Freiburg
IM BREISGAU

Open Server-based Desktop Freiburg im Breisgau, Germany

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FOSS Group holds shares in small companies , which primarily focus on the usage of Free Open Source Software for their projects and their customers .

Our company cooperatively uses the synergy to provide professional services and Open Source Solutions to the market .

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Initial Starting Point

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- **Gartner 4/08**: "...the complexity of Windows, its missing modularity, its hardware footprint (especially on low-end PCs) and the growing trend to web-based and other applications, whose underlying OS doesn't matter...“
- **AG IuK Position Paper 10/07**: "For this reason, the municipalities need a DP group with an overall strategy regarding the usage of open standards working as leaders, innovators and consultants, but not marketers of manufacturers' solutions. In response to customers, an orientation towards open standards has been propagated but not lived. Efforts at standardization for reduction of costs are pushed, but not by the DP groups. The integration of procedures and the development of new solutions occurs at the level of products (e.g. SAP) and not of standards. The dependency on manufacturers accompanying this leads to disadvantages with regards to economics (monopolization) and quality (no one can do everything).
- **City of Freiburg**: With the resolution of the municipal council of the 26th of June 2007, the City Management of Freiburg will apply the "Open Document" format in addition to the PDF format as a standard. The implementation of this resolution occurs with the migration of 2,000 computers from Microsoft Office 2000 to "Open Office".

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OSBD Definition

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OSBD - Open Server-based Desktop is an integrated, redundant server infrastructure. It makes virtual machines available, which can be accessed both internally as well as from the Internet. OSBD covers all of the aspects of an Open Source IT environment.

- OSBD Desktop Virtualization
- OSBD Identity & Access Management
- OSBD Printing- and Data-Management
- OSBD OpenOffice.org Management

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Funktion of **OSBD**

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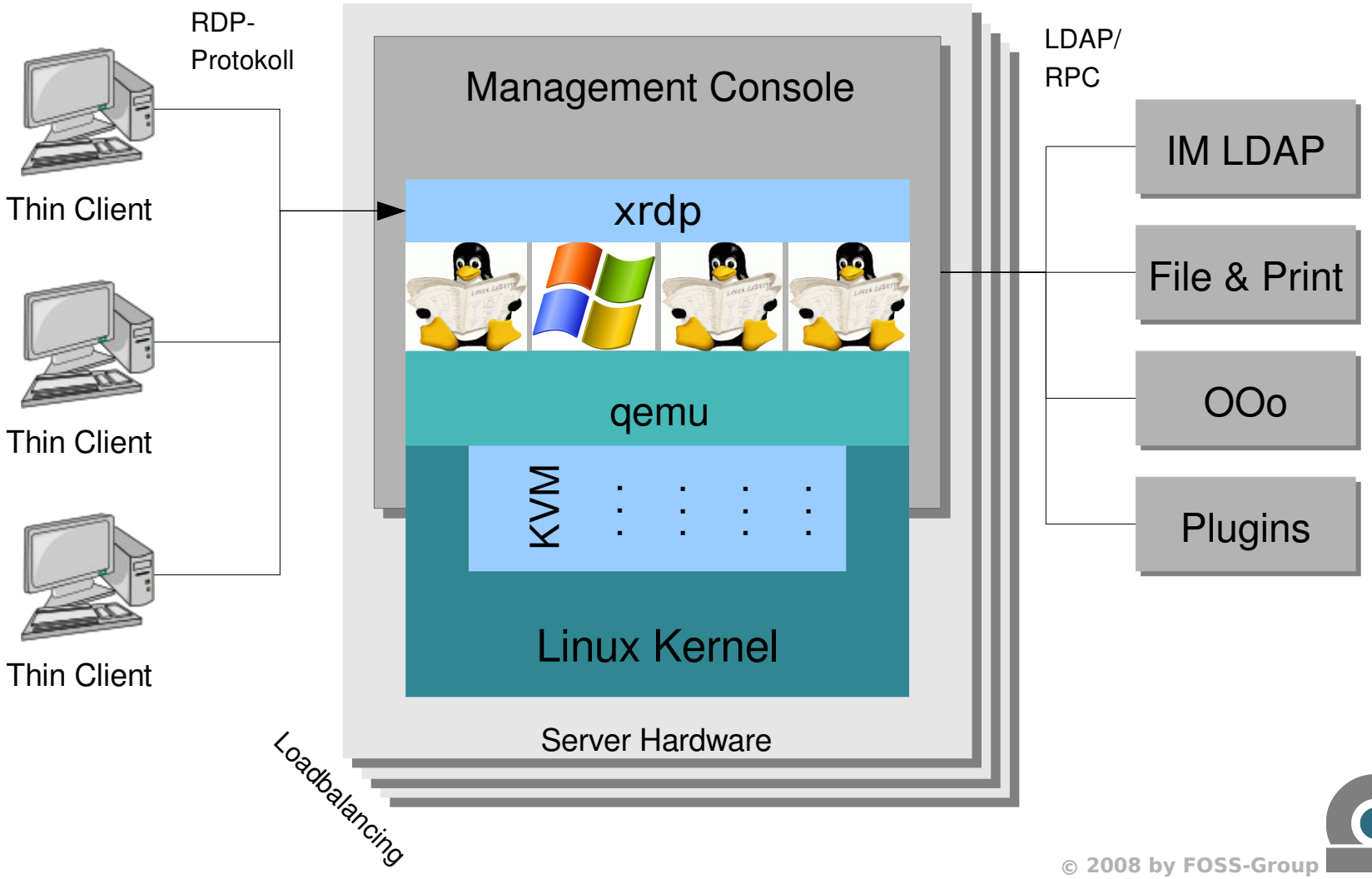

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OSBD Key Factors

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- A Pure Open Source Solution
- Realisation with existing FOSS Projects
- Free of Licensing, on EUPL, osor.eu

- Distribution Independence
- Client OS - Linux, Windows or OS/X
- Open, modularly developed, and clearly specified components providing supplier independence
- Highly Scalable
- Centrally Configured by Web Interfaces
- Multi-lingual

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OSBD Architectural Overview

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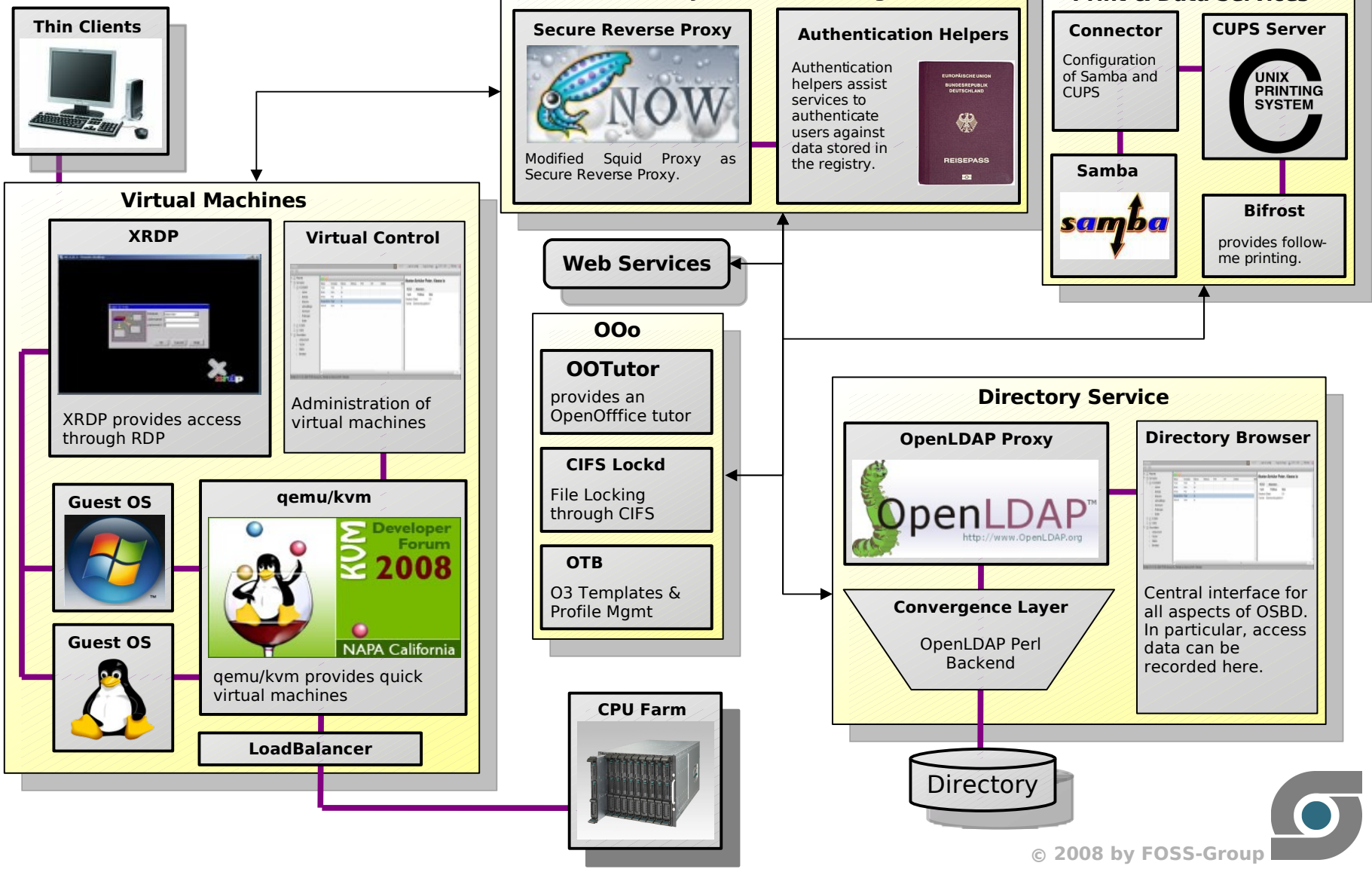

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OSBD Virtualization

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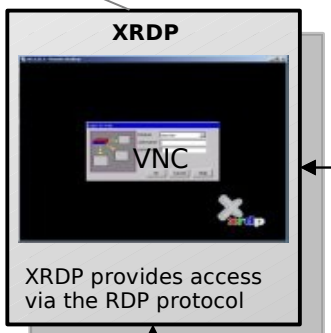
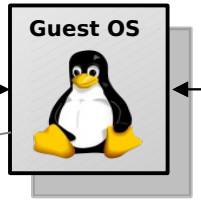
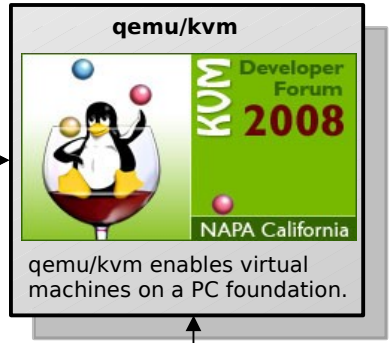
Authenticated users receive a graphical listing of the virtual machines available to them. This list may be affected by their credentials, but cannot be re-assembled due to the location of the thin client. Machines already in use, which do not support concurrent access, indicate that here. The connection to the virtual machine occurs internally through VNC. The guest operating system doesn't need to have either special software installed or direct support for VNC.





The OSBD control console communicates with all participating guest systems, the underlying host systems (Linux with qemu/kvm) and LoadBalancer. If necessary, a so-called "live migration" will be performed, meaning a running client is switched to another CPU. What is unique about this is the ability of kvm to be able to perform outside of the host boundaries, meaning the starting CPU and target CPU don't need to be in the same physical machine.



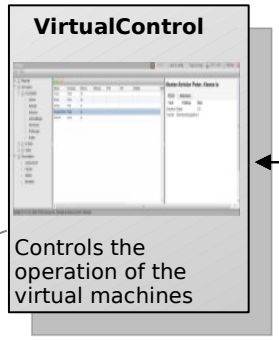
There are several types of virtual guest systems:

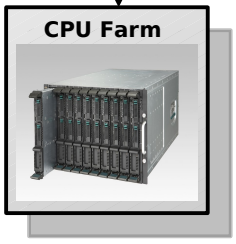
- True machines, which have their own data volumes.
- Persistent ghosts, which depend upon a (dedicated) true machine. Ghosts only save those changes affecting their true machines and can be reset to their default settings, which are defined by the true machine.
- "Flying Ghosts" are automatically reset to their default settings when restarted.

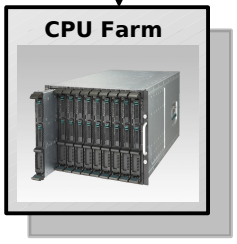
Die Thin Clients communicate with the virtual systems using RDP protocol. According to the client OS used, it is possible for several thin clients to connect to the same virtual machine at the same time.

RDP

Http







The administration and status inquiries about the virtual machines operate through a web interface. Here, it is possible to start, freeze, create, copy or even backup the machines. It is also possible to assemble the virtual machines into a virtual network, so-called "groups". The utilization capacity of the CPU Farm can be observed from here, both totals and for each CPU.

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Identity & Access Management

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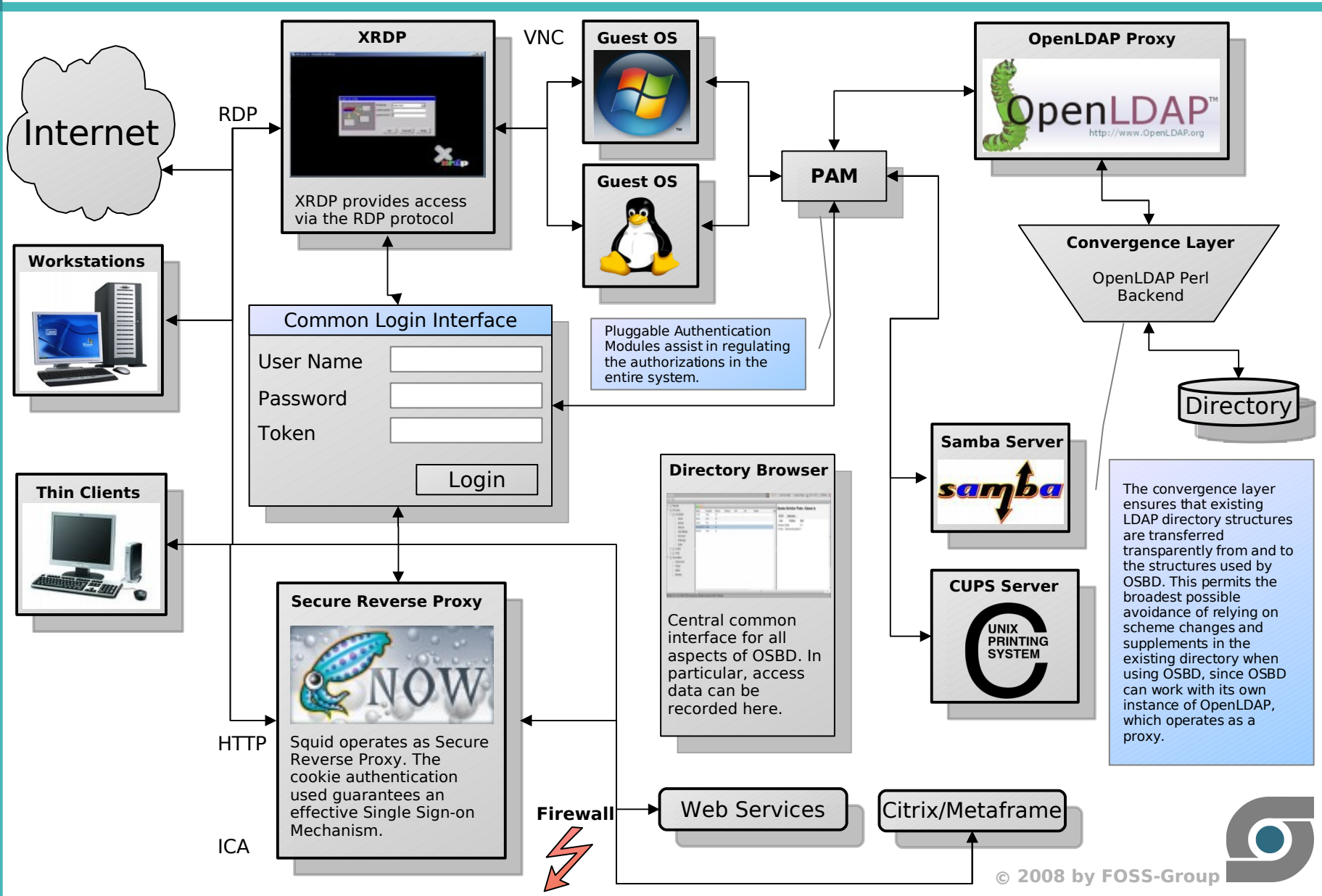

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OSBD Printing

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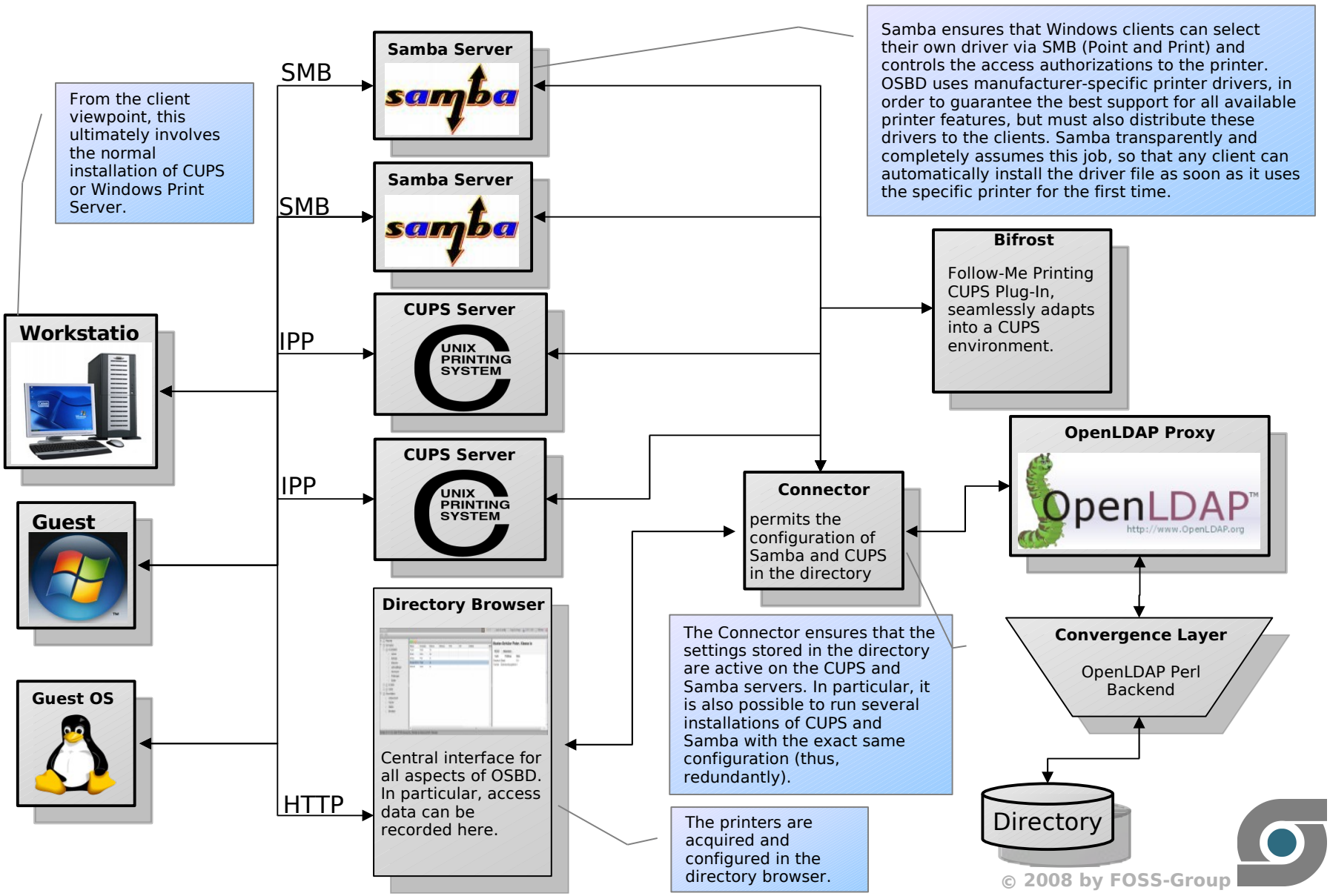

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OTB Module

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Features

- Authoring Tool for the Creation of Templates
- O^3 Add-On with Customized Menus, Dialogs and Toolbars
- Inclusion of User Directories and Other Data Sources (LDAP, Databases)
- Identity Management
- Connection to Applications
- Centralized Management of O^3 Profiles
- Automated Distribution of Templates

In Planning

- Integration into Document Management Systems
- Workflow Features

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Roadmap OSBD

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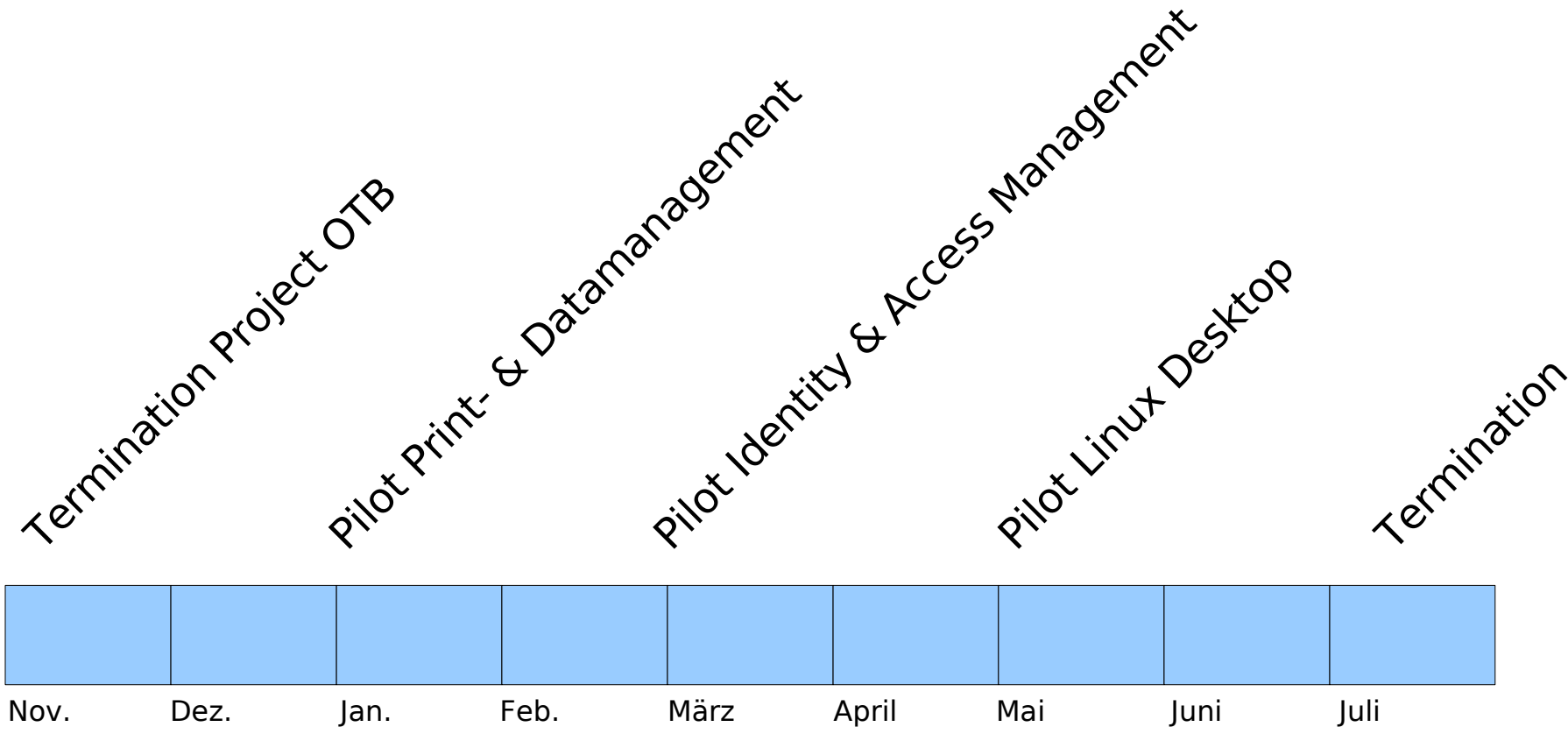

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Real Open Source

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