ITRI OCP Cert Center Operation Update

Jan 28th, 2014

Agenda

ITRI OCP Certification Testing Center Operations

- Workflow process
- Results examples
- Lessons learnt

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- Results examples
- Lessons learnt

Table of Content

Submission Request

OCP Certification Request (Form: OCP-CI-0004)

Contact Information

Company Name	
Address	

Business contact			
Name		email address	
mobile		office	

Technical contact			
Name		email address	
mobile		office	

Logistic/administrative contact			
Name		email address	
mobile		office	

Submission info (Please select certification category)
☐ Server
☐ Storage

工業技術研究院
Industrial Technology
Research Institute

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14OCP-CI-0005: OCP Certification SUT Specification

（工程規格表單）

Specification

Item	De...
Model Name	for example: Windmill-EP FAB7
Physical Dimension	for example: Length: --; Width: --;
BIOS version	for example: EP_iD07
ME version	for example: 2.17
CPU	for example: Intel(R) Xeon(R) CPU E5-2660, 2.20GHz, L3 20MB

Inventory Information

	Item	Description	Volume	Check?
SUT1	GUID (unique)	for example: 00020003-0004-0005-0600-000700...		
	MAC address	for example: 1G LAN MAC: xx:xx:xx:xx:xx:xx, BMC MAC: xx:xx:xx:xx:xx:xx; 10G LAN MAC: xx:xx:xx:xx:xx:xx, BMC MAC: xx:xx:xx:xx:xx:xx;		
SUT2	GUID (unique)	for example: 00020003-0004-0005-0600-000700...		
	MAC address	for example: 1G LAN MAC: xx:xx:xx:xx:xx:xx,		

Information prepared and material provided to Lab:

Item	Description	Volume	Check? (Test Lab Use Only)
SUT	Sample Sizes	3	
Sensor ID (assignment accordingly)	Outlet Temp	N/A	
	Inlet Temp		
	PCH Temp		
	P0 Therm Margin		
	P1 Therm Margin		
	P0 DIMM Temp		
	P1 DIMM Temp		
	CPU0 Tjmax		

Email Notification

From: ☐ ITRI OCP Lab

To:

Cc: ☐ CCMA-ZGP31 (OCP Team)

Subject: 設備收受確認

您好，
工服單No.66-OCP-2013-005-A
本實驗室已於2013年12月27日17時收取，
比對確認貴公司提供之設備清單型號及數量無誤，
特此告知，將如期展開測試，如有任何問題敬請來信洽詢。
謝謝您！
OCP Lab ITRI

Jira Tracking

OCP C&I / OCP-76
66-OCP-2013-005-A Wiwynn Winterfell Formal Submission

| | Edit | Assign | Assign To Me | Comment | More Actions ▾ | Resolve Issue | Workflow ▾ |

35. ✅	JIRA35-(66-OCP-2013-005-A)-更新66-OCP-2013-005-A-summary.xlsx	📄	🧑 Closed	朱逸勤	⇕	⚙▾
36. ✅	JIRA36-(66-OCP-2013-005-A)-整合報表產出 OCP C&I Test Report File Name Rule: 66-OCP-2013-005-A.docx	📄	🧑 Closed	吳書瑋	⇕	⚙▾
37. ✅	JIRA37-(66-OCP-2013-005-A)-Progress Notification Email Stage 3: 完成所有測試	📄	🧑 Closed	吳書瑋	⇕	⚙▾
38. ✅	JIRA38-(66-OCP-2013-005-A)-實驗室管理者檢視報告	📄	🧑 Closed	李珊	⇕	⚙▾
39. ✅	JIRA39-(66-OCP-2013-005-A)-組長檢視報告	📄	🧑 Closed	王啓龍	⇕	⚙▾

- Workflow process
- Results examples (Wiwynn submission)
- Lessons learnt

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SUT1 Test Result

Test Case No.	Description	Result
TC-001-0001-001	1. Gathering CPU information by using lshw command. 2. Output CPU model and L1, L2, L3 cache size. 3. Criteria: CPU model should belong to Intel® Xeon® processor E5-2600 product family and L3 Cache should be larger than 20MB	Intel(R) Xeon(R) CPU E5-2660 v2 @ 2.20GHz CPU Internal L1 640 KB CPU Internal L2 2 MB CPU Internal L3 25 MB Intel(R) Xeon(R) CPU E5-2660 v2 @ 2.20GHz CPU Internal L1 640 KB CPU Internal L2 2 MB CPU Internal L3 25 MB
TC-001-0001-002	1. Gathering CPU information by using lscpu command. 2. Output the total number of CPU, the number of Thread per core, the number of Core per Socket, and the number of Socket. 3. Criteria: It should be 8-12 cores per CPU and 2 Threads per core.	CPU(s): 40 Thread(s) per core: 2 Core(s) per socket: 10 Socket(s): 2

TC-001-0006-001	1. Retrieving CPU, DIMM, chipset, inlet, outlet temperature via DCMI in-band access using dcmitool. 2. The motherboard has five thermal sensors: Two for CPU0 and CPU1	Outlet Temp: 25 degrees C Inlet Temp: 20 degrees C PCH Temp: 48 degrees C P0 DIMM Temp: 29 degrees C P1 DIMM Temp: 30 degrees C

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Open Compute Project Compliance & Interoperability Test Report

	temperatures, Two for CPU0 DIMM group and CPU1 DIMM group temperatures, one for PCH temperature, one for Inlet temperature, one for outlet temperature. 3. Criteria: These five temperatures should be able to be retrieved via DCMI in-band access.	CPU0 Temp: 31 degrees C CPU1 Temp: 32 degrees C

| TC-002-0006-002 | 1. Power reset the SUT using dcmitool through out-of-band access 20 times.
 2. Criteria: The SUT should be successfully powered reset 20 times by dcmitool out-of-band access. | 10.2.103.5 Chassis Power Control: Reset
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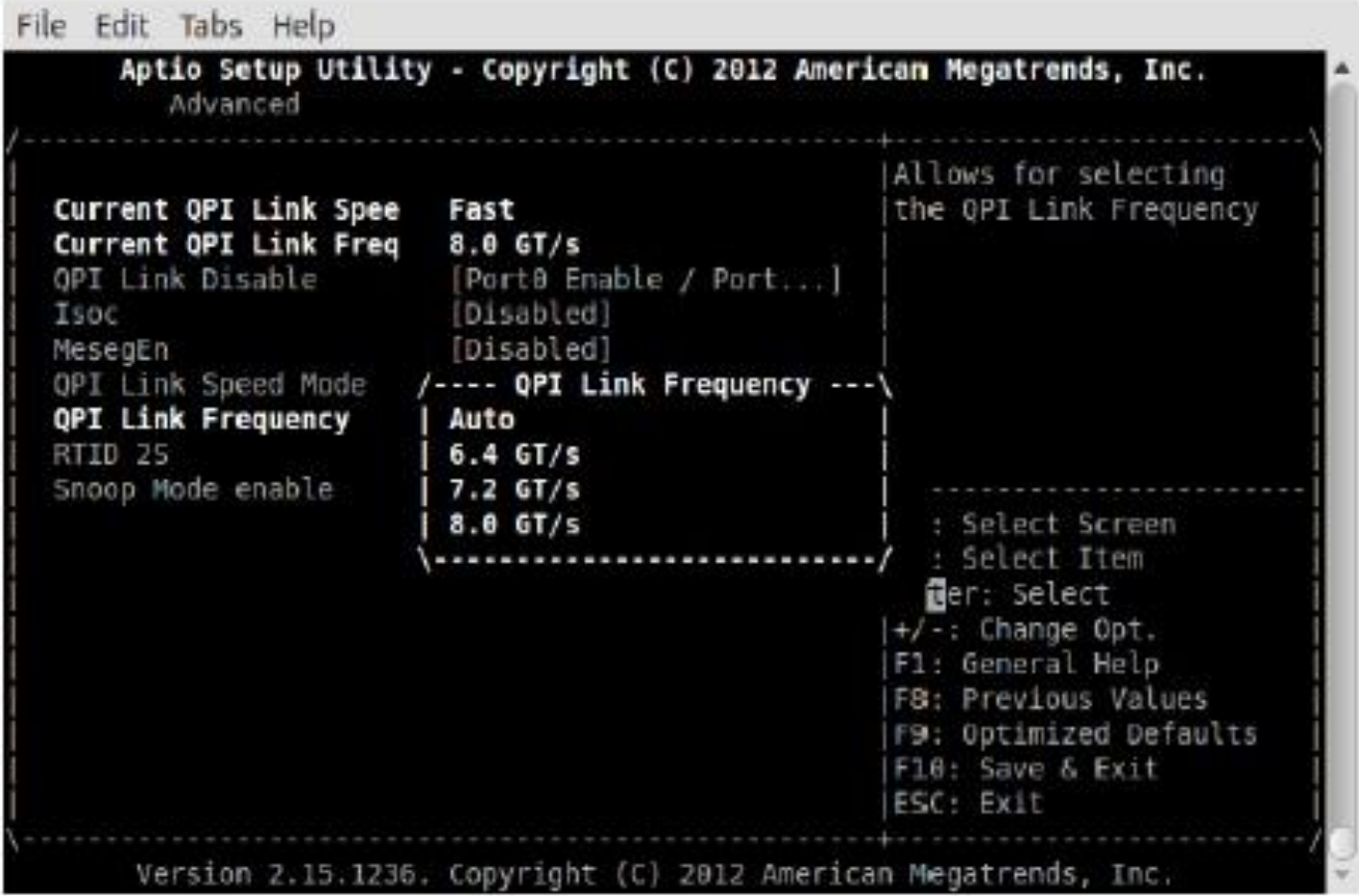|		
TC-002-0010-001	1. Retrieving inventory information via dcmitool. 2. Asset Tag can be set. 3. Retrieving inventory information which contains Device ID, System GUI,	Asset Tag: 66-OCP-2013-005-A-SUT1 System GUID: c6d65b07-535e-e311-7ba7-b2d71e3a3201 Get Management Controller Identifier String: DCMI0002C9B29A6C Device ID: 80

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Open Compute Project Compliance & Interoperability Test Report

	Firmware/Software Information, Management Controller ID. 4. Criteria: All information mentioned above should not be null.	Manufacturer Name: Intel Corporation Firmware Revision: 2.17

P. 40: BIOS

Figure Name	QPI speed
Figure	

P. 42: Power Restore

```
File  Edit  Tabs  Help

       Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
         Advanced

/-------------------------------------------------------+----------------------------\
| DCMI Support              [Enabled]           |Select the policy for      |
| Power Restore policy      [No Change]          |AC power-on behavior of    |
| Current Policy        :   Last State           |the server                 |
| Serial Over LAN           [Enabled]            |                           |
|                                                |                           |
| Device ID Data                                 |                           |
| Self Test Result   : /---- Power Restore policy ---\                       |
| Device ID          : |  Power always Off       |                           |
| Device Revision    : |  Restore power state    |                           |
| Firmware Revision  : |  Power always On        |  ------------------------ |
| IPMI Version       : |  No Change              |     Select Screen         |
| Manufacturer ID    : \---------------------------------/  Select Item      |
| Product ID         :                             Er: Select                |
|                                                |+/-: Change Opt.           |
| System GUID        :                           |F1: General Help           |
| c6d65b07-535e-e311-a77bb2d71e3a3201            |F8: Previous Values        |
|                                                |F9: Optimized Defaults     |
|                                                |F10: Save & Exit           |
|                                                |ESC: Exit                  |
\-------------------------------------------------------+----------------------------/

       Version 2.15.1236. Copyright (C) 2012 American Megatrends, Inc.
```

Figure

Report Statistics

- Page Count: 81

- Page 1: Cover Page
- Page 2: Certification Results Source
- Page 3-6: Test/Sample Description
- Page 7-39: Test Results (Text-based)
- Page 40-81: Appendix (screen shots)

Agenda

- **Workflow process**
- **Results examples**
- Lessons learnt

Information Collection

- SUT Spec: configurations for the three submissions MUST be identical
  - For example, if each machine uses different DIMM, it will be sent back

- PXE Boot: must have MAC address

Vendor Settings

- ## Sensor ID naming conventions
  - Each vendor is different, ITRI had to ask/confirm individually
  - Current process is liable to human errors

- ## BIOS default settings
  - Each vendor is different, ITRI had to ask/confirm individually
  - Current process is liable to human errors

```
root@winterfell:/usr/share/checkbox/jobs# dcmitool -H 10.2.104.5 -U USERID -P PASSWORD dcmi power reading

Instantaneous power reading:          79 Watts
Minimum Sampling period:              4 Seconds
Maximum Sampling period:              188 Seconds
Average power reading over sample period: 79 Watts
IPMI Timestamp:                       (null)
Sampling period:                      64737000 Milliseconds
Power reading state is:               activated
```

- **Power Draw**
  - DCMI tools have a bug, changed to IPMI to conduct the test
  - Vendor cannot provide the source code without permission
  - (planned) ITRI can maintain the source code, if available

2014/2/3

Logs Issues


```
ccma@winterfell:~$ dcmitool -H 10.2.103.5 -U USERID -P PASSWORD sel list
   1 | 12/12/2013 | 05:35:23 | OEM |0x5f |  | Asserted
   2 | 02/07/2106 | 06:28:15 | OEM |0x70 |  | Asserted
   3 | 01/01/2011 | 00:00:03 | System Firmware Error |0x2b | Unknown Error | Asserted
   4 | 01/01/2011 | 00:01:10 | System Firmware Error |0x2b | Unknown Error | Asserted
   5 | 01/01/2011 | 00:02:22 | Battery |0x45 | Low | Asserted
```

- **"System Firmware Error"**
  - Message lacks granularity
  - ITRI had to call and confirm this is the expected behavior (when battery is unplugged)
  - Suggest that vendor provide more granular information

Cert Script Issue

- ME Command for Remote Power Reset
  - (Today) assumes the ME is alive at all time even during reset
  - (Planned) script to ping until ME responds for 1.5 minutes before issuing an error

2014/2/3

ITRI OCP Lab 2014 H1 Timeline

Dec 27th, 2013
Cert Lab Operational

Q1, 2014
Server Cert v1.0 GA
- Uploaded to Launchpad
- Available for download

Q2, 2014
ITRI OCP Website Automation

Jan, 2014
OCP Summit: announcing certified machines

Q1/Q2, 2014
Storage Cert v1.0 beta

Q2/Q3, 2014
Storage Cert v1.0 GA

Mar 3rd/4th, 2014
ITRI Cert Lab Grand Opening Party
OCP Workshop + Product Demo

Finding ITRI OCP Cert Center

Full Name

- ITRI OCP Certification Testing Center
- 工研院 OCP 驗證中心

URL

- www.ocpcertificationcenter.org

Mascot

- AC - because we support Data Centers (DC)

Email address

- info@ocpcertificationcenter.org
- submission@ocpcertificationcenter.org

Q&A

Thank You

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