



The Printer Working Group

IPP Job Storage 2.0: Fixing JPS2

Smith Kennedy, HP Inc.

2019-02-14

JPS2 v2.0 : Topics to Discuss



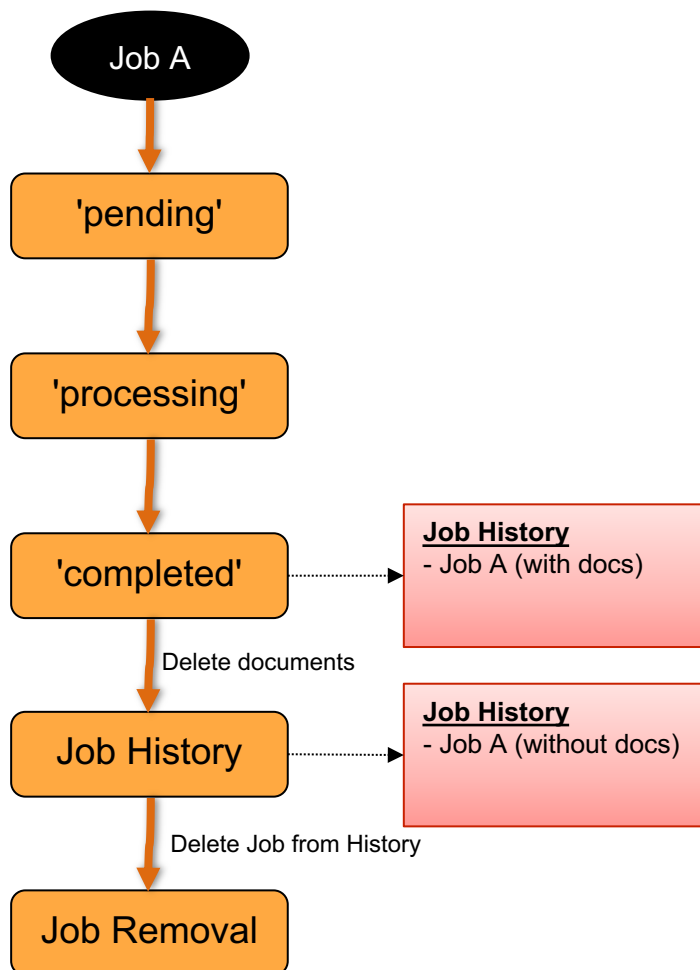
- Design questions pertaining to the replacement for "job-save-disposition"



Job Storage – Details To Discuss

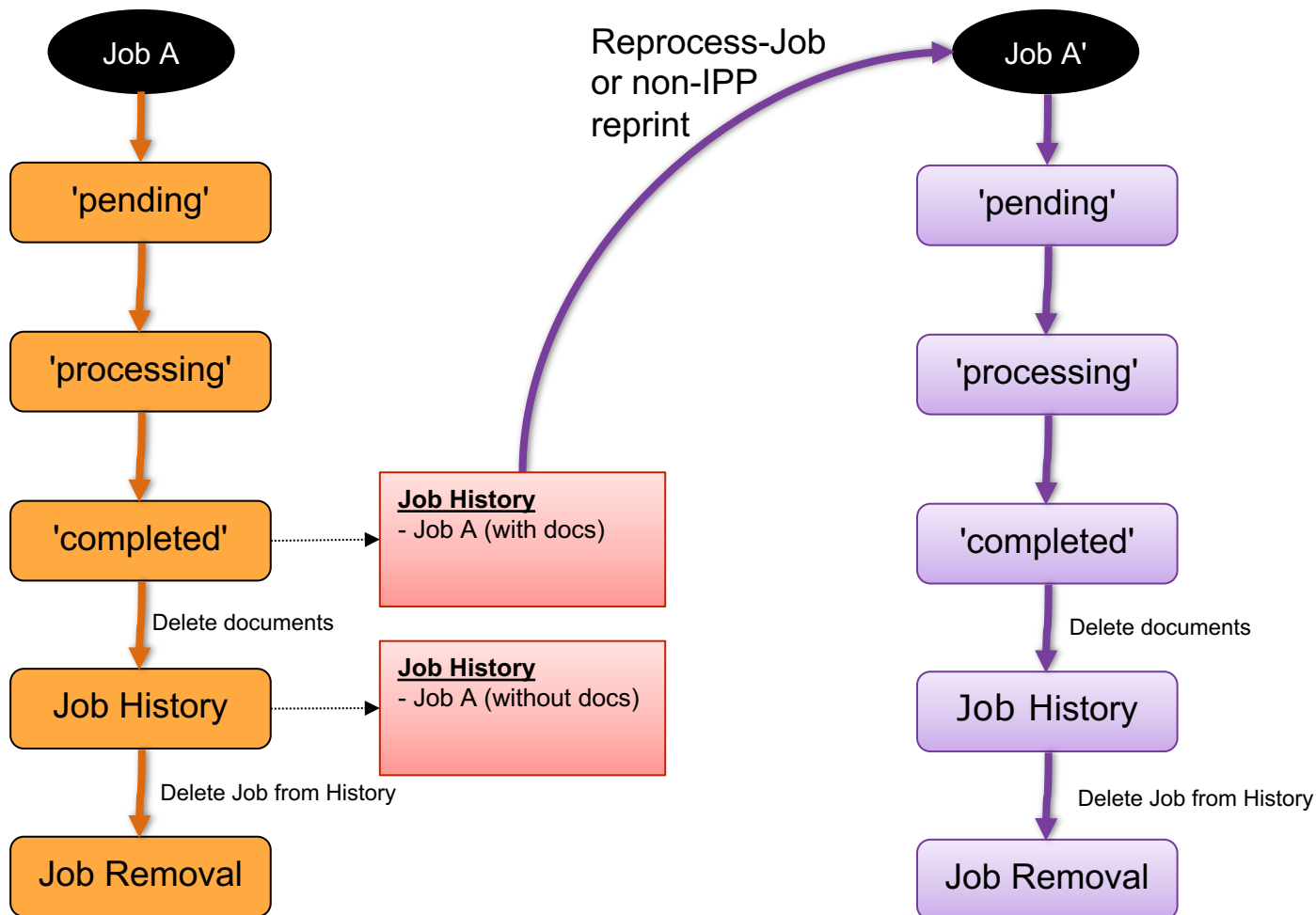
- What do we want to do about Job States and the "Job Storage" feature?
 - Retain indefinitely (implicit "job-retain-until" = 'forever'), special handling / visibility / presentation based on "which-jobs" = 'stored-jobs'
 - New "job-state"?
- How to handle reporting the set of Stored Jobs
 - IPP Get-Jobs operation with "which-jobs" = 'stored-jobs'
 - Handling limiting access - authentication prompt possible?
 - All stored jobs vs. different "which-jobs" keywords for each visibility scope? Or should "job-storage" be an operation attribute for Get-Jobs?
 - Group etc. discovered by Client by examining each Job's "job-storage" Job Status attribute

Job States – Regular Job



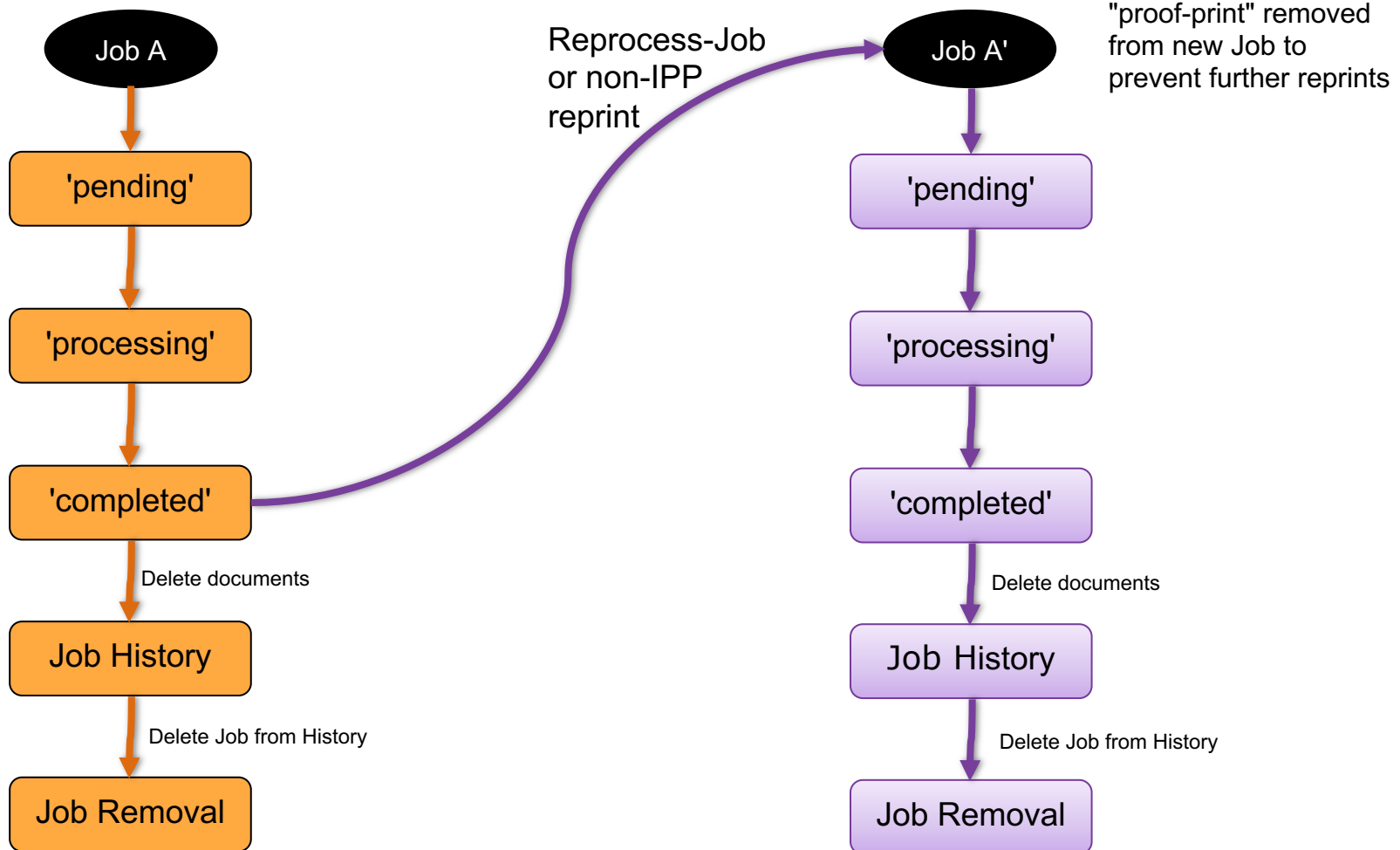


Job States – Regular Job With Reprint

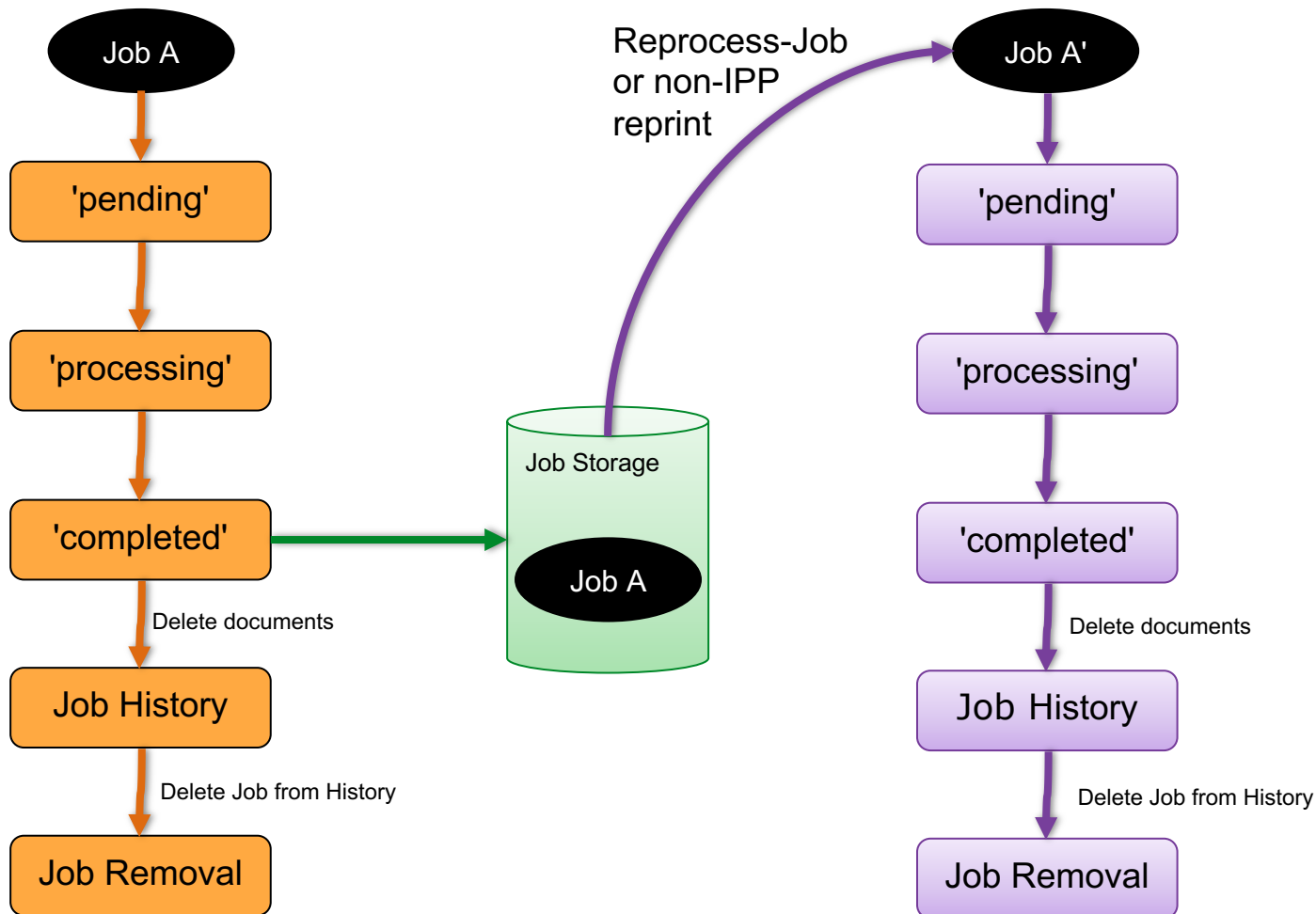




Job States – Proof Print Job



Job States – Stored Job





Stored Job Requirements

- After reaching 'completed' state, retained indefinitely
- Access Control
 - Who can see it
 - Who can reprint it
 - Encryption
- Job Ticket
- Job Accounting

"job-password"



- Add related attributes from 2016 registration?
 - "job-password-repertoire" & friends
 - "job-password-length-supported"



"job-print-password"

- Could have added a password to "job-storage" – a generic more flexible replacement for "job-password" allows it to be used in other context
 - Retained Jobs of various types
 - Job Proof Print ("proof-print")
 - Reprints from Job History
 - IPP INFRA use cases
 - Others...?
- Deprecate "job-password"? Or leave it alone?



Obsolescence vs. Deprecation

- Should we be deprecating "job-save-disposition" or obsoleting it?



The Printer Working Group

Earlier Slides



JPS2 – What's wrong with it? (1/2)

- Job Save → Feature solution did not fully satisfy the requirements from the use cases
- Proof Print → Retention time duration for Proof Print Jobs is ambiguous
- "job-password" feature is incompatible with both the Job Save and Proof Print features



JPS2 – What's wrong with it? (2/2)

- Issues identified at August 2018 F2F:
 - "job-save-disposition" does not create a Saved Job as defined in JPS2, it saves the processed output of that Job to the specified destination (which may or may not be sufficient to recreate the original Job - all implementation-specific, determined by output mimeType)
 - No way to specify a serialized IPP object representation (application/ipp is a message format, not a serialization format)
 - What does this mean?
 - proof-print asks for a Job to be retained but does not guarantee it is retained indefinitely

JPS2v2: Goals



1. Develop a system of attributes that can be used together to support the Job Storage, Proof Print, and Reprint Job use cases from 5100.11-2010 along with those in this deck and other relevant additions. The system **MUST** resolve all the ambiguity and incompatibility issues described earlier.
2. Clean up and deprecate whatever attributes are displaced by this new solution
3. Resolve any errata / editorial issues



Target Use Cases

- Hold Job Until User Release
 - Using authentication
 - Using Job authentication
 - "job-password" or new "job-print-password"
 - With basically no authentication (click OK to print)
 - "job-hold-until" = 'indefinite' → Is this the commonly held semantic for this?
- Job Save With Password
- Proof Print
 - Job Retention Duration (new "job-retain-until" and "job-retain-until-time" attributes)
- Use Cases in 5100.11 (Proof Print, Job Save, Reprint Job)
 - Mostly adequate but not clearly satisfied by the IPP attribute semantics



System Requirements

- Hold a Pending Job (not really a "stored job")
 - Submitted Job stays in 'pending-held' or 'pending' until "released"
 - Release via IPP
 - Release via non-IPP (control panel, management console)
 - Release MAY be guarded by a password (alphanumeric or numeric-only) but not required
- Store a Job for later re-printing
 - Store Only or Print-and-Store (latter different than Proof Print)
 - Associate with user identity
- Proof Print
 - Print one copy of a multiple copy job for review; release remaining copies, to be printed potentially from other input source

5100.11 – Deprecations

- "job-save"
 - Doesn't satisfy all the use case requirements
 - Existing definition has polluted semantics and expectations
- "proof-print"
 - Intersects with "job-save" in certain ways that are vaguely defined
 - Retention duration is not clearly defined (implementation-specific)
- "job-password" / "job-password-encryption"?
 - Does this need to be deprecated? Or does it do what we want it to do for the Hold Job case?



5100.11 – Additions

- "job-password-repertoire"
 - Defined in [IPP Job Password Repertoire](#)
 - Should be deprecated if "job-password" is deprecated
- "job-retain-until" (dateTime)
 - Discussed at the August F2F
- Replacement for "job-save" and "proof-print"



Next Steps

- Email discussion to discuss proposals for new attributes and semantics
- New draft to be produced for review in January