Package Hub 15
Bridges to Babylon

Ismail Dönmez
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Enterprise meets Community
Can we help users get open source software built for SUSE Linux Enterprise?
MORE

LESS

SUSE LINUX ENTERPRISE USER

WANT!

SUSE LINUX ENTERPRISE SERVER

~2500 SOFTWARE PACKAGES

OPEN SOURCE UNIVERSE

A BAZILLION SOFTWARE
SO MANY SOFTWAREZ
The story begins here...

openSUSE Build Service
openSUSE Build Service

Community of Packagers
60k+ Developers

500k+ Source Packages

¹ statistic from March 2019
## Extra Batteries Not Included

<table>
<thead>
<tr>
<th></th>
<th>SLE 12</th>
<th>openSUSE 13.2</th>
<th>Tumbleweed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Packages</td>
<td>3000</td>
<td>7500</td>
<td>8000</td>
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<tr>
<td>Maintenance</td>
<td>SUSE</td>
<td>SUSE+Community</td>
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</tr>
<tr>
<td>Support</td>
<td>SUSE</td>
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<td>no</td>
</tr>
<tr>
<td>Life Time</td>
<td>10 years</td>
<td>2 years</td>
<td>none</td>
</tr>
</tbody>
</table>
Extra Open Source Packages

What are the options?
Option 1

Feature Request
Business Case

Volume vs. Margin
Option 2

Build it yourself
Do you feel lucky?

• Find community portal
Do you feel lucky?

• Find community portal
  • Download Source
Do you feel lucky?

• Find community portal
  • Download Source
  • Read Installation Instructions
Do you feel lucky?

- Find community portal
- Download Source
- Read Installation Instructions
  - Build
Your Lucky Day!

• Find community portal
  • Download Source
• Read Installation Instructions
  • Build
• Install & Use
Not your lucky day!

- Find community portal
- Download Source
- Read Installation Instructions
  - Build
  - **Build Failures**
DIY

• Isolation
Not alone

● Package Community
Finding Prebuilt Packages

- How can customers find them?
Finding Prebuilt Packages

• How can customers find out about them?
Uncovering Hidden Gems

**phpMyAdmin**

**Administration of MySQL over the web**

phpMyAdmin can manage a whole MySQL server (needs a super-user) as well as a single database. To accomplish the latter you'll need a properly set up MySQL user who can read/write only the desired database. It's up to you to look up the appropriate part in the MySQL manual.

Currently phpMyAdmin can:

* browse and drop databases, tables, views, fields and indexes
* create, copy, drop, rename and alter databases, tables, fields and indexes
* maintenance server, databases and tables, with proposals on server configuration
* execute, edit and bookmark any SQL-statement, even batch-queries
* load text files into tables
* create and read dumps of tables
* export/1 data to various formats: CSV, XML, PDF, ISO/IEC 26300 -
Uncovering Hidden Gems

- Load text files into tables
- Create and read dumps of tables
- Import data and MySQL structures from Microsoft Excel and OpenDocument spreadsheets, as well as XML, CSV, and SQL files
- Administer multiple servers
- Manage MySQL users and privileges
- Check referential integrity in MyISAM tables
- Using Query-by-example (QBE), create complex queries automatically connecting required tables
- Create PDF graphics of your Database layout
- Search globally in a database or a subset of it
- Transform stored data into any format using a set of predefined functions, like displaying BLOB-data as image or download-link
- Track changes on databases, tables and views
- Support InnoDB tables and foreign keys (see FAQ 3.6)
- Support MySQL, the improved MySQL extension (see FAQ 1.17)
- Communicate in 57 different languages
- Synchronize two databases residing on the same as well as remote servers (see FAQ 9.1)

**Direct Install**

openSUSE 13.2, Version 4.4.15, 5.77 MB

Show other versions
Uncovering Hidden Gems

- Track changes on databases, tables, and views
- Support InnoDB tables and foreign keys (see FAQ 3.6)
- Support MySQL, the improved MySQL extension (see FAQ 1.17)
- Communicate in 57 different languages
- Synchronize two databases residing on the same as well as remote servers (see FAQ 9.1)

### Direct Install

<table>
<thead>
<tr>
<th>Distro</th>
<th>Version</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>openSUSE Tumbleweed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>openSUSE Leap 42.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>openSUSE 13.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Official Update</strong></td>
<td>4.4.15</td>
<td>57 MB</td>
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<tr>
<td>Source</td>
<td></td>
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<tr>
<td>1 Click Install</td>
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</table>

- Show unstable packages

<table>
<thead>
<tr>
<th>Distro</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>openSUSE 13.1</td>
<td></td>
<td></td>
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</tbody>
</table>

- Show unstable packages

<table>
<thead>
<tr>
<th>Distro</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSE SLE-12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Show more packages for unsupported distributions

<table>
<thead>
<tr>
<th>Distro</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>SUSE SLE-11 SP 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Show unstable packages

<table>
<thead>
<tr>
<th>Distro</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSE SLE-11 SP 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Perils of Uncovering Hidden Gems

Warning

Please be aware that the following packages are from unofficial repositories. That means they are not reviewed by openSUSE and may contain unstable or experimental software.

- Don’t show this warning the next time

Continue
# Uncovering Hidden Gems

- **openSUSE Tumbleweed**
- **openSUSE Leap 42.1**
- **openSUSE 13.2**
  - **official update** 4.4.15 noarch Source 1 Click Install
  - Show unstable packages

- **openSUSE 13.1**

- **SUSE SLE-12**
  - server:php:application... 4.4.15 noarch Source 1 Click Install
  - spins:invis:common 4.4.13 noarch Source 1 Click Install
  - spins:invis:rootpack 4.4.15 noarch Source 1 Click Install
  - home:ingogoeppert:SLES 4.4.15 noarch Source 1 Click Install

- **SUSE SLE-11 SP 4**

- **SUSE SLE-11 SP 3**
  - Show more packages for unsupported distributions
Wha?
This Sucks!

● There Must Be A Better Way!
Package Hub

● Provides additional packages not part of SUSE Linux Enterprise
● Allows Enterprise customers to take part of Community innovation
● Ease access with standard SUSE Linux Enterprise tools
Community Linux to Enterprise Linux

- Package Hub closes potential gap in package delivery.
- Architecture support:
  - built & tested on x86_64
  - other architectures depend on community engagement
- Packages targeting userland applications, no Kernel modules are available
- Packages in SUSE Linux Enterprise have precedence
## Architectures

<table>
<thead>
<tr>
<th>Architecture</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>x86-64</td>
<td>Required</td>
</tr>
<tr>
<td>AArch64</td>
<td>Optional</td>
</tr>
<tr>
<td>ppc64le</td>
<td></td>
</tr>
<tr>
<td>s390x</td>
<td></td>
</tr>
</tbody>
</table>
Directly available via SCC
Package Hub or just another name: Backports

- openSUSE:Backports:SLE-12
- openSUSE:Backports:SLE-15{-SP1}
· So, that was how we did Package Hub 12, then came SLE 15 ...
The fall of Babylon; Cyrus the Great defeating the Chaldean army. Mezzotint by J. Marti
· Package Hub 12 shipped binaries from 1400+ source packages...

Disclaimer: No cat shipping, only RPMs...
You know what else is cool?
Shipping binaries from ~7000 source packages!
Package Hub 15

- Derived from openSUSE Leap 15.0
- Leap sources synced into Package Hub
- Packages not available in SUSE Linux Enterprise 15 are automatically build
- Easy community involvement
  No extra step needed for Package Hub – only submit to Leap
- **Goal:** SLE 15 + Package Hub 15 == Enterprise + all openSUSE Leap packages
Package Hub 15 – what’s different

- Source from Leap used instead of Factory
- Auto inheritance from Leap – many more packages!
- Package Hub is linked to SUSE Linux Enterprise version
  - Package Hub 15 is based on Leap 15.0
  - Package Hub 15 SP1 will be based on Leap 15.1
Package Hub 15 – what’s the same

● Does not invalidate support of functionality of SLE
● No commercial support for the software
  ● We do accept bug reports and address issues on best effort basis – no guarantees – not recommended for business critical workloads!
● No dedicated QA
● No additional cost beyond SLE subscription
● Supported with SLES, SLED, SLES for SAP, SLES HPC
Package Hub Count

<table>
<thead>
<tr>
<th>Package Hub 12</th>
<th>930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Package Hub 15</td>
<td>8,850</td>
</tr>
<tr>
<td>Leap 15.0</td>
<td>11,890</td>
</tr>
<tr>
<td>SLE 15</td>
<td>11,830</td>
</tr>
</tbody>
</table>

**Package Hub 12 vs 15**

**SLE 15 + Package Hub ~ LEAP**

Based on x86_64 package data
It’s a two way bridge
You can upgrade from Leap or... go back to Leap!
SUSE Package Hub

More info:
https://en.opensuse.org/Portal:Backports
https://packagehub.suse.com

Questions:
idonmez@suse.com
Questions
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