

# Why Capabilities?

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**Tokens are a significant  
step in the right  
direction.**

# However, Tokens are NOT capabilities

# Capability-Based Computer Systems

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*Henry M. Levy*

# (HT)Condor -> HTCSS

- Researcher places workloads to be handled at an Access Point (**AP**)
- Execution Point (**EP**) joins an HTCondor Pool
- **AP** can use the capacity of an **EP** to execute a job
- **AP** can delegate a job for execution by a remote batch system
- **AP + HTCondor Pool = HTCondor System**

**All Identifiers (and  
name spaces) are local  
(to the AP)!!**

**No (good reason) to  
ship identifiers to the  
EP**

**AP creates Capabilities,  
Ships them to servers  
(with authorized services)  
and ships them to client.**



- **AP to server - Client presenting capability X can read (fetch) file Y**
- **AP to client - Use capability X to read (fetch) file Y.**
- **Client to AP – Server rejected my read (fetch) request**
- **Server to AP – Rejected service request with capability X**

# Thank You!



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**PATH** PARTNERSHIP to ADVANCE  
**THROUGHPUT  
COMPUTING**

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