

The HPC Best Practices Webinar Series (HPC-BP)

<https://ideas-productivity.org/events/hpc-best-practices-webinars>

Osni Marques

Lawrence Berkeley National Laboratory

oamarques@lbl.gov

Joint work with David Bernholdt (ORNL), Elaine Raybourn (SNL),
Ashley Barker (ORNL) and Rebecca Hartman-Baker (LBNL)

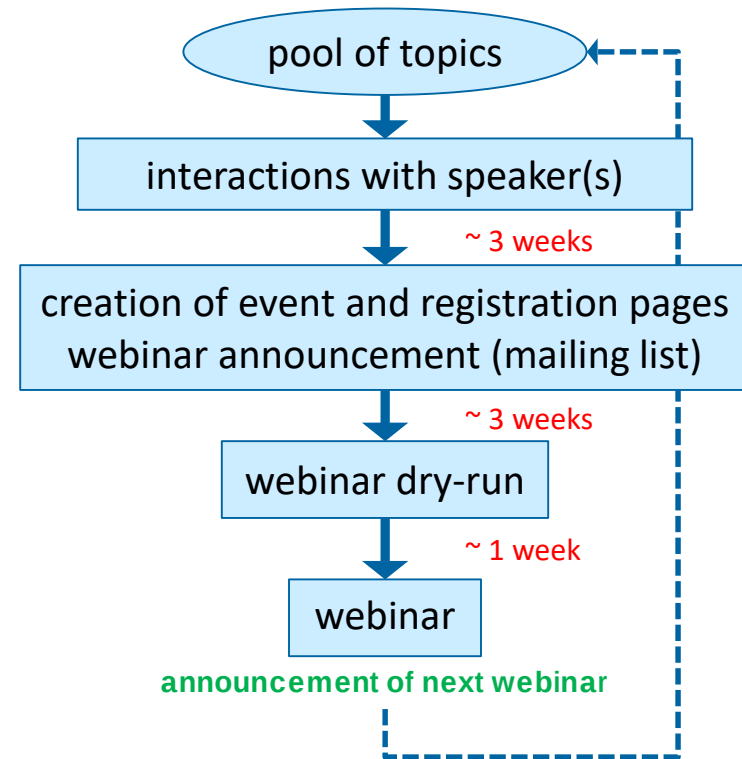
The Rationale behind HPC-BP

- Major component of the outreach efforts of the IDEAS-ECP Productivity Project
 - confluence of trends in hardware and increasing demands for predictive multiscale multiphysics simulations
 - trends for continuous refactoring with efficient agile software engineering methodologies and improved software design
- Once-a-month event
- “Flexible” agenda

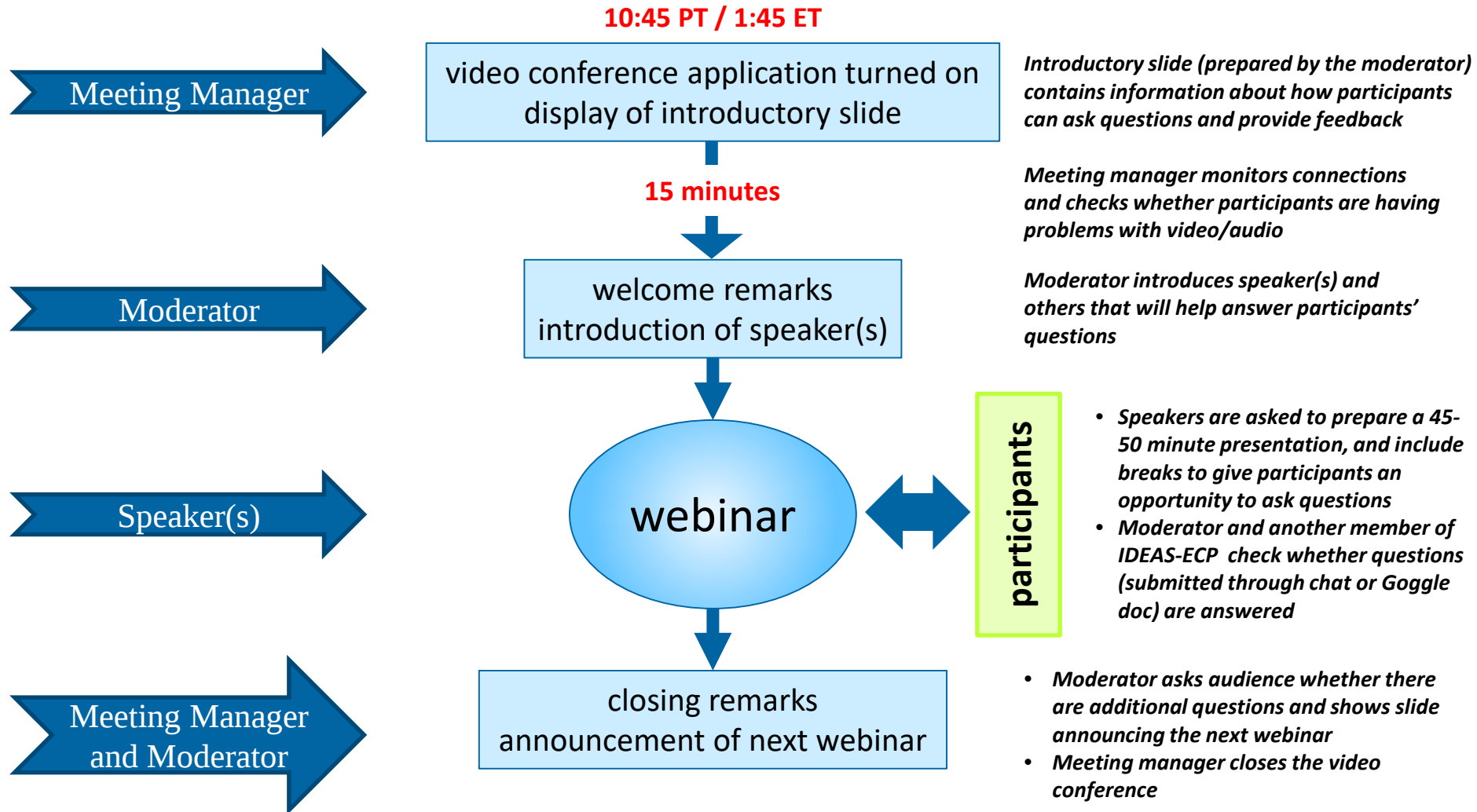
IDEAS: Interoperable Design of Extreme-scale Application Software → <https://ideas-productivity.org>
ECP: Exascale Computing Project → <https://www.exascaleproject.org>

Selection of Topics

- Interactions with ECP application teams
- Interactions with staff at ALCF, OLCF and NERSC (perceived trends in hardware evolution)
- Discussions (and fine-tuning) among members of IDEAS-ECP
- Contributions from “volunteers”
- Q&A of each webinar may indicate potential follow-ups on the topic (or further training through tutorials)



The Webinar in Motion



Registrations and Participation

June 2017 - October 2018

TOPICS

- *Python*
- *Intermediate Git*
- *Roofline*
- *Project Management*
- *Managing Defects*
- *BSSw*
- *Best Practices*
- *Jupyter*
- *Eclipse*
- *Software Citation*
- *On Demand Learning*
- *Popper*
- *Open Source Software*
- *Sustainability*
- *CMake*
- *From CI to Static Linters*

	total registrations	ECP affiliated registrations	attendees
Minimum	69	22	26
Average	135	42	74
Maximum	210	71	127
Std. deviation	48	15	34

Overall Considerations and Conclusions

- Agenda is implemented in concert with three major DOE computer facilities (webinar may need to address different installations, more than one speaker)
- Future topics distilled from a survey on tools, programming languages, programming models and runtimes, etc., of interest to the ECP community
- The webinars can be (and typically are) attended by a broad community
- Capture of meaningful data for metrics of success is a challenge (few people respond to surveys; number of registrants and participants seems to be more appropriate)