New Employee Orientation

Orientation for Reliability Dept.

B0Q200 / Hugo SF Tsai

2022/07/18

公司與部門

B0Q and B0Q200

公司常用網頁

- **EIP - https://eip.wiwynn.com/**
  - 出勤 / 請假 / 加班 / 教育訓練 / 新人手冊
- **PTS - https://pts.wistron.com/**
  - 專案文件 / Timesheet
- **PRD – http://prd.wistron.com/**
  - KPI Set / Maintain
- **PMCS - https://pmcs3.wistron.com/**
  - 借還帳 / 物料查詢

產品客戶別

amazon
aka Amber

facebook
aka Fiona

Microsoft
aka Monica

twitter

AMPERE.

ORACLE

Uber

habana

處級組成

- B0QA00: Automation (for Linux)
- B0Q100: Firmware Validation (BIOS/BMC)
- B0Q200: Reliability (for All Customers)
- B0Q300: Facebook (Storage)
- B0Q500: Facebook (Compute)
- B0Q600: Microsoft
- B0Q700: Channel
- B0Q800: Amazon

部門結構

Team Members	Env.	Trans.
Team Manager	1	
Project Leader	6	2
Engineer	9	2
Assistant Engineer	2	2

Project Leader | Engineer | Technician

B0Q200 Reliability Manager

TK Lee

Environment Test

amazon	Meta	Microsoft	wiwynn / UBER habana
Liam Ho	Fong Chen	Edward YL Huang	Sara Yu
TT Chen		Peter CB Wang	
Squall Yang	Peter Hu	Steven YJ Wu	
Michelle Wang	James Wu	Hugo SF Tsai	
	Jack CY Tsai		
Jack CH Chang (HALT)			
Yiheng Chung (Chamber Management, CMTBF, Regular Task)			
Rex Tsao			
Lola L Luo			

Transportation Test

amazon	Meta	Microsoft	wiwynn / UBER habana
Boffi Liu			
Robert ZS Kao			
Vincent GF Wang			
TBD			
Jim YU Lin			
Ian Zhang			

合作實驗室

- ATC / 暐誠 (七堵) - Environment / Shock & Vibration
- Chroma / 致茂 (桃園) - HALT
- Intertek / 全國公證 (內湖) - Environment
- IST / 宜特 (新竹) - Environment
- KDI / 金頓 (深坑) - Shock & Vibration

- 出差清單: https://forms.office.com/Pages/ResponsePage.aspx?id=KAZu2oP8r0yd0nMGHLqxZ9bTzd6QYnxLgU_fzic9VaxUOVQ2RjFNNDJYQ1M5OVczNlZKVlhGUEhOVy4u

常見部門與職位

- **AM (Account Manager) or Sales**
- **PM (Product Manager)**
  - PjM (Project Management)
- **R&D (Research & Design)**
  - EE (Electronic Engineering) / BIOS / BMC
  - ME (Mechanical Engineering) / Structure / Thermal
- **QT (Quality Testing) / QE (Quality Engineering)**
- **SIT (System Integration Test)**
- **MFG (Manufacturer)**

產品驗證階段

- **NPI (New Product Introduction)**
- **POC > EVT > DVT > PVT > MP > EOL**
  - Proof of Concept
  - **Engineering Validation Test *****
  - **Design Validation Test ****
  - **Production Validation Test ***
  - Mass Production
  - End of Life
- **2nd Source Regression / DoE (Design of Experiments)**

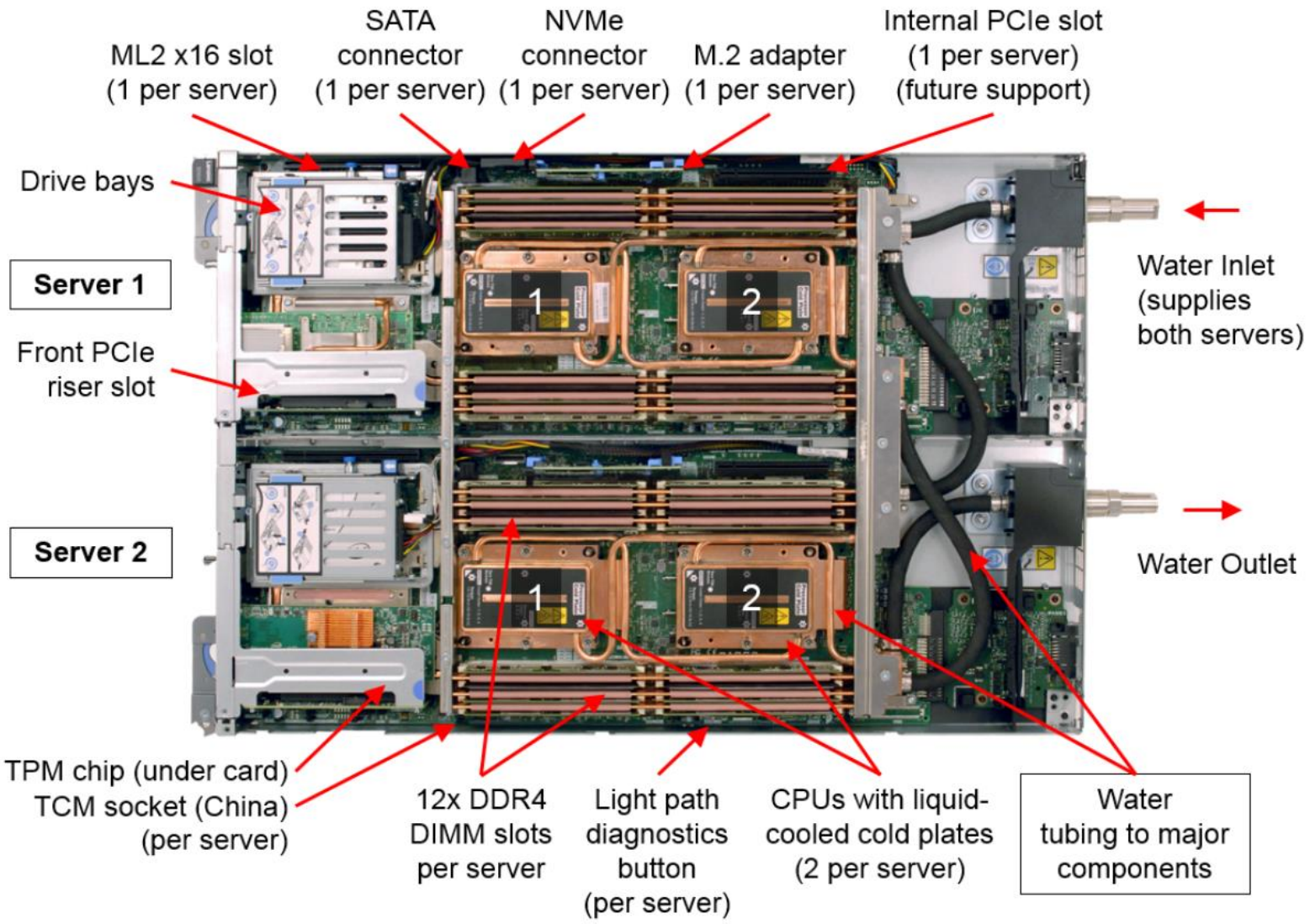
產品與可靠度

Product and Reliability

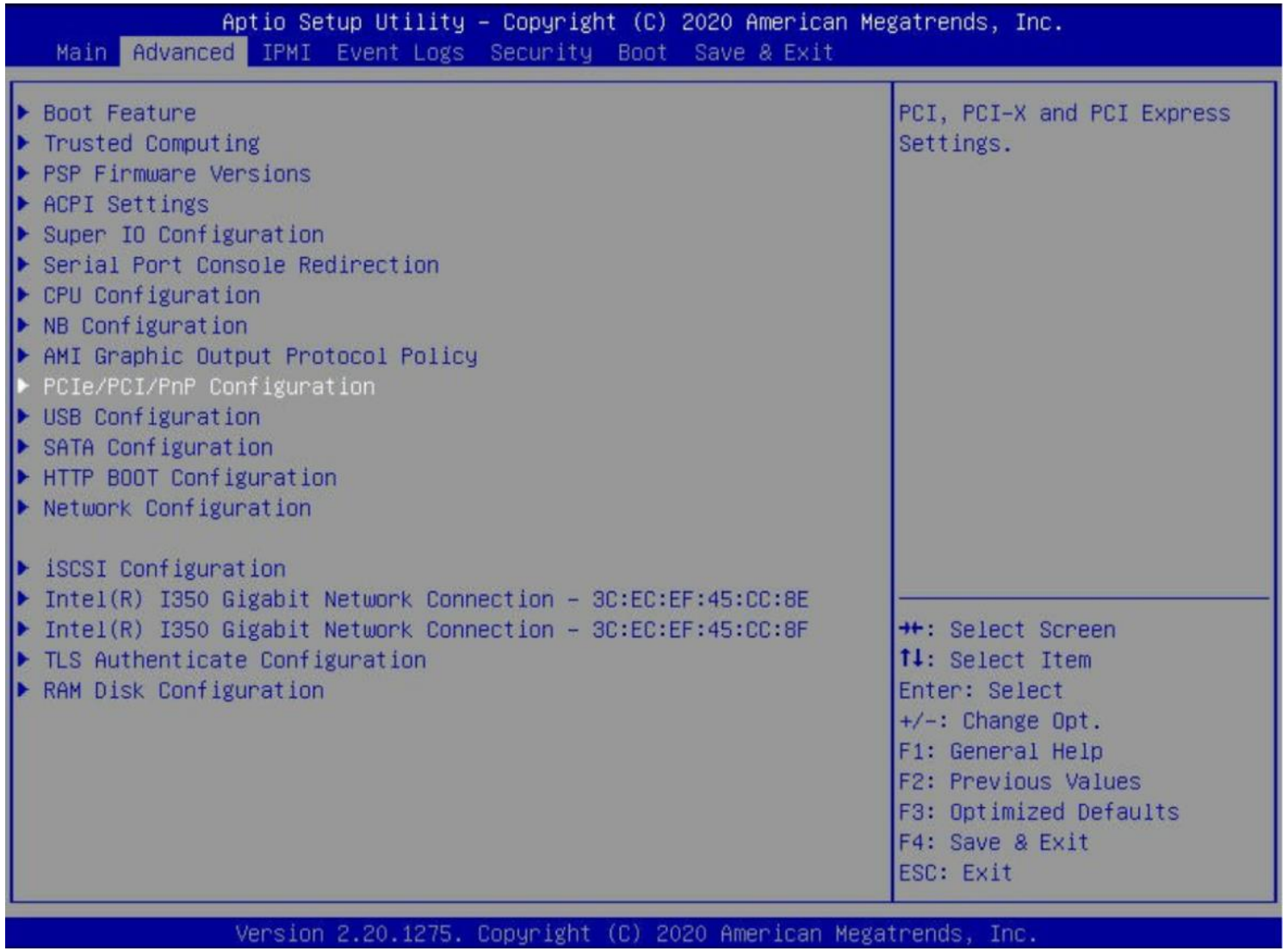
伺服器組成

- **硬體**
  - Motherboard, CPU, DIMM, Storage, Add-on Cards
  - PSU, Chassis, Heatsink, Fan, Air Duct
- **韌體**
  - BIOS (Basic Input/Output System)
  - BMC (Board Management Controller)
- **軟體**
  - OS (Operating System) - Windows, Linux
  - Stress Test Tools - Prime95, FIO, iPerf

Hardware



BIOS



BMC/IPMI

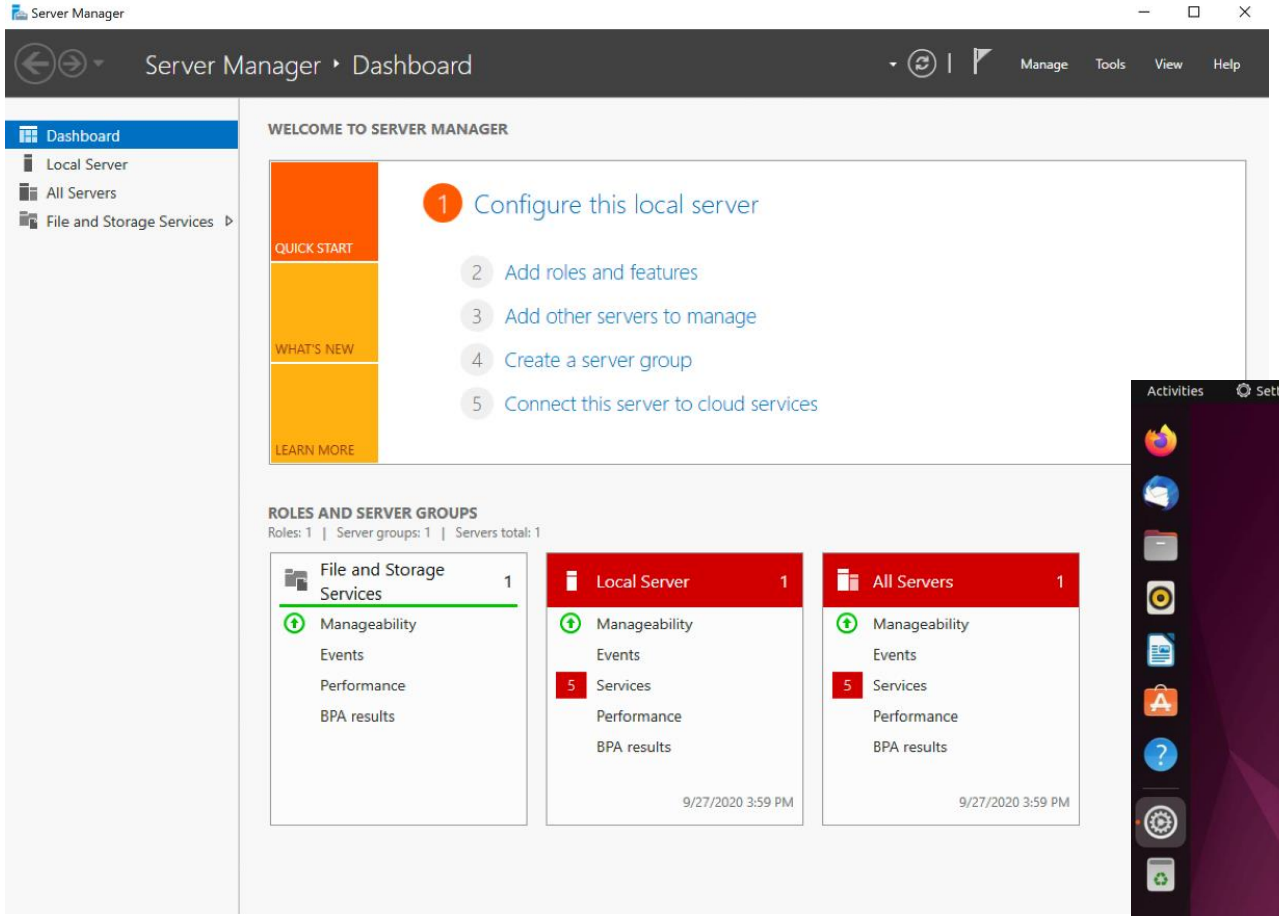
```
HSC0 Temp         | 41 degrees C      | ok
FPGA_S4_HSC_TMP   | 38 degrees C      | ok
FPGA_S4_DIE_TMP   | 58 degrees C      | ok
FPGA_S4_AMB_TMP   | 40 degrees C      | ok
FPGA_S4_NIC_TMP   | 74 degrees C      | ok
FPGA_S4_POWER     | 35 Watts          | ok
CPU_ERROR         | 0x00              | ok
P0VPP_ABC         | 2.56 Volts        | ok
P0VPP_DEF         | 2.56 Volts        | ok
P1VPP_GHJ         | 2.56 Volts        | ok
P1VPP_KLM         | 2.56 Volts        | ok
Temp_CPU0         | 48 degrees C      | ok
Temp_PCH          | 39 degrees C      | ok
Temp_Inlet        | 28 degrees C      | ok
Temp_Outlet       | 37 degrees C      | ok
Temp_CPU1         | 55 degrees C      | ok
Temp_DIMM_A       | 42 degrees C      | ok
Temp_DIMM_B       | 45 degrees C      | ok
Temp_DIMM_C       | 49 degrees C      | ok
Temp_DIMM_D       | 38 degrees C      | ok
Temp_DIMM_E       | 37 degrees C      | ok
Temp_DIMM_F       | 37 degrees C      | ok
P3V3              | 3.37 Volts        | ok
P5V               | 5.08 Volts        | ok
BMC Health        | 0x00              | ok
Fan_0             | 7326 RPM          | ok
Fan_1             | 7437 RPM          | ok
Fan_2             | 7437 RPM          | ok
Fan_3             | 7437 RPM          | ok
Fan_4             | 7548 RPM          | ok
Fan_5             | 7437 RPM          | ok
CPU0_VccInPIN     | 35 Watts          | ok
CPU1_VccInPIN     | 32.50 Watts       | ok
CPU0_VccInPOUT    | 32.50 Watts       | ok
CPU1_VccInPOUT    | 32.50 Watts       | ok
```

Sensor Reading

SEL (System Event Log)

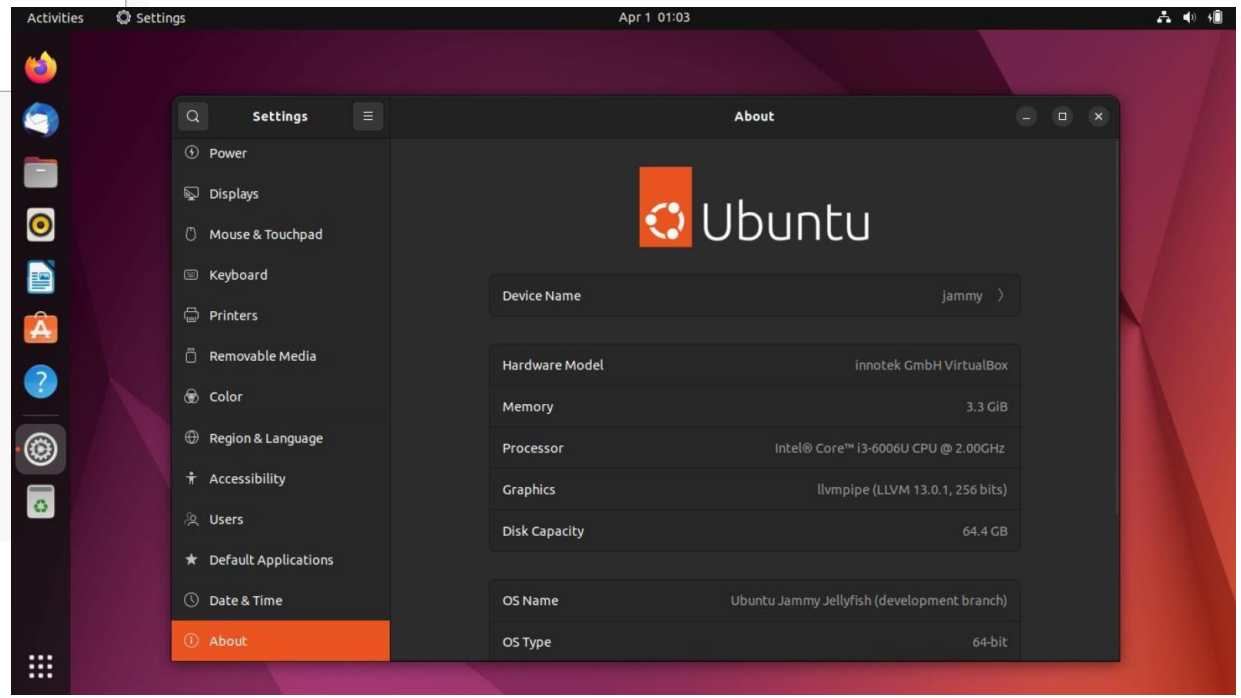
```
134 | 11/03/2009 | 14:55:15 | Voltage #0x6b | Lower Critical going low
135 | 11/03/2009 | 14:55:19 | FRU Hot Swap #0x02 | Transition to M4 | Asserted
136 | 11/03/2009 | 14:55:20 | FRU Hot Swap #0x03 | Transition to M4 | Asserted
137 | 11/03/2009 | 14:55:21 | FRU Hot Swap #0x01 | Transition to M4 | Asserted
138 | 11/03/2009 | 14:55:29 | Version Change #0x51 | Firmware or software change detected | Asserted
139 | 11/03/2009 | 14:55:33 | Reset #0x43 | State Asserted
13a | 11/03/2009 | 15:08:27 | System ACPI Power State #0x4e | S0/G0: working | Asserted
13b | 11/03/2009 | 15:56:59 | Reset #0x43 | State Asserted
13c | 11/03/2009 | 15:56:59 | Reset #0x43 | State Asserted
13d | 11/03/2009 | 15:57:33 | Reset #0x43 | State Asserted
13e | 11/03/2009 | 15:59:00 | Reset #0x43 | State Asserted
13f | 11/03/2009 | 16:18:22 | Reset #0x43 | State Asserted
140 | 11/03/2009 | 16:19:16 | System ACPI Power State #0x4e | S0/G0: working | Asserted
141 | 11/03/2009 | 16:22:57 | Reset #0x43 | State Asserted
142 | 11/03/2009 | 16:22:57 | Reset #0x43 | State Asserted
143 | 11/03/2009 | 16:23:58 | System ACPI Power State #0x4e | S0/G0: working | Asserted
144 | 11/03/2009 | 16:26:13 | Reset #0x43 | State Asserted
145 | 11/03/2009 | 16:26:14 | Reset #0x43 | State Asserted
146 | 11/03/2009 | 16:26:33 | Reset #0x43 | State Asserted
147 | 11/03/2009 | 16:27:45 | Reset #0x43 | State Asserted
148 | 11/03/2009 | 16:29:26 | System ACPI Power State #0x4e | S0/G0: working | Asserted
149 | 11/03/2009 | 20:56:15 | IPMB-0 Status #0x53 | IPMB-A enabled, IPMB-B disabled | Asserted
14a | 11/03/2009 | 20:56:26 | IPMB-0 Status #0x53 | IPMB-A enabled, IPMP-B enabled | Asserted
```

OS (Operating System)



Windows - Server 2019

Linux - Ubuntu



Environment Test Cases

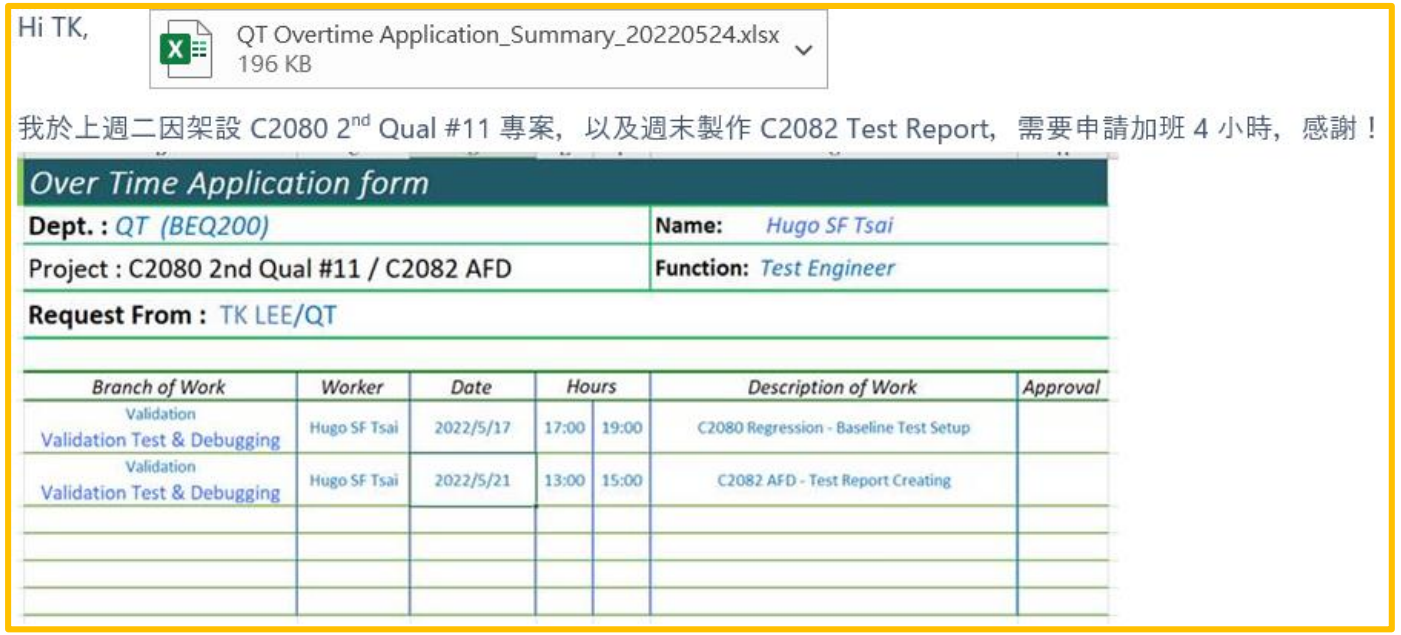
- BAT (Baseline Acceptance Test)
- MTBF (Mean Time Between Failure)
- CMTBF (Calculated MTBF)
- RDT / DMTBF (Demonstrated MTBF)
- HALT (High Accelerated Life Test)
- HTHH (High Temperature / High Humidity)
- Four Corner Test
- AC Cycling Test / DC Cycling Test

其他資訊
Other Information

申請加班

Download Link: https://github.com/Monkieff/NEOdocuments

- **1. 填好加班申請 Excel**
- **2. 發 mail 給 TK 告知需要申請加班**
  - 附上填好的 Excel 和內容表格截圖
  - 新增一個「同意/拒絕」按鈕
- **3. 等 TK 同意後，上 EIP 申請加班**



Hi TK,

QT Overtime Application_Summary_20220524.xlsx
196 KB

我於上週二因架設 C2080 2nd Qual #11 專案，以及週末製作 C2082 Test Report，需要申請加班 4 小時，感謝！

Over Time Application form

Dept. : *QT (BEQ200)*	**Name:** *Hugo SF Tsai*
Project : C2080 2nd Qual #11 / C2082 AFD	**Function:** *Test Engineer*
Request From : TK LEE/QT	

Branch of Work	*Worker*	*Date*	*Hours*		*Description of Work*	*Approval*
Validation Validation Test & Debugging	Hugo SF Tsai	2022/5/17	17:00	19:00	C2080 Regression - Baseline Test Setup	
Validation Validation Test & Debugging	Hugo SF Tsai	2022/5/21	13:00	15:00	C2082 AFD - Test Report Creating	

其他參考文件

- **Setup Guide**
  - C2080 BAT and RDT Setup Guide
  - C2030 Cold and Hot Test Setup Guide (for IST)
  - F2010 Thermal Cycling Test Setup Guide (for IST)
  - S2260 Cold and Hot Test Setup Guide (for IST)

- **Project Document**
  - C2195 Reliability Validation Test Plan
  - C2195 EV2 Cross Table
  - C2195 EV2 Validation Waterflow
  - C2195 EV2 FW Table

Download Link: https://github.com/Monkieff/NEOdocuments

推薦資訊

- **鳥哥 (Linux 介紹與教學)**
  - https://linux.vbird.org/
- **工作熊 (科技業職稱和專有術語解釋)**
  - https://www.researchmfg.com/about/
- **Benjr (Linux Test Tools 介紹與用法)**
  - https://benjr.tw/
- **SS64 (Linux/CMD/Powershell 指令用法整理)**
  - https://ss64.com/
- **CMD 初學者之卷 (Windows CMD 介紹與教學)**
  - https://lnpcd.blogspot.com/2012/09/00.html
- **批次檔精要學習手冊 (Windows CMD 介紹與教學)**
  - https://peterju.gitbooks.io/cmddoc/content/chapter1.html

Thanks!