

IBM Software Demos

IBM System z9 Capacity on Demand Upgrade CP V1.0

Abstract

This demonstration shows the use of IBM System z Capacity on Demand to non-disruptively configure, order, and activate an additional general purpose processor (or CP) on a temporary basis driven by business need.

1a Time: 00:00 39sec

This demonstration shows the use of IBM System z Capacity on Demand to non-disruptively configure, order, and activate an additional general purpose processor (or CP) on a temporary basis driven by business need. We will use the IBM Resource Link web-based tool to configure and order the additional CP for our System z9 Business Class server, and then activate that processor non-disruptively using the Hardware Management Console. Note that although we are using a System z9 BC machine for this demonstration, this capability is available on all IBM System z servers.

1b Time: 00:46 15sec

We begin by signing on to the Resource Link web site where we have already established a profile for our machine. We navigate to the Customer Initiated Upgrade portion of Resource Link and then select our z9 BC server.

1c Time: 01:10 26sec

The machine profile shows our Current Configuration, or permanently installed capacity. In our case, our starting configuration is capacity setting X03 with 3 general purpose processors, or CPs; 1 Application Assist Processor, or zAAP pronounced "zap" ; 1 Integrated Information Processor, or zIIP pronounced "zip" ; and 1 Integrated Facility for Linux, or IFL.

1d Time: 01:35 26 sec

To help us determine our desired capacity setting, we use the Display Upgrade Matrix selection to view the available upgrade or downgrade options for our machine. The matrix presents the various capacity settings as a percentage of our base configuration X03. We decide to place an order for a temporary upgrade to a Y04 capacity setting, giving us a 44% increase in CP capacity.

2a Time: 02:05 59sec

We select Create On/Off CoD Order to place our order. We have already established the price per 24 hour period with our Business Partner or IBM representative so that price is displayed. Had we not already established the upgrade price, Resource Link would notify our Business Partner or IBM representative.

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Note that once we have selected the Y04 capacity, we are unable to add any additional specialty engines. This is because with the Y04 setting and our 3 existing specialty engines we have used all the available engines on the server.

We now review and agree to the terms of the order and submit it for processing. Because we are using CIU Express, our order will be available within 3 hours. We will receive an e-mail from Resource Link when it is ready. If desired, an additional approver can be notified who must give his approval before the order is made available for download.

3a Time: 03:00 18sec

Now that our order has been staged, we turn to the Hardware Management Console to actually install the upgrade.

First, we confirm our starting configuration. The Product Information tab of the Details view tells us that our starting CP capacity setting is X03.

3b Time: 03:20 13sec

The CPs work area tells us that our starting configuration consists of 1 **zIIP**, 3 CPs, 1 **zAAP** (or IFA), and 1 IFL.

3c Time: 03:24 nn sec

To begin the upgrade we select Perform Model Conversion and navigate to the Customer Initiated Upgrade tree. We then select Retrieve and Apply Data and enter our Order Activation Number. Once we click OK, the HMC will connect to the IBM Service Support System to retrieve the upgrade data.

4a Time: 03:50 23 sec

While the order data is being downloaded we switch to the CPs view to see if we can catch the processor as it is actually being added.

Note that while we were using Resource Link, we could have placed several orders to cover a variety of possible upgrade needs. This allows us to be prepared to immediately install the needed capacity without waiting for the order to be processed.

4b Time: 04:16 24 sec

Here we see a new processor is just coming into the configuration as a CP. In addition, although we can't see it happening, the performance of our existing CPs is being increased as well.

We can also install a temporary upgrade on a system that already has a temporary upgrade active. There is no need to return to the base configuration to add additional temporary capacity.

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5a Time: 04:42 20sec

Using the View On/Off CoD Feature Information icon, we can see that we have an active temporary CoD order which consists of capacity setting Y04 and 1 CP.

To complete the upgrade, we would now configure the additional processor online to the appropriate operating systems.

6a Time: 05:04 43sec

When the additional capacity is no longer needed, it can also be removed non-disruptively. We use Perform Model Conversion and Undo Temporary Upgrade to return to our original capacity setting. We'll watch the CP view as the processor goes away.

In addition to the temporary increase of processor capacity we have seen in this demonstration, IBM System z Capacity on Demand offers the ability to perform non-disruptive permanent upgrades of general purpose processors, specialty processors, and memory.

Capacity Backup allows for the addition of temporary processing capacity to a backup server in the event of an unforeseen loss of server capacity.

6b Time: 05:48 12sec

For more information on Capacity on Demand capabilities of IBM servers or assistance in implementing this feature, contact your Business Partner or IBM representative.