

## Case Study – Linux Server for the City of Salzburg

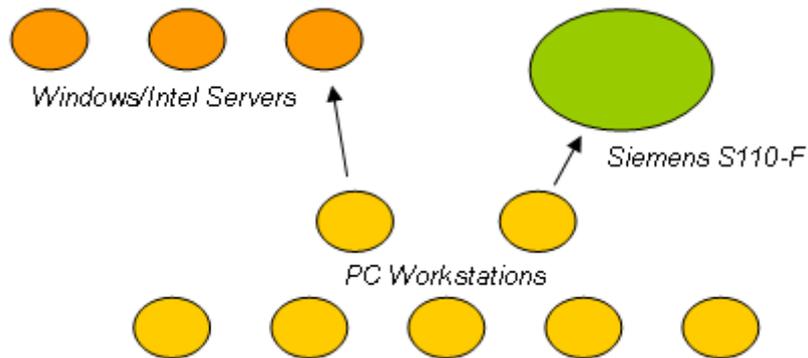
The city of Salzburg migrated successfully to a Linux based server replacing a proprietary Siemens mainframe system. This migration example shows an integration of an open source software system into a proprietary system environment resulting in economic and technical advantages.

### Introduction

On November 3, at the Open Source Software Conference for public administrations in Vienna – Austria, Roman Breidfuss who is the person in charge of IT from Salzburg's city administration, presented details of the open source migration process of its city.

The municipal department 06 is the internal IT service provider of the city and is responsible for the support of about 1.250 PC-workstations.

In 2002, 1250 workstations of the municipality were running under the proprietary operating system Windows XP or Windows NT connected with Windows/Intel servers responsible for office automation tasks (Microsoft, Fabasoft software products, etc.) and with a Siemens S110-F server responsible for finance and human resource management tasks based on software products from SOFTWARE AG.



Due to the discontinuation of the support for the Siemens S110-F server, the IT-department had to replace the system and to find an adequate alternative.

### Migration Scenarios

The IT department of the municipality analysed three migration scenarios to replace the Siemens server and came to the following results.

#### New Siemens Server

A new or Siemens server would bring advantages in terms of performance but the

migration team emphasised numerous disadvantages regarding price of purchase and maintenance, duration of the maintenance contract and license terms. Furthermore the lack of integration of a new host was criticised.

### Windows/Intel Client-/Terminalserver

A lower price of purchase in comparison to a new Siemens host was explained as the main reason to insert a proprietary Windows/Intel Server by Salzburg's IT department. Technical disadvantages and migration effort were particularly seen in a change-over of the character set and the batch-jobs. A migration to a Windows Server would also come along with an allocation of the software and would lead to a creation of a server farm.

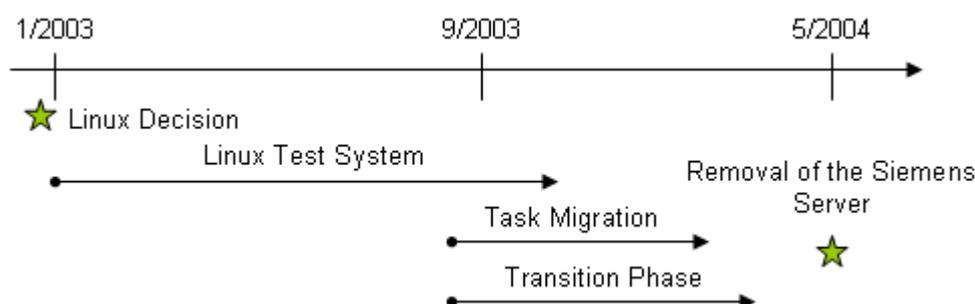
### Linux/Intel Server

The analysis of a Linux/Intel server alternative revealed, like the analysis of the Windows/Intel solution, economic advantages due to a lower price of the required hardware, software licenses and maintenance. A change-over of the character set and the batch-jobs is also required.

## Migration Process

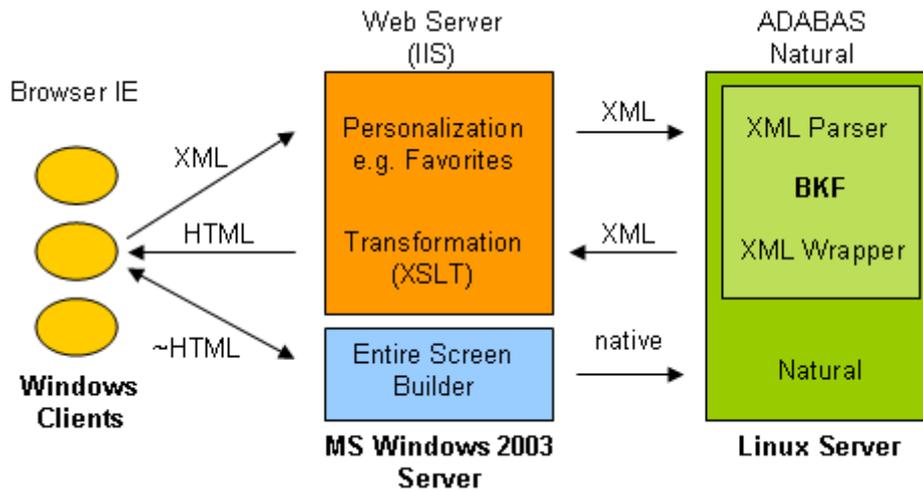
On **November 2002**, the city senate reached the decision to use a new server system based on Intel processors. By **end of 2002** the internal IT provider of the municipality evaluated Microsoft Windows and Linux operating systems on Intel based systems to analyse the advantages and disadvantages of proprietary and open source system use within the IT environment of the municipality. Due to positive results of the open source scenario, the senate decided to replace the Siemens S110-F server and to migrate to a Linux based server system.

In cooperation with external open source experts and an internal created migration team, a Linux based test system was built up. At first, human resource management applications were integrated into the new server in the second half of the **third quarter of 2003**. Further tasks followed. The migration was completed in **May 2004** - the Siemens server was removed and the new system was successfully put into operation.



## Architecture of the new Server System

The Siemens SF110-F server was replaced by an Intel based Linux server that operates together with a Microsoft Windows 2003 server.



## Overall Impression of the Migration

The IT department of the city of Salzburg announced at the conference in Vienna that the new Linux/Intel based server is a condign mainframe replacement. The migration team emphasised positive technical aspects regarding operational availability, performance and batch processing.

The unproblematic integration of the new server into the existing hardware and Windows software environment was lauded by Roman Breitfuss as well as new feature and expansion possibilities (e.g. Single SignOn and FTP) that can be introduced with little economic effort.

Regarding the economic aspects, the migration to the new system promises tremendous cost saving potential. The city of Salzburg expects to save about €50.000 in 2004, €250.000 in 2005 and €450.000 (accumulated) in 2006 by the integration of the new open source based server.

Along with the introduction of the new server came the exigency to gain open source know-how through further training of the employees. External support was also needed for a successful migration.

The new system demonstrated its functionality and stood the test of time during the election of the municipal council, the parliament and the mayor on March 7, 2004.

## Evaluation

The integration of an open source based system into the city administration of Salzburg is a good example for a successful server sided migration. The Linux server is the first system of the municipality that uses open source software as operating system and showed the city the advantages of using free software regarding economical and technical aspects. The successful migration can be seen as a motivation for further open source projects. The city of Salzburg announced to favour open source software if its functionality is equal to proprietary software. A migration to Linux and open source office applications on desktop workplaces is not forced – not yet!

**Further Information:**

City of Salzburg - <http://www.stadt-salzburg.at/>

Conference presentation - <http://staedtebund.wien.at/de/oss/referate/breitfuss.ppt>

Open Source Software Conference - <http://europa.eu.int/idabc/en/document/3416/469>

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*27 January, 2005*

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