

IBM Education Assistance for z/OS V2R1

Item: DYNCPADD nnnn

Element/Component: BCP



Agenda

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Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.



Presentation Objectives

- Describe the existing z/OS dynamic CPU addition support
- Describe the new enhancement to dynamic CPU addition to inform z/OS how many CPUs are eligible for dynamic CPU addition



Overview

- Problem Statement / Need Addressed
 - Enterprise Class or Business Class z10 and later hardware running z/OS V1R10 and above supports dynamic CPU addition through parmlib member LOADxx via DYNCPADD ENABLE
 - CVTMAXMP = maximum CPU ID eligible for dynamic CPU addition
 - z/OS, middleware, applications must support all CPUs
- Solution
 - Support LOADxx DYNCPADD nnnn to inform z/OS to make nnnn CPUs eligible for dynamic CPU addition (nnnn in addition to those defined at IPL)
- Benefit / Value
 - CVTMAXMP set with maximum CPU ID for life of the IPL
 - z/OS, middleware, applications allocate less storage to support all CPUs



Usage & Invocation

- When DYNCPADD not specified in LOADxx, DYNCPADD 16 is the new default. This allows an image to dynamically add up to 16 CPUs (of any type) after IPL.
 - IBM recommends choosing reasonable DYNCPADD nnnn that suits your needs
- Specifying DYNCPADD ENABLE causes z/OS to revert to the pre-V2R1 behavior where all CPUs (of any type) are eligible for dynamic CPU addition
- Example: CVTMAXMP (DEC) with 5 IPL defined CPUs (IDs 0-4) & DYNCPADD

	z10	z196	EC12
DYNCPADD <u>16</u> (Allows adding up to 16 more CPUs)	20	20	20
DYNCPADD 5 (Allows adding up to 5 more CPUs)	9	9	9
DYNCPADD ENABLE (Allows adding up to max # of CPUs)	63	79	100

- CVTMAXMP is limited by the following:
 - Maximum CPU ID hardware supports
 - Maximum CPU ID z/OS CPU Infrastructure supports (V2R1 = 255)
- With DYNCPADD 5, cannot dynamically add CPU ID >9 receives message:
 - ISN013I CPU nn CANNOT BE ADDED. SYSTEM LIMITED TO CPU ID yy DUE TO LOADXX DYNCPADD



Interactions & Dependencies

- Software Dependencies
 - None
- Hardware Dependencies
 - Enterprise Class or Business Class z10 or later hardware
- Exploiters
 - None



Migration & Coexistence Considerations

- In z/OS V2R1, when DYNCPADD is not specified in LOADxx, DYNCPADD 16 is the new default
 - DYNCPADD 16 makes only 16 CPUs eligible for dynamic CPU addition
 - If 16 is not an appropriate default, specify an appropriate value for your configuration

- To get the old behavior where all CPUs are eligible for dynamic CPU addition, specify DYNCPADD ENABLE in LOADxx.



Presentation Summary

- LOADxx DYNCPADD nnnn defines the number of CPUs eligible for dynamic CPU addition over the life of the IPL



Appendix

- MVS Initialization and Tuning Reference (LOADxx)
- V2R1 Migration

