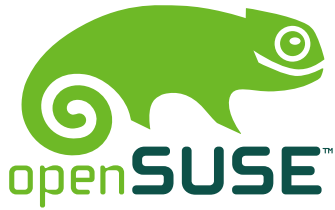


# If the mountain won't come to Mohammed...

or: how to design a protocol for real world

Robert Schiele <[rschiele@uni-mannheim.de](mailto:rschiele@uni-mannheim.de)>

FOSDEM 2006



## Legal Disclaimer

What's wrong with current protocol?

How did I solve this?

`mydrpmsync`

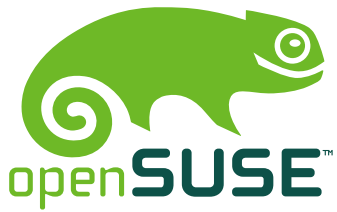
Are there alternative solutions?

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questions,  
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The statements mentioned in this talk are solely based on my personal opinion and do not necessarily reflect the position of Novell, SUSE, or the openSUSE project.



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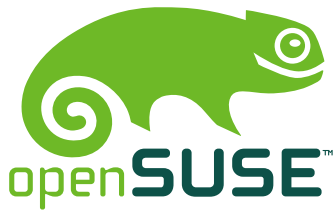
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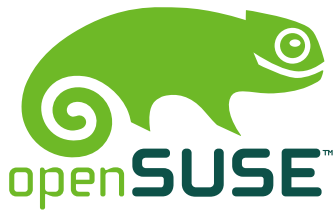
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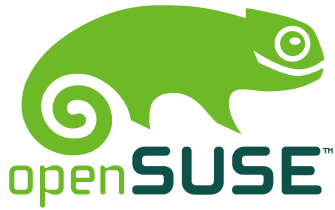
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- not a problem of the protocol but of tool acceptance



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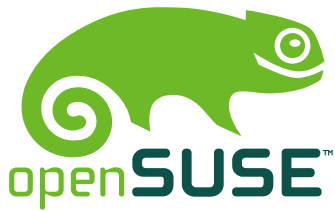
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- only one `drpmsync` server in public (mirror admins don't like the tool)



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⇒ protocol not ready for real world





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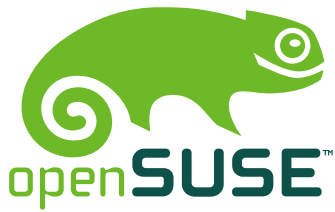
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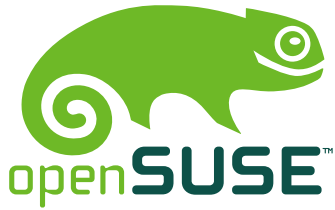
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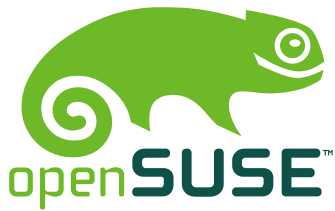
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## How did I solve this?

- permanently annoying Christoph by whining about the badness of the world (did not help)
- trying to teach `drpmsync` to fetch deltas from alternative servers (did not work because of lacking implementation documentation)
- implementing an alternative proof-of-concept implementation (`mydrpmsync`)



mydrpmsync

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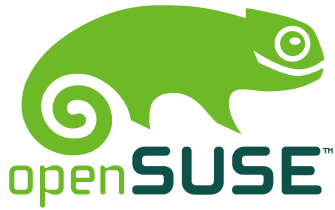
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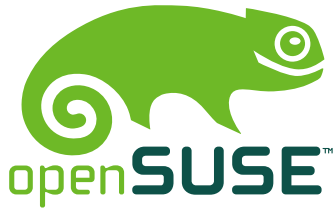
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- can use any `rsync` servers with mirrored deltas (scales with established mirror infrastructure)



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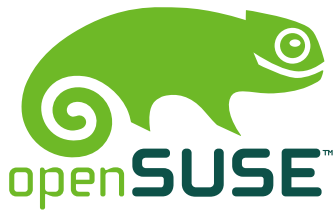
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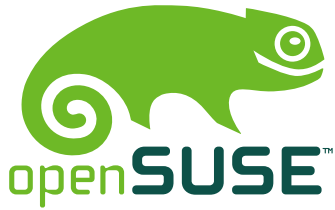
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- can use any `rsync` servers with mirrored deltas (scales with established mirror infrastructure)
- multithreaded (can be tuned not to suffer from a specific resource bottleneck)
- to be mirrored packages selectable (can mirror only required architecture packages)





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## mydrpmsync

- can use any `rsync` servers with mirrored deltas (scales with established mirror infrastructure)
- multithreaded (can be tuned not to suffer from a specific resource bottleneck)
- to be mirrored packages selectable (can mirror only required architecture packages)
- robust (does neither crash nor do harm to your repository on failures like server inconsistencies or temporary transmission failures)



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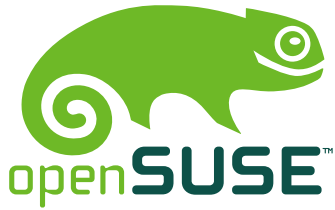
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**Are there alternative solutions?**



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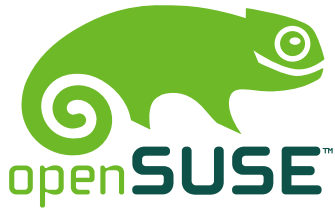
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- implement a plugin infrastructure in `rsync` to handle specific files with specific algorithms



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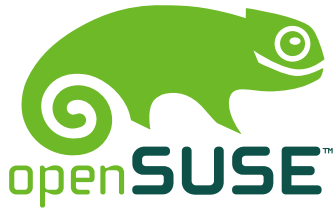
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## Are there alternative solutions?

- implement a plugin infrastructure in `rsync` to handle specific files with specific algorithms
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## Are there alternative solutions?

- implement a plugin infrastructure in `rsync` to handle specific files with specific algorithms
- implement a `drpmsync` plugin for `rsync`
- convince mirror admins to use `rsync` with `drpmsync` plugin



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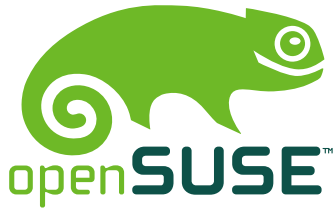
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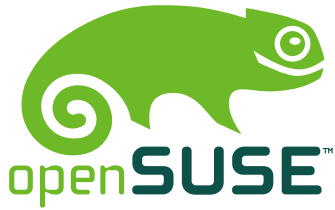
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- only distribute file metadata from `drpmsync` server



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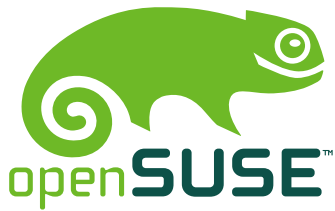
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## How to improve the current protocol?

- only distribute file metadata from `drpmsync` server
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## How to improve the current protocol?

- only distribute file metadata from `drpmsync` server
- fetch actual data with traditional protocols (`rsync`, `ftp`, `http`, ...) from other mirrors
- solve inconsistencies between mirrors by a consistency controller (included in the `drpmsync` server)



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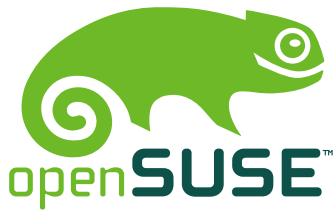
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...should go to `rschiele@uni-mannheim.de`