

Humanware Advancing Research in the Cloud — HARC



CASC Spring meeting

Presented by Craig A. Stewart (stewart@iu.edu)

Executive Director, Indiana University Pervasive Technology Institute

ORCID ID 0000-0003-2423-9019

Reference and license info

- Please cite as: Stewart, C.A. . 2019. Humanware advancing research in the cloud – HARC. Presented at CASC spring meeting, 20 March 2019, Alexandria, VA.
<http://hdl.handle.net/2022/24428>
- Copyright Trustees of Indiana University
- Released under a CC by 4.0 license (details at <https://creativecommons.org/licenses/by/4.0/legalcode.txt>). You may reuse and remix the contents of this talk with attribution

The key points of HARC

- Goals:
 - Demonstrate the importance of „humanware“ in adoption of new technology in general and cloud technology in particular
 - Calculate ROI for a diverse set of workflows comparing „whatever is being used now“ with cloud-based workflows
 - Workflows are expected to be run on MS Azure Other cloud choices are also being used in addition to Azure.
 - Publish „domain“ papers (that were underway anyway) with some amount of calculation done on MS Azure
- Process
 - We put out a call for existing postdoctoral fellows to apply to become Cloud Research Software Engineers.
 - We picked a first batch of 8 people with diverse expertise. They get a \$2K a month honorarium for a period of 6 months.
 - Another call is expected this summer sometime

Why?

- Microsoft feels that Azure is not getting either the respect or the amount of adoption in the US research community that it merits.
- We (IU) have been pushing the „humanware“ concept for 20+ years. Applying this concept to MS Azure is a natural fit for us.
 - Consistent with understanding that technology adoption decisions are driven primarily by perceived value of adoption and perceived difficulty of adoption.
 - What we are doing is also informed by what Campus Champions and CaRCC are doing!
- The incentives for the CRSEs are good enough that we think we are going to get really good data on ROI on „cloud vs. traditional“ for specific workflows
- Similar in some ways, dissimilar in others, to the Internet2 E-CAS project that Amy Apon described earlier. I view the two projects as complimentary.

Did we sell our souls?

- We're pretty sure we did not. We think we didn't even lease them out.
- Microsoft has given IU a contract to do this.
- We now have the money and *we're* running the show (the wishes of the occasional member of the Microsoft sales organization notwithstanding).
- We're doing assessment more than anything. We'll do rational assessment, and we'll not put up with anyone in advertising, anywhere, spinning misleading marketing tales out of our assessment activities.
- Our independence in this project is key to what MS wants: the raw materials to demonstrate that MS Azure merits real respect from the academic research community.

How can you or your colleagues learn more and be involved?

- More info at humanware.iu.edu
- We have a proposal for a workshop on humanware and cloud ROI pending with PEARC19. If that proposal is accepted, we'll put out a general call for anyone to contribute papers and talks on this topic
- There will be additional rounds of invitations for people to apply to be CRSEs. A **likely** change in the future is that professional staff members with a terminal degree will be eligible to apply in addition to postdoctoral fellows.

Utterly shameless advertisement: follow @scinode on Twitter (it's free and it's great)



[Home](#) [Archive](#) [Contribute](#) [Sponsor](#) [About](#) [Give Now](#)



Measuring the storm

Switzerland works hard to predict weather despite extreme topography.

[Read more](#)

Acknowledgments

- The Indiana University Pervasive Technology Institute was created in 1999 by a major gift from the Lilly Endowment and persists today through a combination of competitively obtained federal funding, donations, and IU support.
- Thanks to all my colleagues at IU PTI and XSEDE.
- Thanks to Harmony Jankowski for editing and design of the talk.
- The Humanware Advancing Research in the Cloud project is funded by a contract between Microsoft, Inc. and Indiana University with Craig A. Stewart as the PI, and Brian Voss as the Project Director and Co-PI. Other Co-PIs are
- Opinions presented here are those of the author(s) and do not necessarily represent the views of the NSF, IUPTI, IU, Microsoft Inc., or the Lilly Endowment, Inc. Any and all mistakes are the sole responsibility of the senior author.

More about the Indiana University Pervasive Technology Institute (@IU_PTI on twitter)

- The Indiana University Pervasive Technology Institute (IUPTI) transforms new innovations in cyberinfrastructure and computer science into robust tools and supports the use of such tools in academic and private sector research and development. IUPTI does this while bolstering the Indiana Economy and building Indiana's 21st century workforce.
- IU_PTI is Indiana University's initiative for advanced information technology research, development, and delivery in support of scientific discovery, scholarly investigation, and artistic creation.
- Information technology today pervades scholarly discovery in the humanities, research in all areas of the sciences, and the processes of artistic creation. The "Pervasive" in the name IU Pervasive Technology Institute reflects the foundational importance of computer science, informatics, cyberinfrastructure, and information technology research to most of what is done in academia and industry today.
- The Indiana University Pervasive Technology Institute was created in 1999 by a major gift from the Lilly Endowment and persists today through a combination of competitively obtained federal funding, donations, and IU support.