Linux in the City of Munich (AKA LiMux)
A 2015 status update

Speaker: Jan-Marek Glogowski – Linux Client Team
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City facts

- 1.5 million residents
- 3rd largest city in Germany, 12th in Europe
- ~ 33,000 employees
  - ~ 1,000 IT personal support + admins + devs
- ~ 24,000 PC workstations
- ~ 50 operating locations
- 22 independant IT departments
  - heterogeneous infrastructure

2012: all IT employees were moved into an owner-operated municipal enterprise (it@M).
2015: most staff and services were centralised and moved to new building.
## Brief history

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tr>
<td>2001</td>
<td>IT internal migration discussions</td>
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<td>2003</td>
<td>IT: We have to migrate from Windows NT 4 (EOL). City council: What options do we have?</td>
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<td>2004-2005</td>
<td>City council: We'll migrate to Linux!</td>
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<td>Project goal: migrate 80% to Linux (~12 000 of 15 000 PCs)</td>
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<td>Tender for migration support, Linux Client Team formed</td>
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<td>2006</td>
<td>First Linux Client beta released, first PC migrated</td>
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<td>2010</td>
<td>Open Office and WollMux rollout finished</td>
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<td>Office migration and template consolidation</td>
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<td>2011</td>
<td>Half of the expected PCs are migrated</td>
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<td>2013</td>
<td><strong>LiMux project finished</strong>, ~ 15 000 PCs migrated</td>
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<td>2015-08</td>
<td>Linux is still growing in city-wide use, ~ 18 000 PCs migrated</td>
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Tech facts – LiMux release

- Current Release: 5.0
  freezed in DAK @ 2014-11-27
- Based on Kubuntu 12.04 with KDE 4.12 from PPA
  big thanks to the Kubuntu community for the backport!
- Firefox and Thunderbird ESR (patched for KDE4)
- LibreOffice 4.1+ (plus = 300+ patches) + WollMux

269 changed source packages (patched or backports)
3950 binary packages (not all installed)
Tech facts – Client management

- GOsa² – LDAP management tool (github: credativ/limux-gosa)
  Manages host and user configuration and triggers installations
- FAI (github: Ihm-limux/fai)
  Fully Automated Installation based on GOsa² LDAP data
- Client and user configuration management infrastructure
  - application preconfiguration, KDE menu generation, host settings, FAI integration, network share mounting (CIFS, Novell), printers, sudoers, roaming profile sync, Xorg configuration, USB storage devices
  - Finally (almost) completely Python 2 based
  - Reads / caches configuration from GOsa² managed LDAP
  - Please poke city to release sources as Free Software!
Release primary install targets

- **Basisclient**
  Normal user workstation, fully managed. Has almost all software installed. Menu is configured on login based on GOsa² data.

- **Notebook**
  Almost as the normal client, but with some additional config. Just useable in the citys intranet (backbone) or offline, fully managed.

- **Outback client**
  Almost standard Kubuntu release with LiMux look and feel and some additional packages. Used for external jobs, not managed. Not useable in the citys intranet.

- **Verteilserver**
  Cascadable FAI install server with local GOsa² and SW repositories but central LDAP. Used to distribute load for installations.
Snapshot from a fresh installed LiMux client Release 5.0
Release cycle 5.0 – we're soo late

- Ubuntu release LTS 12.04 (Q2 2012)
- Waiting at least for the first point release (Q3 2012)
- Port initial SW distribution server and minimal client (Q4 2012)
- LiMux development started (Q1 2013)
- Original development plan almost realized (Q4 2013)
  - But LibreOffice 4.1.2 in has unacceptable shortcomings: KDE4 broken, mail merge broken and slow, API broken since OOo 3.2.1, Macros + WollMux need adaption, LO needs fixes
- Development finished – first Beta (Q2 2014)
- Testing finished start – first RC (Q4 2014)
- Final release – 2014-12
Major problem: HW support

- 18 000 PCs, max ½ year of HW in stock
- Ubuntu Hardware Enablement Stack (HWE)
  - Backported Kernel, DRM, Mesa, Xorg, xorg-drivers
  - Supplied every ½ year until next LTS (2 years)
  - Just original HWE and next LTS HWE supported
    - Interim HWE just supported until next LTS HWE appears
- Currently: 1 HWE per Release
  - Long test cycle, all HW needs re-tests
- Future: Hardware specific HWE, just new HW has to be tested
Future plans

- Current large IT projects affecting Linux
  - Internal LDAP reorganization
  - MigMak = Kolab rollout, 1st using Kontakt on Windows in large

- Dist-upgrade 5.0 to 14.04 to get security updates until 19.04
- LiMux 6.0 based on Ubuntu LTS 18.04 (KDE5, systemd, 64bit)
- New Gosa 2.8 (github: mbenkmann/limux-gosa)
  - New infrastructure agent to handle linux systems (go-susi)
  - Download specific FAI config space as tar
Further information and contact

http://www.muenchen.de/limux ; email: limux@muenchen.de