

IBM Software Demos

IBM System z9 Capacity on Demand Upgrade IFL

Abstract

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

Pronunciation notes

zIIP is pronounced zip

zAAP is pronounced zap

1a Time: 00:00

This demonstration shows the use of IBM System z Capacity on Demand to non-disruptively configure, order, and activate an additional Linux processor (or IFL) on a temporary basis driven by business need. We will use the IBM Resource Link web-based tool to configure and order the additional IFL 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: 00:40 14sec

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: 00:54 25sec

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; 1 Integrated Information Processor, or zIIP; and 1 Integrated Facility for Linux, or IFL.

1d Time: 01:20 22sec

We select Create On/Off CoD Order to place our order. Rather than the upgrade price of zero dollars seen here, the price per 24 hour period we established with our Business Partner or IBM Representative would be displayed. Had we not already established the upgrade price, Resource Link would notify our Partner or IBM.

1e Time: 01:42 11sec

Note that with the one processor available to us for the upgrade, we could have chosen to order an additional zAAP, zIIP, ICF, or CP in place of the IFL.

1f Time: 01:53 23sec

We now review and agree to the terms of the order and it is submitted for processing. Because we are using CIU Express, our order will be available within 3 hours. We will receive

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an e-mail from Resource Link when it is ready. If desired, an additional approver can be notified who must respond before the order is made available for download.

2a Time: 02:15 15sec

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

2b Time: 2:26 11sec

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

2c Time: 02:38 11sec

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

2d Time: 02:51 20 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.

3a Time: 03:18 9sec

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.

3b Time: 3:27sec

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.

4a Time: 03:42 5sec

Here we see a new processor is just coming into the configuration as an IFL.

4b Time: 3:50 12sec

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.

4c Time: 04:02 6sec

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Once the upgrade completes, we confirm that the machine is still an X03 capacity setting as expected.

4d Time: 04:10 10 sec

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

5a Time: 4:21 7sec

If we were to complete this upgrade, we would then go to our z/VM or Linux LPARs and configure the additional processor online.

5b Time: 04:31 17 sec

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 remove the temporary IFL. We'll watch the CP view as the processor goes away.

5c Time: 4:48 16sec

Along with the temporary addition 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.

5d Time: 5: 06 10sec

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

6a Time: 05:17 11sec

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