The Common Event Adapter (CEA) address space must be active to allow the z/OS system to communicate with other System z hardware. This is necessary for setting up authority to use BCPii.

Setting up authority to use BCPii

- Given the nature of the BCPii APIs and the capabilities of a BCPii application to potentially modify vital hardware resources, a number of authority validations are performed for each BCPii requestor.
- A BCPii application needs to have program authority, general security product authority to be able to issue BCPii commands, authority to the particular resource that requires BCPii service.

Setting up event notification for BCPii z/OS UNIX applications

Applications running in a started procedure, batch, TSO or non-z/OS UNIX environment can use the HWEVENT service and provide their own ENF exit that receives control when the application-requested events occur on the target CPC or image. Applications running in a z/OS UNIX environment do not have normal ENF exit processing capabilities available and cannot readily listen for ENF signals.

Examples of information you can query:

- CPC information
- General information
- Name, serial, machine type, id, networking information
- Status information
- Operating status and other status values
- Capacity information
- Various CBU info, Capacity on Demand info, Processor configuration, including IFA, IPL, IF, IP
- Power savings information (available on zEnterprise only with APAR OA09831 on VRTX - VRTD) + Power savings available?, current power saving mode, supported power saving modes available
- Image information
- General information
- Name, OS
- Capacity information
- Defined capacity, Processor weights

Levels of hardware BCPii supports

- The HWINAPI address space, which supports the issuing of BCPii APIs from a z/OS image, will run on any level of hardware that supports the level of the z/OS operating system in which it is included. However, there will be reduced BCPii functionality when targeting any system with a BCPii request which is not running on a z10 or z11 with all the recommended microcode levels installed.
- The further the hardware level is from a z10, the greater the restrictions.
- BCPii applications might need to perform hardware or software functions on CPCs other than the CPC on which the application is running. Such requests can be targeted to other System z hardware at a lower or higher hardware level than the local CPC, provided that these CPCs have the required hardware levels supported to exist with the local CPC level.

Note: Each version of hardware has subtle or sometimes significant changes in the way information is displayed and saved in the support element.

The BCPii address space functions:

- The bridge to a z/OS application and the support element
- Manages all application connections
- Builds and receives all internal communication requests to the SE
- Provides an infrastructure for storage required by callers and for the transport communicating with the SE
- Provides diagnostic capabilities to help with BCPii problem determination
- Provides security authentication of requests

Enable BCPii communications on the support element

- You need to enable cross-partition authority on the support element to allow the BCPii APIs flowing from the user application through the HWINAPI address space.

Note: This setting controls whether a logical partition can issue a subset of control program instructions to other logical partitions activated on the same CPC.

Define the BCPii transport on the support element

- BCPii uses an SNMP community name to provide a level of security between the z/OS image that is executing the BCPii service (the SE) and the Hardware Management Console (HMC) using BCPii.
- An SNMP community is a logical relationship between an SNMP agent and an SNMP manager.

Failure to set this properly on the local SE can result in a severe BCPii failure and you cannot start the application.

Power savings information

- Tivoli System Automation (ProcOps) allows its automation product to use one of 2 transport protocols: SNMP over an IP network
- BCPii transport in TSA is for TSA usage only
- z/OS BCPii can run in ANY address space and has no other product requirements.

What is z/OS BCPii vs. BCPii mentioned in TSA?

- Tivoli System Automation (ProcOps) allows its automation product to use one of 2 transport protocols: SNMP over an IP network
- BCPii protocol (internal transport)
- TSA’s BCPii implementation is similar but not a z/OS BCPii and requires TSA, Netview and Comm Server.
- BCPii transport in TSA is for TSA usage only.
- z/OS BCPii can run in ANY address space and has no other product requirements.