



Fixing your issues on alternative architectures

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Agenda

- Common issues
- Resources
- General directions for architecture support
- CI for upstream projects
- Recommendations
- Improving documentation



Common issues

- data endianness – order of bytes read/written from/to memory
 - typecasts – smaller from bigger
 - data formats
- signed/unsigned char
- size_t – unsigned int vs unsigned long
- atomics
- clocks/ticks counts

Common issues

- architecture detection - #ifdefs
 - no `__powerpc64le__`, needs
 - `#if BYTE_ORDER == ORDER_LITTLE_ENDIAN`
- be careful with assembler
- hw support
 - s390x lacks USB, ...
 - cleaner packaging (less exceptions)?
- parallel debugging



Resources

- <https://fedoraproject.org/wiki/Architectures>
- https://fedoraproject.org/wiki/Test_Machine_Resources_For_Package_Maintainers
- looks for us on #fedora-ppc, #fedora-s390x, #fedora-arm
- OpenPOWER hub for long term projects
- Talos II OpenPOWER workstation (Power9)



CI

- track changes in upstream projects and be notified about breakages ASAP
- idea came after issues with FF 53
- plan to make it public
- share resource with other Fedora CI



Miscellaneous

- order of actions where a package is FTBFS on alt-arch
 - ExcludeArch should be the last resort solution
- where are you looking for help, shall we improve our docs?
- general directions about language/ecosystems with respect to alt-arches
 - eg. no golang on ppc64



Example

- Storage configuration error during Anaconda install while building Atomic Cloud Image locally on armhfp
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- Error message from Anaconda log:
- Volume group given physical extent size of "4 MiB", but must be one of: 1024 B"