

SGI[®] ICE[™] X in the Deep Fryer *aka* Immersion Cooling Demonstration

NO Water Cooling

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GM, Compute

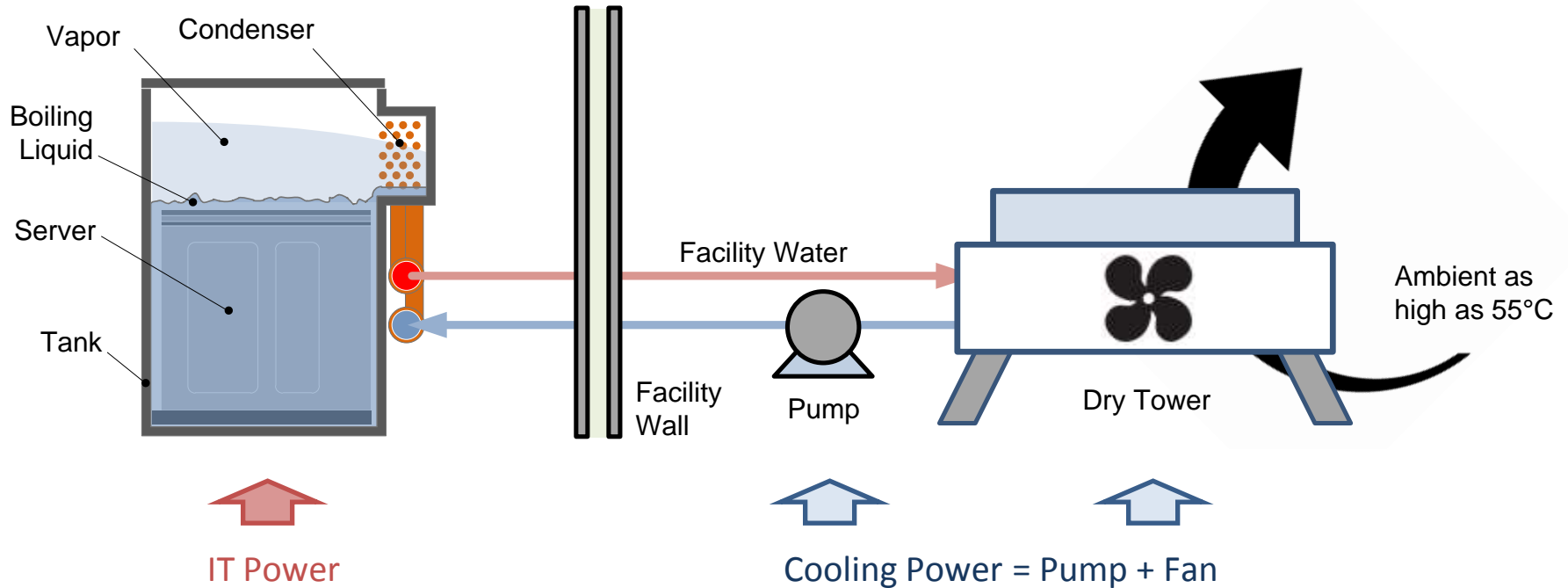
3M Immersion Cooling Overview

- Environmental Security Technology Certification Program (ESTCP) is funding body
 - DoD's environmental technology demo and validation program
 - ESTCP approved Year-2 funding (the project can continue)
- Lawrence Berkeley National Laboratory led team
 - LBNL: Bill Tschudi and Henry Coles (program management)
 - 3M: Phil Tuma (cooling technology)
 - Intel: Dr. Michael K. Patterson (processors)
 - Schneider Electric: Ozan Tutunoglu (dry-cooler)
 - SGI: Tim McCann (SGI® ICE X™ system)
 - NRL: Dr. Jeanie Osburn (demonstration site)
- Immersion Cooled ICE X Power-Up April in CF
 - Install at The NRL ~ May-2014

What's NOT Needed

- Any specific changes to the standard air-cooled product
- Cold plates, closed-loop cooling systems, etc.
- Special cleaning after equipment removal (Novec completely evaporates)
- Cooling tower, CRAC, ear plugs, raised floors, cool/warm water...

3M's Open Bath Immersion Overview



OBI does not require: chillers, cooling towers, water use, raised floors, computer room air conditioners or earplugs!

3M ICE-X Immersion System



3M SGI® ICE™ X Immersion System



Doing “live” HPC work for 3M in St. Paul, MN!
Press release at <http://www.sgi.com>

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