#LetsTalkOpenly

A series of 3 webinars determining the opportunity for African businesses around Open Computing
Our speakers

Steve Helvie is currently the VP of Channel for the Open Compute Project (OCP). In this role he helps to educate organisations on the benefits of open hardware designs and the value of “community-driven” engineering for the data centre. He works closely with Solution Providers and Manufacturers to help organisations adopt Open Compute across all regions and segments of the market.

Dr Gilbert Saggia is a seasoned business executive in the East African market, having led several Global Fortune 100 Tech multinationals to significant growth in the region. Dr. Saggia focuses on growing local executive and management talent, top and medium sized enterprises and ensuring overall eco-system growth that interweaves global and local scenes, including working with Government on strategic public assets.

Daniel founded Atlancis with a vision to bridge the technology gap in Africa by combining global expertise with local context. Atlancis believes Technology adoption in Africa can only be driven by Africa. This has entailed developing tech-enabled vertical and horizontal solutions built to world class standards but with an informed understanding of the problems faced by businesses in Africa.
Agenda

• Impact of OCP on Africa
• Open Source movement in Africa
• Introduction to OCP hardware
  • Servers and storage
  • Networks
  • Optimised Data Centers
• Questions
Impact of OCP in Africa

Dr Gilbert Saggia
Open Source movement in Africa

Dan Njuguna
We apply innovation that’s been honed in the world’s largest data centres to deliver fundamental improvements in performance, administration and efficiency at scale.

It’s our belief that a software-centric approach is the future for the data centre. These values run through our corporate ideology determining our alliances and objectives.
Voice of the customer

Development
• Limited resource pool, high cost
• Low local talent investment

Training
• Expensive and hard to consume
• Vendor lock-in

TCO
• High CAPEX and OPEX
• Lack of budgetary control

Licensing
• Bill shock
• Complex models

Vendor lock-in
• Over-investing in legacy systems
• Low power of negotiation

Lack of interoperability
• Unable to provide services to the business
• Project failures
Atlancis’ OCP decision

- Shorter lead times
- Higher interoperability
- Local design
- Lower failure rates

- Bespoke service design
- Lower TCO passed on to customers
- Innovation and operational stability
- Improved, reliability support and resolution times
- Direct and local customer support

- Little to no licensing fees
- No vendor lock-in
- Increased negotiating power
- Global and local development talent pool

- Crowd-sourcing
- Quicker time to market
- Local talent development
- Reduced cost of content production and distribution
Use cases

• 10 projects
• $2m investment
• 50 staff skilled in
  • Open platforms
  • Open architecture
  • Migration from vanity brand to OCP
  • Open standards membership
  • Open source
  • Application development
Atlancis OCP tour
Africa is Open

Kenyan cloud services company, Atlancis Technologies, becomes the first to adopt OCP in Africa

Open Compute Project (OCP) hails Kenyan company as global innovator in developing state-of-the-art cloud infrastructure at...
OCP benefits

- 50% + CAPEX reduction
- Small deployments and scale up
- Halved the EADC space
- Payback period of 10 months

- 95% reduction in licensing fees
- 80% reduction in implementation costs
- Reduced timelines to deliver by 75%

- Support costs reduced by 58%
- Localised support increases NPS by 1 point
- 40% reduction in OPEX
- 60% less system management time

- Lower CAPEX and OPEX
- Crowd-sourced resource pool
- Natively scalable architecture
- Market disruptive inputs
Introduction to OCP Hardware

Steve Helvie
Creative Destruction - the process of breaking older conventions to accelerate movement to the future, without cutting off from the past.

*Joseph Shumpeter (Economist)*
<table>
<thead>
<tr>
<th><strong>OEM</strong></th>
<th><strong>ODM/White Box</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Original Equipment Manufacturer)</td>
<td>(Original Design Manufacturer or White Box)</td>
</tr>
<tr>
<td>Buys platform components from the manufacturer</td>
<td>Manufactures platform components</td>
</tr>
<tr>
<td>Resells those components under their own brand name</td>
<td>Provide full product development services</td>
</tr>
<tr>
<td>Create products that can serve the broadest possible market</td>
<td>Can manufacture specialised solutions</td>
</tr>
<tr>
<td>Support and managed services</td>
<td>Support centred on product</td>
</tr>
</tbody>
</table>

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ODM/White Box + Open Source
The old innovation pipeline

TECHNOLOGY

OEMs

USERS
“Creative Destruction”

TECHNOLOGY

OPEN Compute Project

USERS
Facebook to Build Its Own Data Centers

Facebook has decided to begin building its own data centers, and may announce its first facility as soon as tomorrow. The fast-growing social network has previously leased server space from wholesale data center providers.

Rich Miller | Jan 20, 2010
What can we remove from the system?

Can we raise operating temperatures and have the servers survive?

Can we increase relative humidity operational ranges to make the system much more efficient?

Do we need a centralized power supplies?
Open Compute Project
A collaborative community focused on redesigning hardware technology to efficiently support the growing demands on compute infrastructure.
150+ companies
189 contributions
6K engineers

150+ OCP Accepted™ & OCP Inspired™ Products

OCP Ready™ Facilities

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Our Projects

Networking  
Server  
Storage  
Rack & Power  
Advanced Cooling

Data Center  
Telco  
HW Mgmt  
Open System Firmware  
HPC  
Security

Modular DC  
openEDGE

https://www.opencompute.org/projects

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Efficiency
Scale
Impact
Openness

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Server bezels....gratuitous differentiation
Tool less OCP vanity free open source cubby servers

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Open Rack Unit Innovations
Server Fans “Cube Law”

½ the speed
7/8th energy reduction
“Creative Destruction” of Server Efficiency

https://www.opencompute.org/events/past-summits

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OCP advantage

- **Unracking Server Node**
  - Traditional: 4:45
  - OCP: 4:14
  - 40% reduction on average
- **Racking Server Node**
  - Traditional: 3:48
  - OCP: 2:33
  - 1 Person on average
- **Remove FRU**
  - Traditional: 6:48
  - OCP: 3:00
  - Less tools (rail kit)
  - tools: screwdriver, screw and proprietary tool
- **Install FRU**
  - Traditional: 7:39
  - OCP: 3:59

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OCP revenue expected to top $11B in 2023*

EMEA sees growth due to telco and circular IT

Co-processors emerging category

Need DC building changes – more dense racks

* Does not include OCP board member companies

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## Server Shipments and Market Share
### Q4 2019

<table>
<thead>
<tr>
<th>Company</th>
<th>4Q19 Unit Shipments</th>
<th>4Q19 Market Share</th>
<th>4Q18 Unit Shipments</th>
<th>4Q18 Market Share</th>
<th>4Q19/4Q18 Unit Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dell Technologies</td>
<td>549,488</td>
<td>16.1%</td>
<td>580,579</td>
<td>19.4%</td>
<td>-5.4%</td>
</tr>
<tr>
<td>2. HPE/New H3C Group*</td>
<td>507,228</td>
<td>14.9%</td>
<td>484,668</td>
<td>16.2%</td>
<td>4.7%</td>
</tr>
<tr>
<td>3. Inspur/Inspur Power Systems*</td>
<td>270,567</td>
<td>8.0%</td>
<td>247,600</td>
<td>8.3%</td>
<td>9.3%</td>
</tr>
<tr>
<td>T4. Lenovo*</td>
<td>233,896</td>
<td>6.9%</td>
<td>190,721</td>
<td>6.4%</td>
<td>22.6%</td>
</tr>
<tr>
<td>T4. Huawei*</td>
<td>216,734</td>
<td>6.4%</td>
<td>211,618</td>
<td>7.1%</td>
<td>2.4%</td>
</tr>
<tr>
<td>ODM Direct</td>
<td>1,054,743</td>
<td>31.0%</td>
<td>689,394</td>
<td>23.1%</td>
<td>53.0%</td>
</tr>
</tbody>
</table>

Rest of Market: 570,667 (16.8%) 582,070 (19.5%) -2.0%

**Total:** 3,403,323 (100%) 2,986,651 (100%) 14.0%

Source: IDC Worldwide Quarterly Server Tracker, March 12, 2020
Traditional Delivery Model

ODM → Brand Named Vendor (OEM) → Traditional customers such as banks, telco’s, public sector

→ Specialised customers such as Cloud Service Providers (CSP’s)
OCP Delivery Model

ODM

Those who can procure, design, configure and maintain/support OCP hardware by themselves

Those who need help to procure, design, configure or maintain/support OCP hardware

CSP’s
Telco’s
Public Sector
E-Commerce
Manufacturing
Fintech
SaaS

#LetsTalkOpenly
“Creative Destruction” in Data Centres across Africa
Questions?