# Test Cases for Automatically create KNL specific information (PP-706)

1. Install PBS (with BASIL 1.7 SYSTEM Query changes). Run pbsnodes -av.

Perform the installation on a Cray system that does not support BASIL 1.7. (BASIL versions < 1.7 will be supported on such systems. Both non-KNL and KNL nodes may be present.)

The following log message should be displayed in the MoM logs, indicating that there is no BASIL 1.7 support on the system. (Refer to the 'External Interface Design' page for details.)

* This Cray system does not support the BASIL 1.7 protocol.

System Query processing should not happen. Consequently, none of the vnodes in the output should have vntype set to "cray\_compute\_knl".

Only the Inventory (BASIL 1.4) Query will be processed. All compute nodes (include KNL) will have vntype set to "cray\_compute".

2. Install PBS (with BASIL 1.7 SYSTEM Query changes). Run pbsnodes -av.

Perform the installation on a Cray system that supports BASIL 1.7. (BASIL versions < 1.7 will also be supported on such systems. Both non-KNL and KNL nodes may be present.)

The following log message should be displayed in the MoM logs, indicating that there is BASIL 1.7 support on the system. (Refer to the 'External Interface Design' page for details.)

* + - * This Cray system supports the BASIL 1.7 protocol.

System Query processing should proceed as expected. The KNL vnodes in the output should have vntype set to "cray\_compute\_knl".

There should only be 1 vnode per KNL node, regardless of the number of NUMA nodes/segments per KNL node.

The Inventory (BASIL 1.4) Query will also be processed. Only non-KNL compute nodes will have vntype set to "cray\_compute".

3. Run the System (BASIL 1.7) XML request on a Cray system supporting BASIL 1.7.

Prerequisite: PBS (with BASIL 1.7 SYSTEM Query code changes) must be installed on a Cray system that supports BASIL 1.7 (both non-KNL and KNL nodes may be present).

Verify that every KNL node (with role=batch and state=up) reported in the XML response is also present in the output of pbsnodes -av and identified by vntype=cray\_compute\_knl and PBScrayseg=0. Also, verify that the other attributes, namely, "arch", "host", "mem", "ncpus", "nppus", "PBScrayhost", "PBScraynid", "vnode" and "vps\_per\_ppu" are present. Though they should be present, PBScrayorder and PBScraylabel have been ommitted from the KNL vnode attribute list for the first iteration of this project; hence, they will not appear in the output of pbsnodes -av.

The following KNL node XML attributes: "numa\_cfg", "hbm\_size\_mb" and "hbm\_cache\_pct", should be non-empty. In the pbsnodes -av output, current\_aoe will have the value of numa\_cfg concatenated with the hbm\_cache\_pct value. hbmem (expressed in megabytes), in the pbsnodes -av output, will have the value of the XML attribute hbm\_size\_mb.

The vnode names should follow the naming convention: systemName\_nodeId#\_0, where systemName is the value of 'mpp\_host' (in the XML response) and nodeId# refers to each node in the Rangelist of nodes in the response.