# Ideas for YP 2.8

Brainstorming for the 2.8 release. Ideas can be added and elaborated, people can indicate interest or ownership. Ultimate aim is to translate these into bugzilla entries which take over from this document.

Key:

- {} has final owner
- [] contact person who understands item (not a commitment to doing it)
- () person who submitted item or comments from the person indicated

People:

- RP - Richard Purdie
- RB - Ross Burton
- akuster - Armin Kuster
- Jon - Jon Mason

What part of this process will involve the Yocto TSC?

Ideas under discussion:

- Fixing patchtest/patchwork so its working again #13284
- Migrate some poky specific config to nodistro? - Nice to do, but no owner now.
    - Maybe we need to elaborate on this so maybe some else may understand what it means ( akuster) #13315
- Yocto Compatibility (akuster)
    - Needs better definition. Like do dependant layers need to pass? How to run, what to run, approval process (akuster) #13285
- License Improvements:
    - Add SPDX headers to all source repos on git.yoctoproject.org (RP) #13319 #13318 #13317 [Bitbake patches are in review]
    - Update OE-Core to replace old SPDX license names with new ones (RP) #13320
    - Use debug source information to compute license field information for comparison? (RP)
    - Integrate sub-tools from fossology to import copyright information (RP) #13321 #13322
    - Generate SPDX manifest output with each deploy artefact (RP)
- Reproducibility Improvements:
    - Add test for autobuilder to evaluate reproducibility of key core images (built in differing build dirs) (RP) {Joshua Watt} #13323
    - Publish reproducibility metrics as part of test output (RP) #13324
    - Fix any reproducibility issues for world builds of OE-Core (RP)
        - https://wiki.yoctoproject.org/wiki/Reproducible_Builds
- resulttool improvements:

    - ~~Allow tool to process http:// url to results json file directly (RP) [Done]~~
    - Add “who” information to testresults files so we can track where the results are from (RP)
    - Add ability to extract ptest logs (RP) {Joshua Watt} #13331
    - Allow generation of html reports/graphs (RP) #13330
- Autobuilder improvements:
    - Add link to output directory on the console view, LHS (RP) #13325
    - Add generated index to the output directory to summarise what kind of results each directory contains (RP) #13326 #13327
    - Investigate+fix hang in UI when builds are stopped (RP) #13329
- Binary Package Feeds?
    - Evaluate potential of the project could supporting a prebuilt binary package feed to better meet the needs of new users? (RP)
- Revise autobuilder test matrix [RP]
    - ~~Extend ptest image to include all oe-core ptests [Done]~~
    - Do we test all kernel versions? All tiny? All -rt?
    - Meta-cgl [Armpit]?
    - Plan for triggering/triage of meta-oe runs? [akuster]?
    - YP plat member layers (intel/TI/Arm/Facebook/Comcast)
        - Intel is already in build (RP: only for source fetching)
- Document QA processes and types of test for the new manual - Scott needs help with the base material to build this upon
- Switchable toolchain [RB]
    - Easily switch between gcc, clang, icc without each layer needing to reimplement the logic.
- Removal of python2 dependencies?
- Refresh ARM hardware platform? (Bruce/Jon) (model secure boot)
- Make meta-gplv2 unnecessary (by creating a configuration that disables gpl3 dependencies or replaces them with maintained non-gpl3 alternatives). Mbition is looking into this, as people realize meta-gpl2 is not a long term solution. (AlexK)
- Mirror generation/archiver improvements - should be able to generate a filtered download mirror (Paul Barker)
- Add toaster to getting started docs?

Other ideas which could be developed:

- Patchtest/patchwork (needs subitems creating)
- Security/CVEs (needs subitems creating)
- Bitbake runqueue changes - Allow bitbake to run setscene mid build and adapt to new artifact availability. Implications for SState Hash Equivalency and multiconfig builds #10682
- Layer setup tooling for the core (needs investigation/discussion and subitems creating)

Ideas in Bugzilla with Owner:

- Revise release artifacts {RP} - Bug #11791
- Switch to memres bitbake by default? {RP/Robert} - Bug #13023
- Aarch64 builder support Bug 13059 and ARM ptest items but #13060 (what is the HW model? TaiShan2280) {Jon, Michael}
- Containers: Agree on what belongs in oe-core vs other layers {Bruce}
    - See Bugzilla: #13051, #13052, #13053
    - There are two main areas to consider for this: development host / testing and target execution. The bugzilla entries will be split into these broad categories, since we may not have time to do both.
    - oe-core needs to only get the minimal plumbing/capabilities, since there is no one size fits all solution to this, and many of the existing tools are far to heavy / complex for oe-core to carry (20-30 significant native and target depends/rdepends) .. this is due to far too broad (for what the build process needs) in the tools.
    - In fact, what oe-core needs is somewhat custom, since none of the existing tools are capable of quickly creating a simple OCI “image”.
    - The final question will be about compatibility, whether we want to produce docker registry compatible images (so they could immediately be pushed to a registry) or if we want to produce OCI compat images and then leave the conversion to docker as an ecosystem question. Bugzilla entries will be created for both.
- Rust - Import into OE-Core? #12675
    - Randy talked about this maybe we can get more traction on it.(AK)
    - Need a proposal first
- Multiconfig SDK {Alejandro} #5421
- Migrate from pkgutil style namespace packages to native namespace packages {Chris Larson} - Bug #13034
    - https://packaging.python.org/guides/packaging-namespace-packages/#native-namespace-packages
- systemd default for poky, needs autobuilder changes. {Kai Kang} #13031
- Virgl support in qemu {Martin Jansa, Alex Kanavin) #12938
    - All the necessary patches are in master/warrior, but this isn’t enabled by default (and there is no convenient switch to do so) (AlexK)
    - I’d like to both enable virgl (via opengl DISTRO_FEATURE) and add the gtk+ frontend to the default qemu frontend list (AlexK)
    - Then Martin can look at sdl/spice if/when he has time.
- Testopia removal { MH } #13015
    - We are not using it for QA anymore (AK)
- Use virtio graphics for qemuarm and qemuarm64 {Jon} #13230
- Fix virtio serial {Jon} #13231
- Switch SDK to be self extracting Python script {Joshua Watt} #13259
- Enable installable image in wic/systemd-boot (Tim Orling) #11291 #13025

Attendees: Richard, Armin, Joshua, Manju, AlexK, Bruce, Michael, Peter Smith, Kevin, David Reyna, Trevor

YP 2.
YP 2.7 M3 rc1 is out of QA. The YP 2.7 M3 rc1 report is summarized at https://lists.yoctoproject.org/pipermail/yocto/2019-April/044667.html and the results are at https://autobuilder.yocto.io/pub/releases/yocto-2.7_M3.rc1/testresults/.
YP 2.5.3 and YP 2.6.2 stable releases were built and submitted to QA last week.
We discuss the YP 2.8 Ideas document at:
https://docs.google.com/document/d/1CNEKA4d0eT6-e0hnS2pwi7xdZ5_t6smpZO2HbaJGXbU/
- If you wish to edit the file, send a request.

AR: Tim - Add to planning document details about installable images via WIC.
AR: Stephen - Cancel 4/16 engineering meeting and add 4/16 Planning meeting.

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MINUTES: 5/7/2019

Attendees: Richard, Armin, Joshua, Bruce, Michael, Randy, Josha Watt, Alejandro, Dustin Bain, Zach Booth, Tracey, Ross, Michael H, Tim, Vineela, David Reyna, Trevor

RP: Need to add milestones
RP: Need to set up 2.8 schedule page (as per 2.7)
RP: Most design items now have Bugzilla numbers (at least the ones for RP). Other should add create/their Bugzilla entries as well
RP: From triage meeting, observed that many things missing owners, specifically PatchTest (Django/Python) and PatchWorks (https://github.com/getpatchwork/patchwork) . This issue will be taken to the Advisory Board.
Randy: TImeline for Governing Board? RP: probably will fall to just prioritizing, especially PatchTest and Reproducible Builds (via automation tests) needed for YP promotion
RP: Looking for ideas. Khem is handling GCC9, Armin is LTP, RP is PTest
GENERAL: list of proposals looks good
Randy: rank the proposals? RP: best done in Bugzilla
Randy: containerization status? Bruce: Bugzilla items created, must be careful because most popular tools bring in hundreds of non-build-related dependencies, will document and point people to meta-virtualization
Tim: “meta-virtualization” versus “meta-cloud”? Bruce, mostly moving to “meta-virtualization”, specifically some cloud recipes are being adopted there
Trevor: Refresh ARM status?
Bruce: this is moving to a more modern reference board, newer than Beaglebone, closer to mainline kernel, hopefully ARM-64 at some point
Michael: newer machines coming on-line soon, but probably not have newer GPUs for QEMU acceleration, perhaps that can be addressed at refresh

Vineela (new Release Engineering): 2.8 starting? RP: yes, normal milestones, 2.7.1 hopefully by end of May, 2.5 over unless huge problem/CVE
Vineela: place for test reports? RP: yes planning new git repo

AR: RP: Need to set up 2.8 schedule page (as per 2.7)
AR: RP to move these monthly meets back to normal tech calls
AR: RP et. al. to new git repo for merged test results (YP, Intel, Wind River, …)
AR: ALL to create Bugzilla entries for their 2.8 items
AR: David to post minutes (DONE)