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GlideinWMS

Marco Mambelli, Dennis Box, Bruno Coimbra, Marco Mascheroni
Stakeholders Meeting
November 10, 2021

Agenda

- Status update

- Important changes

- Project Progress and Roadmap

- Developers' spotlight

- Stakeholders Reports or Presentations

- Roundtable

- Open discussion

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Project status updates

- v3.7.5 in OSG upcoming (OSG 3.5)
- v3.9.3 (Python 3) in OSG 3.5 contrib and OSG 3.6 production
  - Tested in OSG 3.6 w/o GSI
- v3.7.6 and 3.9.4 coming soon
- Moving to GitHub

- Project effort decreased
  - 1.65 FTE
  - Management and 4 developers
  - Everyone involved also in other projects: Factory Ops, HEPCloud, Jobsub, FIFE support, Enstore

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Communication

- Communication
  - Please review periodically your tickets/priorities
    https://cdcvs.fnal.gov/redmine/projects/glideinwms/wiki/RoadmapSummary
  - How can we further improve communication
    - Should we participate in any other meetings?
    - Communicating priorities?

- Redmine/GitHub
  - Working on RPM builds in GitHub
  - Redmine still under restricted access, will move to GitHub
    - GitHub as main Git repository
    - Reviewing issues and migrating open ones to GitHub
      - Will require significant effort (move, ongoing more ticket maintenance)

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Important changes

- 3.7.5
  - Make sure that the condor configuration changes are applied (look for possible .rpmnew files and merge them)
  - Check also the web server configuration
- 3.9.3
  - The Python code in the configuration must be valid Python 3
    - New validation (more checks than 3.9.2)

- Planned for 3.9.4
  - New Glidein and Frontend libraries RPMs

- And please review periodically your tickets/priorities
   https://cdcvs.fnal.gov/redmine/projects/glideinwms/wiki/RoadmapSummary

Release series

- 3.7/3.8 main release in OSG 3.5
  - OSG 3.5 upcoming repo
  - Python 2
  - Support GSI and JWT (with proper HTCondor)
  - OSG 3.5 EOL in February 2022

- 3.9 main release in OSG 3.6
  - OSG 3.5 contrib repo and OSG 3.6 (production)
  - Python 3
  - No GSI in OSG 3.6
  - Updates on Python 3 adoption?

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3.7 Series Status - Dennis Box

- GlideinWMS 3.7.6
  - Release candidate will be available this week (couple of tickets in feedback)
  - Works with OSG 3.5 and 3.6
    - GSI auth disabled in OSG 3.6
  - SciToken Generation/Renewal works with the osg-token-renewer package
    - Still evaluating other SciToken generation/refresh options
  - Reduced complexity for per-site IDToken revocations
    - Use SEC_TOKEN_BLACKLIST_EXPR
  - Use correct value for the issuer in the generated token
  - Added flexible mount point for CVMFS
  - Fixed a few bugs
    - glidein_startup.sh in the staging area incomplete
    - glidein_cleanup doesn't clean up directories
    - All shellcheck errors
    - condor_chirp fails when jobs uses python2
    - removed obsolete code (e.g. GCB references)
  - OSG_Autoconf improvements

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3.7 Series Plans - Dennis Box

3.7.7 Plans (January)

- Tokens
  - Fallback
  - Token definitions will change

- Glidein improvements
  - Periodic scripts using Singularity

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3.9 Series (Python 3) Status and plans – Bruno C

- GlideinWMS 3.9.4 – end of November
  - Will include changes and fixes from the 3.7.6
  - Splits the glideinwms-vofrontend-core package into two additional packages glideinwms-vofrontend-libs and glideinwms-vofrontend-glidein
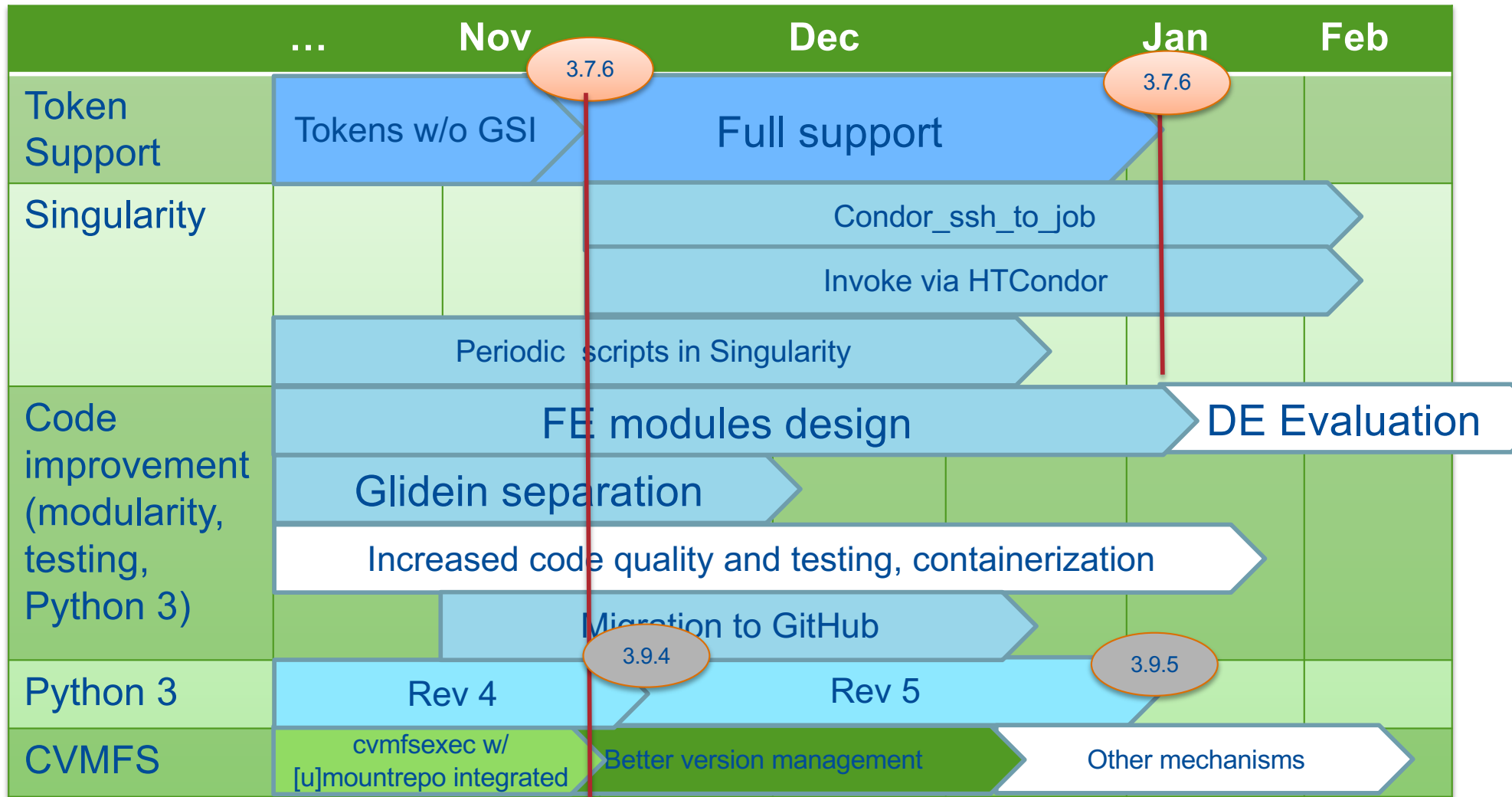
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Bruno Coimbra - status

- Custom execution points for VO scripts
  - Still ongoing. I didn't work on this issue for lately, but I should get back to it soon.

- Current Focus
  - Releasing GlideiWMS 3.9.4
  - Working on the integration of GlideinWMS and the GlideinWMS HEPCloud Module
  - Improvements to the glidein_startup script.

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Marco Mascheroni

- New features for automatic generation of factory configuration (OSG_autoconf)
  - Added the possibility to specify common attributes at the site level
    - Gets propagated to all the entries in that site
  - Allow factory operator to extend the values defined by a site administrator
  - Implemented mechanism for specifying additional yaml files that gets merged on top of the whitelists
    - To allow to automatically fetch additional information that is not in the OSG collector (e.g.: CMS Sitenames, extra information about GPUs, etc)
- Bugfixes related to SCITOKEN
  - Use correct value for the issuer in the generated token
    - TRUST_DOMAIN in place of COLLECTOR_HOST
  - Proxy not renewed on the factory when a scitoken is defined alongside it
- Fixed issue about condor_chirp and python environment mixups

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Development Roadmap overview

	...	Nov	Dec	Jan	Feb
Token Support		Tokens w/o GSI 3.7.6	Full support	3.7.6	
Singularity			Condor_ssh_to_job		
			Invoke via HTCondor		
		Periodic scripts in Singularity			
Code improvement (modularity, testing, Python 3)		FE modules design		DE Evaluation	
		Glidein separation			
		Increased code quality and testing, containerization			
		Migration to GitHub			
Python 3		Rev 4	3.9.4 Rev 5	3.9.5	
CVMFS	cvmfsexec w/ [u]mountrepo integrated	Better version management		Other mechanisms	

Dennis Box | Bruno Coimbra | Marco Mambelli | Marco Mascheroni | Interns | Not assigned

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Roadmap in detail – Plans for 3.8 / 3.7.6 (mid Nov)

https://cdcvs.fnal.gov/redmine/projects/glideinwms/roadmap

- Complete token authentication (OSG) – Dennis
  - Fully working token implementation
  - No errors if no GSI
- Singularity support (CMS/OSG/Fermilab) – Marco Mambelli
  - Simplified code by Singularity invocation via HTCondor
  - Simplified troubleshooting by allowing ssh to job in Singularity
  - Ongoing collaboration w/ OSG – Mats
- Ease operations
- Containerization (OSG/Fermilab/FactoryOps)
  - Factory and Frontend in containers
  - Ongoing collaboration w/ Fermilab/OSG/FactoryOps – Shreyas, Diego

Roadmap: modularity and code quality (HEPCloud/OSG)

- Improvements of Python 3 version - Bruno
  - Complete fine grain separation of RPM packages
  - Remove additional obsolete code

- Glidein as 3rd component (DE, containerization) – Bruno
  - Separate packaging
  - Easier and more robust support for custom scripts

- Improve modularity of Frontend (DE) - Marco Mambelli
  - Configuration
  - Business logic   https://drive.google.com/file/d/1KTThCsx4ZGjxwqe-gfZtonT3eGJamPed/view?usp=sharing
  - Communication w/ Factory

- Integration with HEPCloud/DecisionEngine (HEPCloud/CMS)

- Expand, simplify and automate testing

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Summary

- Development focus
  - Tokens

- Expect more development also for
  - Glideins
  - Singularity
  - Frontend modularity

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Extra Slides

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Reference Slides

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Move to single user Factory

- Starting from release v3.5

- All Glideins will run using the factory user, no more separate users per-VO
  - Currently different VOs (Frontend groups) can use different users to improve isolation

- It is safe
  - The HTCondor team assured us that once we remove Globus GRAM support, the other Gridmanager clients cannot decide which file to retrieve from the Factory (it is HTCondor on the Factory deciding what to send), so will be safe to run as a single user

- The directory structure will remain the same
  - Only the ownership will change
  - Your log files will be in the same place

- Migration:
  - GWMS will provide instructions and tools to ease it: change the files ownership, …
  - if you use HTCondor < 8.7.2 you can upgrade GWMS when convenient for you
  - if you need HTCondor >= 8.7.2 (including 8.8) we recommend to upgrade
    - but if you want to delay the change to 3.5 you can still do that if you are comfortable in using the glideinwms-root-switchboard RPM that we built and tested, but is not supported by OSG.

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GlideinWMS - Stakeholders Meeting

11/10/2021
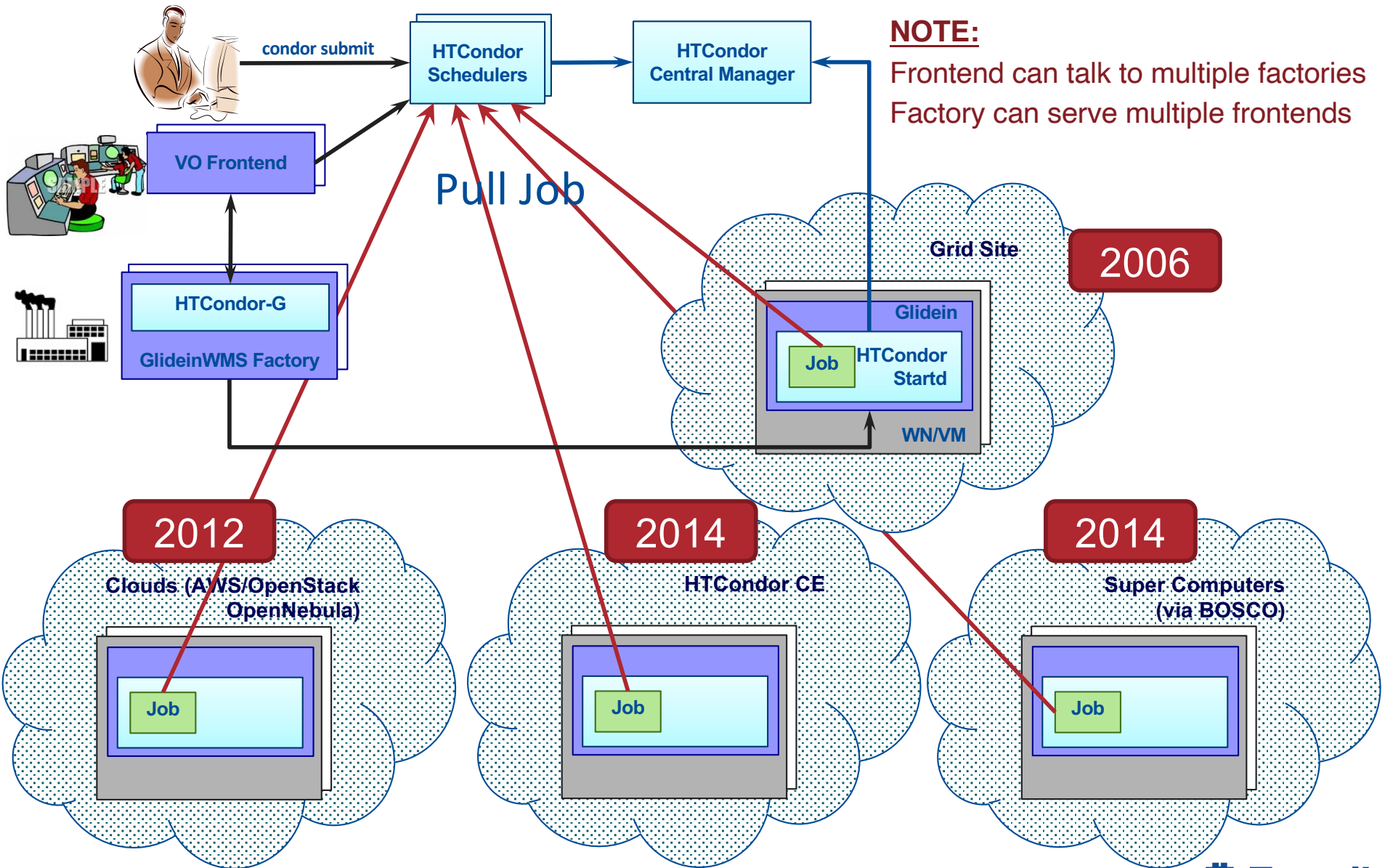
Quick Facts: Releases & Support Structure

- Releases
  - Issues tracked in redmine issue tracker
    - https://cdcvs.fnal.gov/redmine/projects/glideinwms/issues
    - Categorized and prioritized based on impact, urgency and requester
      - Issues are now associated with respective stakeholders
    - Issues are assigned based on developer's expertise and other workload
    - Roadmap for upcoming releases available in redmine (See reference slides)
  - SCM
    - All releases are version controlled and tagged
    - http://glideinwms.fnal.gov/doc.prd/download.html
  - Release notes & history
    - http://glideinwms.fnal.gov/doc.prd/history.html
- Support
  - Entire development team is responsible for support

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Quick Facts: Project Status & Communication Channels

- Project meeting: Wednesdays 10 – 11 am
  - Technical discussions & status updates
  - Regular stakeholder participation
  - Contact Parag Mhashilkar if you need invite for this meeting
- Stakeholders Meeting every two months
- Project Management
  - Project Status reported monthly at CS Project status meetings

Area of Interest	Mailing Lists
Support	glideinwms-support@fnal.gov
Stakeholders	glideinwms-stakeholders@fnal.gov
Release Announcements	glideinwms-support@fnal.gov cms-dct-wms@fnal.gov glideinwms-stakeholders@fnal.gov
Future Release plans	See next slide
Discussions	glideinwms-discuss@fnal.gov
Code commits	glideinwms-commit@fnal.gov Twitter Tag: @glideinwms

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Tracking Releases in Redmine

1. Visit the redmine issues tab for GlideinWMS or the URL

2. Click custom query for stakeholder or version roadmap

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