**OCP Server Committee, 4/9/14**

**Attendees (who self-identified in Fuze) (~~regular attendee, not present~~):**

|  |  |  |  |
| --- | --- | --- | --- |
| ~~Bill Carter (Intel)~~ | Bob Ogrey (AMD) | ~~Chris Huff (Rackspace)~~ | Chris Petersen (Facebook) |
| David Chlaupsky | Erwin Centeno (Emulex) | ~~Frank Helms (Samsung)~~ | Fred Worley (Samsung) |
| Harry Li (Facebook) | ~~Jayaprakash~~ | Jean-Marie Verdun | Jia |
| ~~Latsavongsakda S.~~ | Mark Shaw (Microsoft) | Martin Goldstein (Microsoft) | Oscar Ham |
| ~~Somu Kovvuri (Rackspace)~~ | Son VoBa (Microsoft) | SuiLun Lam (NEC) |  |
|  |  |  |  |

**Agenda:**

* See the new mailing list? Opencompute-server!
* Charter Update/Feedback
* Mezzanine specification update
* OCS Mezzanine modification proposal – initial feedback
* Micro-server specification update
* Micro-server base-board specifications. Which way should we go? OpenRack or OCS?

**Action Items:**

1. AI (All): Subscribe to [opencompute-server@lists.opencompute.org](mailto:opencompute-server@lists.opencompute.org) in order to continue to receive server working group email
2. AI (All): Send email to Mark Shaw if you are interested in participating in a joint Server / System Management meetup event to discuss BMC feature set support for multi-node servers during the Open BigCloud Symposium and OCP Workshop 2014 on 7-8 May, 2014 at UTSA in San Antonio, TX
3. AI (Mark Shaw): Send the Charter Update to the mailing list in a form acceptable to the list server
4. AI (Harry Li): Drive mezzanine spec to closure on v1.0
5. AI (Mark Shaw): Follow up with Bill Carter about Intel’s willingness to support release of the baseboard schematics to OCP

**Meeting Summary:**

* New mailing list
  + Opencompute-server mailing list (replacing mobo)
    - opencompute-server@lists.opencompute.org
  + People currently on the opencompute-mobo list need to subscribe to the new list
* Charter update
  + Mark sent the updated Charter document to the mailing list as a Word document, but apparently the list server does not support distributing Word documents.
  + Mark will post a version of the document and send a link to the reflector
* Mezzanine specification
  + Harry Li will drive closer of v1.0 of Mezzanine spec
* Mezzanine modification proposal
  + Email discussion of RMII support in progress
  + No update this week due to vacation by key participants
* Microserver specification
  + Version 0.7 has been reviewed by the call attendees that plan to review it
  + Bob Ogray is working on an update that will be version 0.75 or 0.8
  + Open issues:
    - I2C addressing
    - Pin assignment table portion of the spec
* Seattle microsever card specification
  + Mark has received a microserver card specification for the AMD Seattle processor
    - Does not include processor specs; just a system hardware specification
    - Those who need Seattle processor specs please approach AMD directly for an NDA discussion
  + AMD approves releasing the microserver card specification for review by the working group
    - With the knowledge that the specification is not complete
    - But with the expectation that review will spark discussion on the open issues
* Microserver baseboard specification
  + Discussion of the need for a common baseboard to enable testing of microserver cards from multiple vendors.
  + Discussion that ODMs will produce products based on volume expectations
  + Discussed the potential for the OCP community to make a group order for ATX boards and work with a system integrator to integrate those boards into ATX chassis solutions
    - Allows the various OCP partners to jointly create enough volume for a board
  + Discussed that in addition to a board implementation BIOS and firmware will need to be available
    - There is a need to define a common set of features for the BMC code for multi-node server architectures
    - Proposal to discuss at the next OCP meeting in San Antonio in May (see below)
  + Facebook (Harry Li) is willing to release the baseboard specification
    - However, Intel collaborated on the spec and the spec requires their review and approval to release to the open source community as well
    - Mark to follow up with Intel to determine if Intel would support release of the OCP microserver baseboard schematics to OCP
* Proposal for “meetup” at San Antonio OCP to discuss systems hardware and management
  + Identified need in today’s meeting for a discussion involving both the server WG and the management WG on defining the right feature set for the BMC on a multi-node server
  + Proposed hosting a longer meeting or breakout session at the Open BigCloud Symposium and OCP Workshop 2014 on 7-8 May, 2014 at UTSA in San Antonio, TX.
  + The OCP process supports “meetups” for off cycle or self-hosted events by working groups
  + Need to have the community provide a list of interested attendees to plan the meetup
    - All interested parties please communicate interest to Mark Shaw

**Meeting notes:**

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* Charter update
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* Mezzanine specification
  + In general for specs, would like to see specs get cranked out
  + Teams have been working quite a bit on this
  + Prefer to see us just get the specifications done and closed out if they are ready so we don’t have them linger
  + First mezz specification made it to 0.5 and it was never officially ratified as a specification, although it is the defacto standard for the blades today
  + Don't want to settle for a defacto standard
  + Harry: will take the action to update the specification
  + AI (Harry Li): Drive mezzanine spec to closure on v1.0
* Mezz modification proposal
  + Discussing RMII support
  + Several people out this week, limiting forward progress
* Microserver (uServer) spec
  + Bob Ogray:
    - No updates as yet
    - Need to clean up some open issues
      * I2C addressing
      * Pin assignment table portion of the spec
  + Next version will be 0.8 or 0.75
  + Q: for the Seattle uServer card [is the spec ready for review]?
    - Mark: just received version 1.0, but haven’t posted yet
    - Bob: can go ahead and post it – will spark discussion
    - I2C interface and how it fits with board implementation will need to be rev’ed
    - Can spark discussion around how the system management interface should work
    - Not a lot of information – Bob just references the management spec
    - Need to figure out when the spec becomes final and how it applies to multi-node
    - [Chris:] if we can lock the uServer card spec w.r.t. HW features required, then we can figure out what we need running on top of i2C
    - Bob agrees with this approach
    - Protocol and features of protocol need additional discussion
    - Might be worthwhile to get both groups in the same room and talk about the hardware implementation as well as the protocol
  + Q: anything else that will deviate from the general uServer spec?
    - No
    - Some things that will change
    - Should probably have been a 0.1 not a 1.0, but good to start the group review to move towards a 2.0 spec [that is more solid]
  + Q: are there specs for the Seattle processor?
    - Available under NDA with AMD
    - There are no processor specs, just a hardware spec
    - Anyone that needs the processor spec should seek an NDA directly with AMD
  + Q: is anyone planning to provide feedback on the 0.7 spec revision?
    - [no responses]
    - some statements that the speaker has already reviewed the spec and provided feedback
* uServer baseboard spec
  + Have a spec, but how do we use it?
  + How do we put it into a system?
  + Have the Group Hug baseboard
  + Both Quanta and Wiwynn have a carrier card
    - Wiwynn guys have a carrier card they use in OpenVault
    - Take the same baseboard and give it 12V if you want a test board for a single uServer
    - Quanta’s is probably similar, or they may have the ATX version mentioned in Jean-Marie’s document
    - Jean-Marie: they did not say they would release [the ATX card] as a product – expected to be used for debugging or for FB internal usage
  + Jean-Marie:
    - Would be good to get Universities, research labs looking at the technology
    - Engineers working on uServer boards need a carrier board that can be used independent of the uServers
    - Mark will talk to the Wiwynn guys about this
    - Quanta also interested, but looking for volumes
  + Q: are the Wiwynn and Quanta x16? Which options do they support?
    - It is the default, x16 for both
    - Per the spec, default is vanilla PCIe
    - Boils down to a business issue – [expect partners like Wiwynn and Quanta to do something if there is a business opportunity and not if not – can’t solve that in this forum]
  + Q for Harry: do you envision releasing your baseboard spec?
    - Harry: see this like 2 things
      * One is enable kit, test kit
      * For development
      * For that part, think that people are on track with Quanta
      * They are going to build based on volume
      * Only for test and debug use, so they don’t have a plan to productize
      * If you can show a use case they may get interested (or not) to produce test kits
      * Q: if the schematic for the test kit is released, if so is that good enough for people to do on their own?
      * Mark: should have a simple spec that goes along with it
      * Harry: agree, but is that good for the committee? Can fab your own PDB
      * Can do small quantity build, standardize on test build
      * But it would still allow everyone to test the standard interface
      * Mark: believe that would go a long way to get people going with test kits
      * Harry: for DNI for OCP, going ahead to prepare for the microserver card independent of which vendor provides
        + Mark: good suggestion – figure out what from Quanta would be the minimum order quantity for the ATX board, and talk to a system integrator about plopping them into an standard ATX chassis
        + [other] people are savvy, can get them into whatever form factor they want
        + But good to get the schematics out there
        + Harry: will release them
        + Mark: that is good – releasing them creates a reference design
        + Wiwynn did the OpenVault – not an ATX board, but shares much of the same functionality
  + RE baseboard question
    - Are there Intel people on the call?
    - Harry requests that Mark relate information to Bill
    - Baseboard developed with Intel
    - From FB side, no problem contributing the whole design
    - But also need Intel to approve this
    - Need to validate that Intel is also willing to contribute
    - Need Bill Potter (?) to drive approval at Intel
    - AI (Mark Shaw): Follow up with Bill Carter about Intel’s willingness to support release of the baseboard schematics to OCP
  + Comment: if we order these boards from Quanta they won’t come with BIOS or firmware, right?
    - That soft code is not open source
    - Other piece is Intel network switch – firmware there is also not open source
    - BMC code is an issue – that is not common, there is not a common set of features
      * Implementation is different
      * We can figure out who writes the code, but we need common features for multi-node stuff
      * As a customer, want one card to be managed the same as the others
      * Spec is still not quite clear yet
      * There is a proposal that is being discussed now, what they built the BMC firmware around
      * Not there yet, but we shouldn’t give up
      * Workshop at San Antonio in May, could move forward on his at/after that
      * Mark: yes, but believe the San Antonio meeting just has 1 hour breakouts – not enough time to make significant progress
    - Suggestion that we schedule a ½ day or full day to discuss this at San Antonio meeting
      * General support for this idea
    - Mark talked to Amber about the process for having longer meetings
      * Process allows for “meetups”
      * Mark is trying to get a 4 hour block for the week of Computex (first week of June – 4th/5th, somewhere in there)
      * Could do the same thing at San Antonio
      * For a spec like this, San Antonio is better
* Q: should we hammer out changes to the uServer at that time too?
  + Initial thought to get HW and HW Management folks in the same room
  + Try to get all the system stuff
  + We never meet
  + The last one was really good – lots of good conversation in the management group, but we never get all of us in the same room
  + Need to get a list of names of people that are interested
  + [Bob?] will confirm that Hari can make it from their end – he has been doing the multi-node stuff
  + Mark: Amber likes to capture planned attendees, [can help with logistics]s