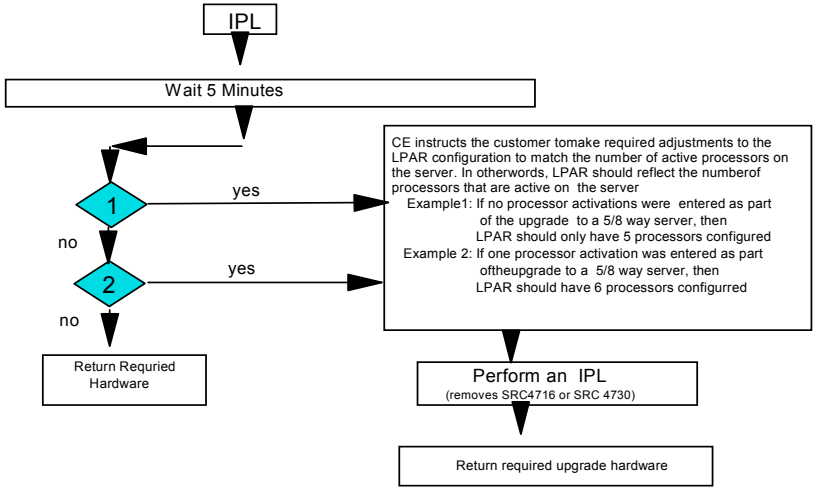
Model Upgrade Instructions

Special Model to Model Upgrade Instructions for CoD

From model 820, 830, 840, 890-2487/2488 with V5R1, V5R2, V5R3



1) **CE determines if the Op Panel or PAL displays a 4716 SRC?**

2) **CE determines if the Op Panel or PAL displays a 4730 SRC?** If this path is performed within a powered on window of 48 hours .. SRC 4730 will not be shown

If the LPAR configuration is not properly adjusted based on display of an SRC4716 or an SRC4730 on the Op Panel **unreturned processor days may begin accumulating.**
It is possible for the following upgrade paths (number of active processors is lower on the to model) to have unreturned processors days accumulate
until the LPAR configuration is properly adjusted to reflect the number of processors the customer is entitled to.

FROM:TO:						
Model	Proc	Nway		Model	Proc	Nway
820	2438	4W		825	2473	3W - 6W
830	2402	4W		825	2473	3W - 6W
830	2403	8W		870	2489	5W-8W
830	2349	4W/8W		825	2473	3W - 6W
830	2349	4W/8W		870	2489	5W-8W
840	2416	8W/12W		870	2486	8W-16W
840	2417	12W/18W		870	2486	8W-16W
840	2417	12W/18W		890	2497	16W-24W
840	2418	12W		870	2486	8W-16W
840	2419	18W/24W		890	2497	16W-24W
840	2420	24W		890	2497	16W-24W
840	2352	8W/12W		870	2486	8W-16W
840	2354	18W/24W		890	2497	16W-24W

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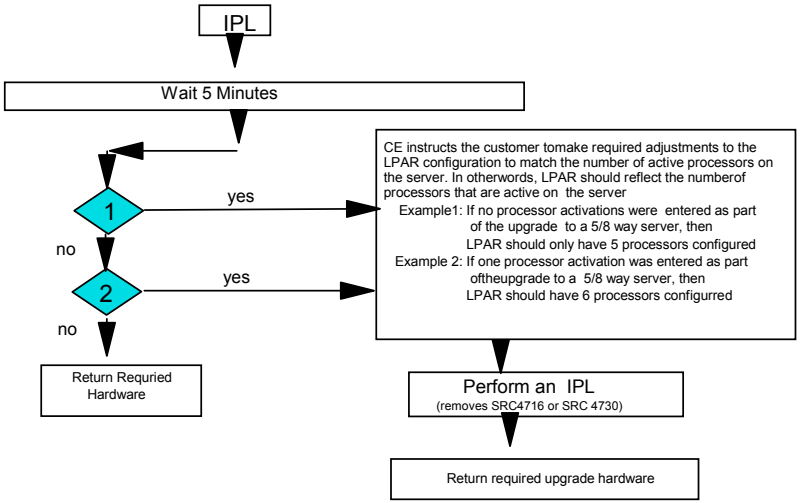
Special Model to Model Upgrade Instructions for CoD

From model 825, 870, 890 with V5R2



1) **CE determines if the Op Panel or PAL displays a 4716 SRC?**

2) **CE determines if the Op Panel or PAL displays a 4730 SRC?** If this path is performed within a powered on window of 48 hours .. SRC 4730 will not be shown

If the LPAR configuration is not properly adjusted based on display of an SRC4716 or an SRC4730 on the Op Panel **unreturned processor days may begin accumulating.**
It is possible for the following upgrade paths (number of active processors is lower on the to model) to have unreturned processors days accumulate until the LPAR configuration is properly adjusted to reflect the number of processors the customer is entitled to.

Add Table of Upgrades here

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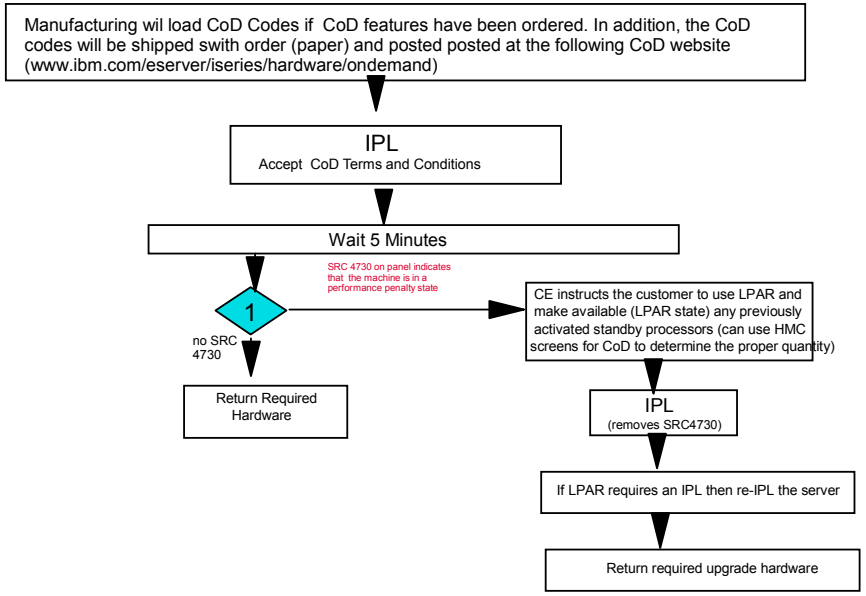
Special Model to Model Upgrade Instructions for CoD

From model 825, 870, 890 (with V5R3)

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**



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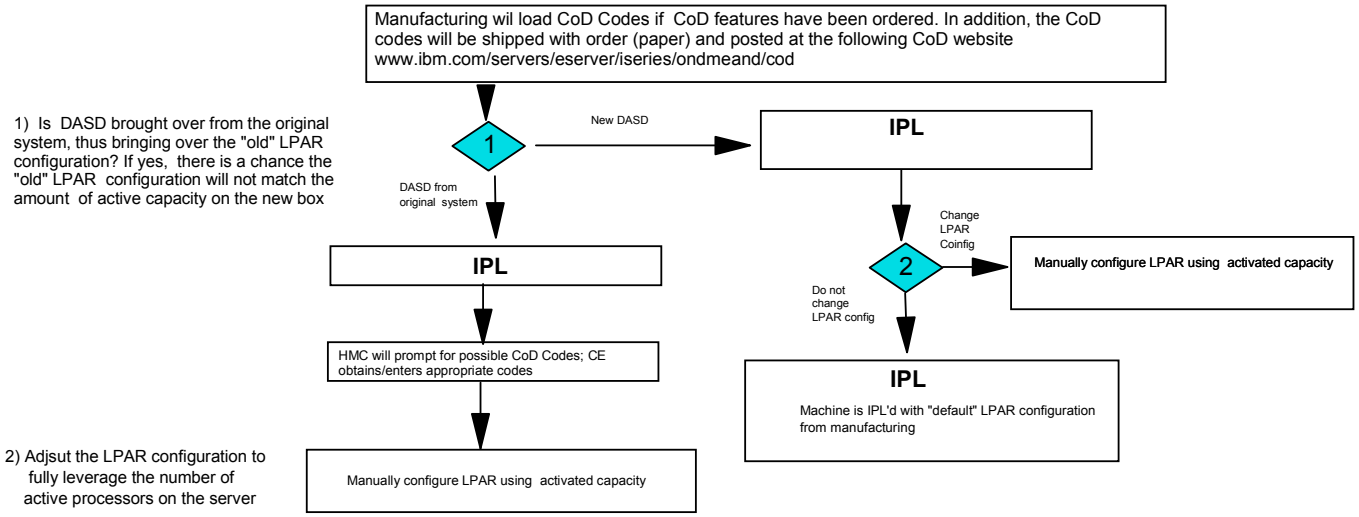
Special Model to Model Upgrade Instructions for CoD

From model 550, 570



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AIX	DataGuide	IBM	Net.Data	PowerPC AS	WebSphere
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APPN	DB2 UDB for AS/400	Information Warehouse	NUMA-Q	PSF	WebSphere Development Tools for AS/400
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