

HPC Profile WG
OGF 25 Catania, IT
Mon Mar 2 2009

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HPC Profile WG

- Objective: the profile and protocol specifications needed to realize **the vertical HPC use case of batch job scheduling of scientific/technical applications**
- Scope
 - **Identify any changes/extensions** that are deemed necessary to **existing protocol specifications** and will work with the relevant working groups to try to affect the identified changes/extensions
 - **Identify additional protocol specifications** that need to be defined and will either work on their definition or spin them out to additionally defined working groups.

HPC Profile: Approach

- Driven by explicit use-cases
- Leverage and work with existing efforts
- Evolutionary design: current tooling, solve an immediate problem
 - Don't succumb to the "Abstraction God" and his friend, the Scope Creep
- Extensible design: Extensions are necessary and 1st-class entities
- Build consensus from the start

Structure of Working Group Output

- BASE case (aka “HPC Basic Profile”)
 - ALL scheduling clients and services are expected to understand
 - HPC, not Grid (i.e., do NOT span administrative domains)
- Common Cases (aka “Extensions”)
 - Represent *some* significant fraction of implementors, not all implementors
 - NOT all cases – only common cases
 - capture client-visible functionality requirements rather than being technology/system-design-driven

GFD-I.100
OGSA HPC Profile WG

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HPC Job Scheduling: Base Case and Common Cases

Status of This Document

This document provides information to the Grid community on batch job scheduling of scientific/technical applications, also broadly referred to as the “core” high performance computing (HPC) use case. It does not define any standards or technical recommendations. Distribution is unlimited.

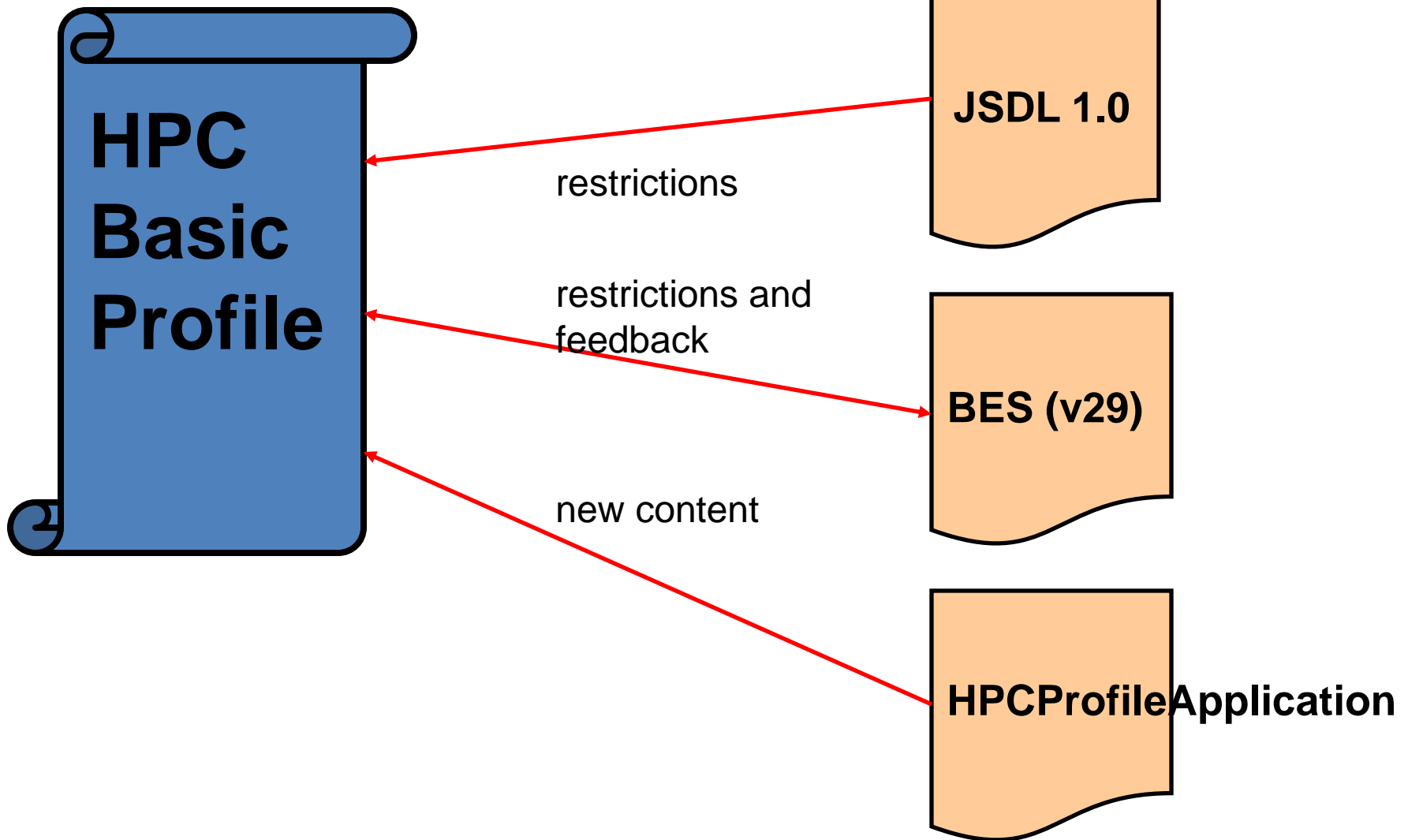
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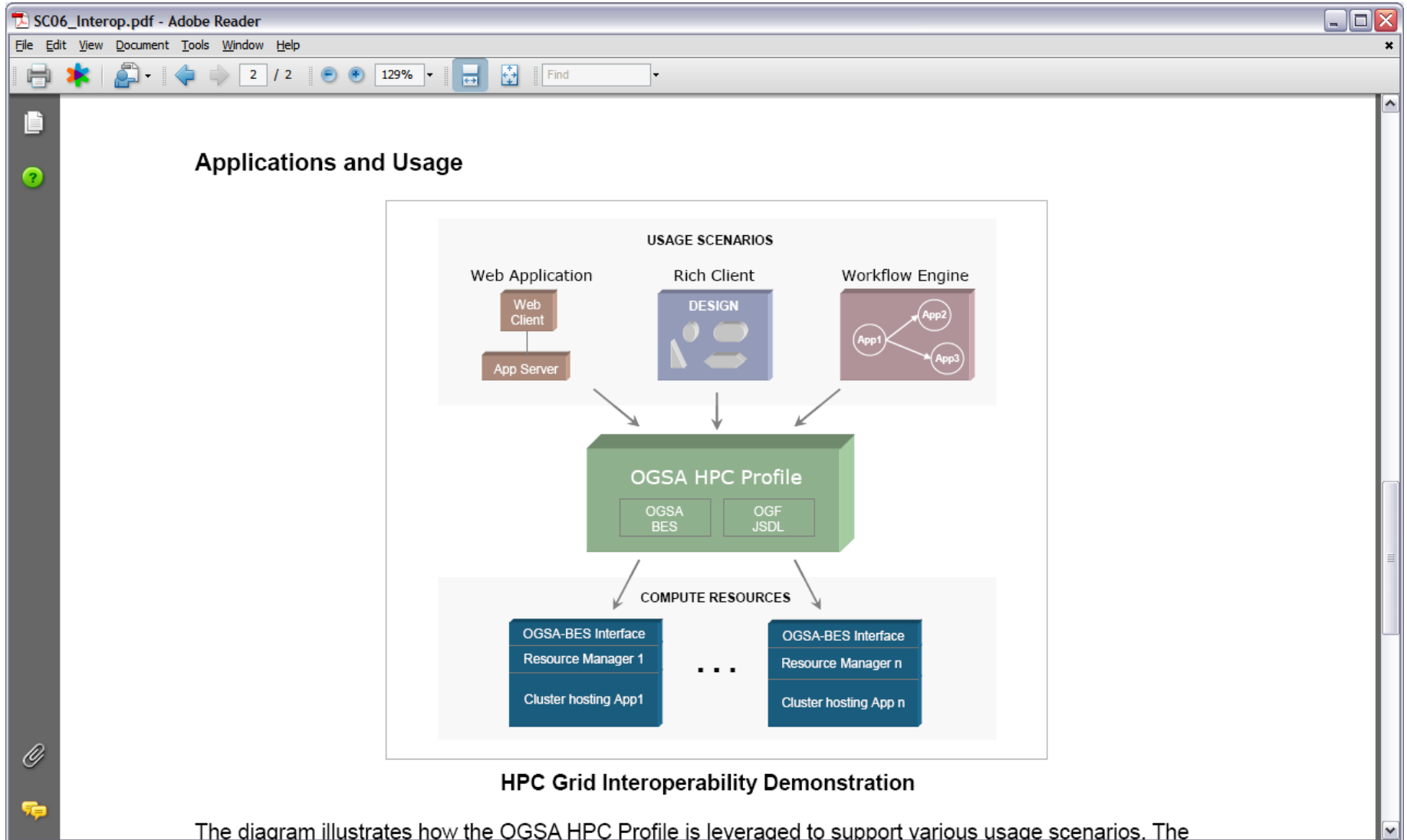
Abstract

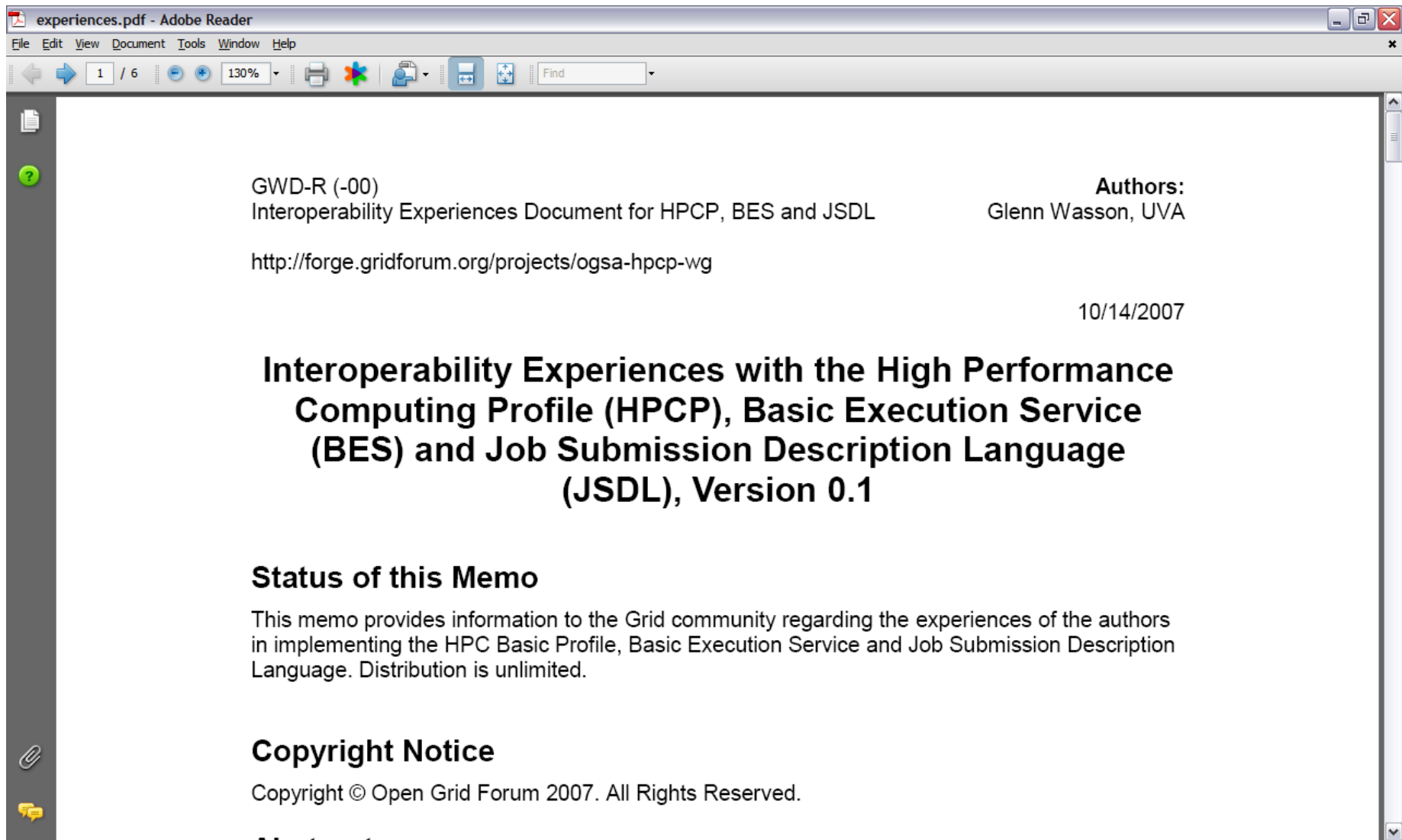
This document describes the set of use cases for batch job scheduling of scientific/technical applications, also broadly referred to as the core high performance computing (HPC) use case. A simple base case is defined that we expect to have universally implemented by all batch job scheduling clients and schedulers. Additional "Common Cases" are enumerated, which are anticipated to be applicable to at least two but not all batch job scheduling clients and schedulers.

HPC Basic Profile



Outreach: SC06, SC07 and SC08





GWD-R (-00)
Interoperability Experiences Document for HPCP, BES and JSDL

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10/14/2007

Interoperability Experiences with the High Performance Computing Profile (HPCP), Basic Execution Service (BES) and Job Submission Description Language (JSDL), Version 0.1

Status of this Memo

This memo provides information to the Grid community regarding the experiences of the authors in implementing the HPC Basic Profile, Basic Execution Service and Job Submission Description Language. Distribution is unlimited.

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OGF Document Status

- HPC Basic Profile: **OGF standard**
- File Staging Profile (GFD.135, June 28 08): OGF Proposed standard
- Advanced Filter (GFD.???, Nov 2 2008): ended public comment period

Open Source Implementations

- BES++
- UVa Windows HPC Server
- GridSAM
- SMOA Computing (formerly OpenDSP)

Other WG Activities/Drafts

- Application Template
- Kerberos Profile
- GLUE (to be continued in another WG?)

HPC Profile WG status

- WG has been very successful
 - Specification stage is complete
 - Now: community use and uptake (not an “OGF WG effort”)
- Thank you and congratulations to all!

