

OBS Virtual Picture Database

Concept Guide



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INTRODUCTION 4

OVERVIEW 5

 THE BIG PICTURE..... 5

 PDB DATA COMPRESSION 6

 PDB SECURITY..... 7

 PDB FORMS 8

 PDB DATABASE DESIGN..... 9

 SOUND FILES & VIDEO CLIPS 10

 PDB AS VIRTUAL MACHINE..... 11

SYSTEM MANAGEMENT GLOSSAR 12

For Marvin, Deborah & Viktoria!

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Introduction

You might have already heard, that „*a picture says more than thousand words*“.

Of course, to describe a colourful picture of an item can be a verbal challenge or even a mission impossible.

Even if written words are the most efficient and easiest way of communication, you have to admit, that there are many cases, when words are not enough. Written Words require, that the reader understands the language and rely on the fact, that there is a basic understanding on the subject between writer and reader.

In today's world, more and more people prefer taking pictures with their digital cameras, rather than wrting long reports. A digital picture can easily be transferred to a computer and be stored in a very compressed jpeg-format.

Furthermore, with HTML technology we have a standard functionality to upload and display those pictures. However, it is still quite complicated to store binary information in an Oracle database, make up the corresponding forms and implement the appropriate user security.

The OBS Picture Database is a out-of-the-box solution, which will do the job for you from the very first day, it is installed.

Since End of 2008, the OBS Picture Database is also available as Virtual Machine for both MySQL and Oracle Databases. It has also been migrated to SLES 10, successfully !#~

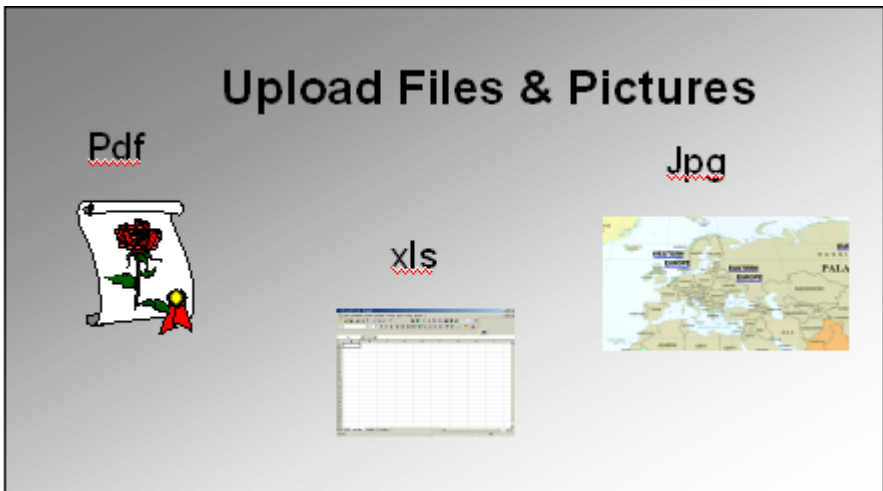
Overview

The Big Picture

The Picture database is an *Out of the Box Database*, that can store any kind of digital files, i.e. Excel Sheets, PDFs or digital Pictures or even films. The files are automatically indexed, categorized and compressed, which reduces disk space down to a 5th.

Though, users can't modify the uploaded files, they can download and alter them and upload a new version.

To view the digital documents and pictures you only need to click the button 'Open File'.

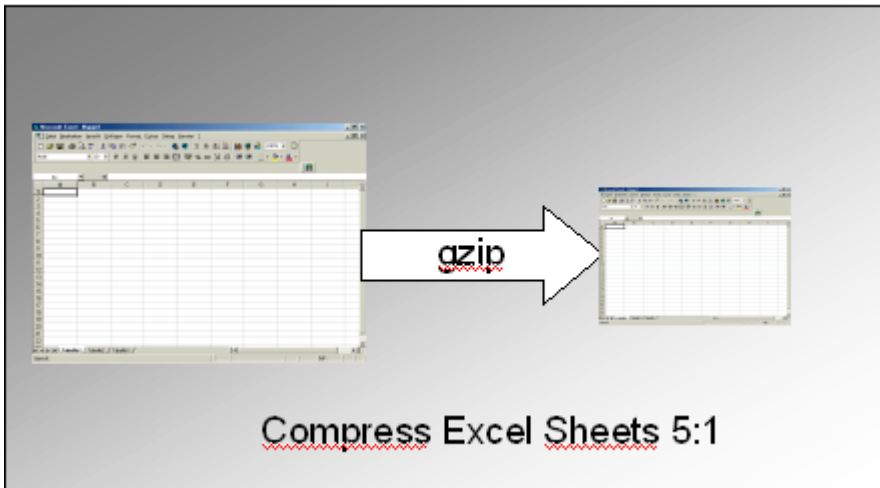


The Picture Database can store any kind of digital file.

PDB Data Compression

All Sorts of Files like Excel Sheets, Word Documents or Power Point Presentations are automatically compressed and decompressed on the fly.

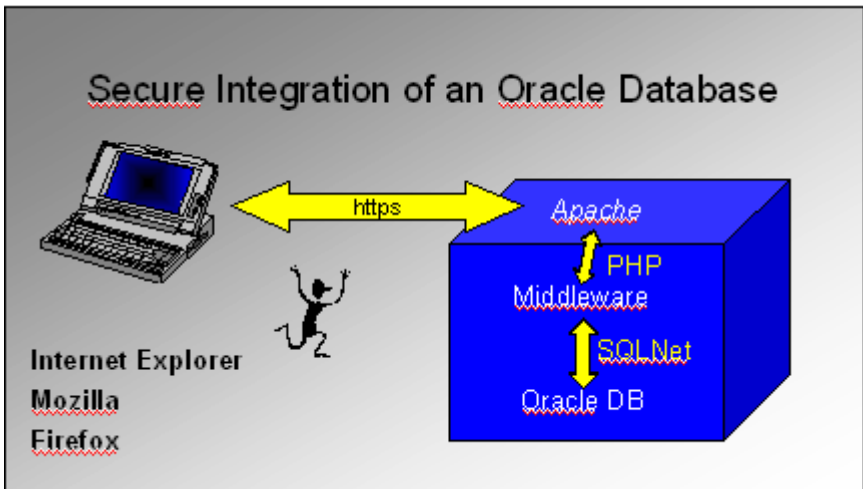
With PDB Data Compression, the *Virtual Picture Database* can grow up to 1 TByte on a 200 GByte virtual disk.



On the Fly Data Compression

PDB Security

The Picture Database is a very secure Database, using https for encrypting all data traffic.



PDB Secure System Architecture

Each User has to login with *Userid* and *Password* and enter a *form password* to upload or download the files.

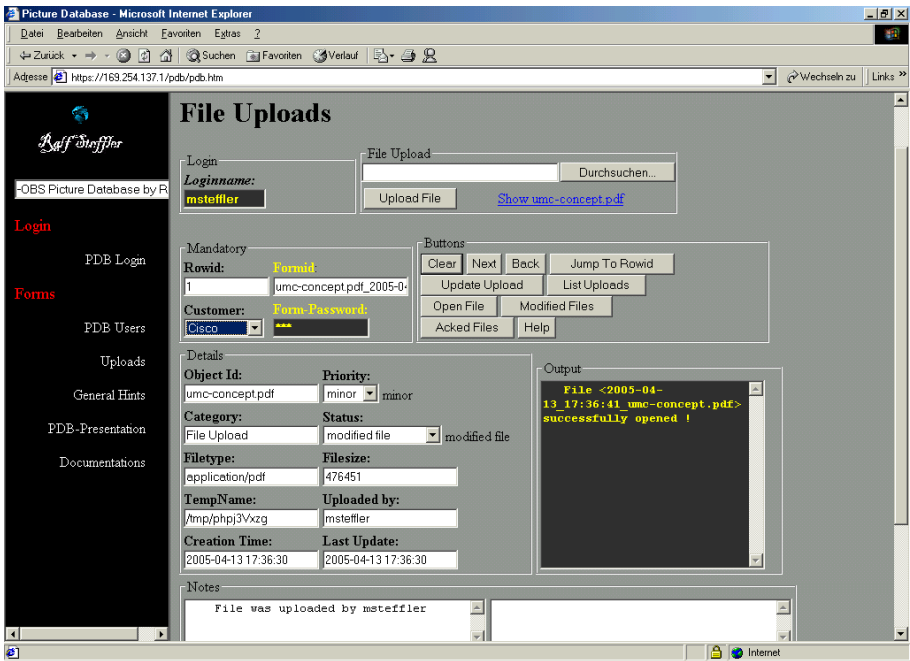
User Id: <input type="text" value="eis"/>	Language: English
Password: <input type="password" value="*****"/>	Login: <input type="button" value="EIS Login"/>
Output Window: Hello Eis Cold You are logged in 22-09-2006 21:02:49 ----- You are moving on Eis	

PDB Login

PDB Forms

The Picture Database Forms are based on standard HTML technology.

Thus, you can basically use any browser, such as Internet Explorer, Firefox or Mozilla, to run them. Of course, the browser can automatically start the corresponding program to view the digital file.



The Picture Database Upload Form

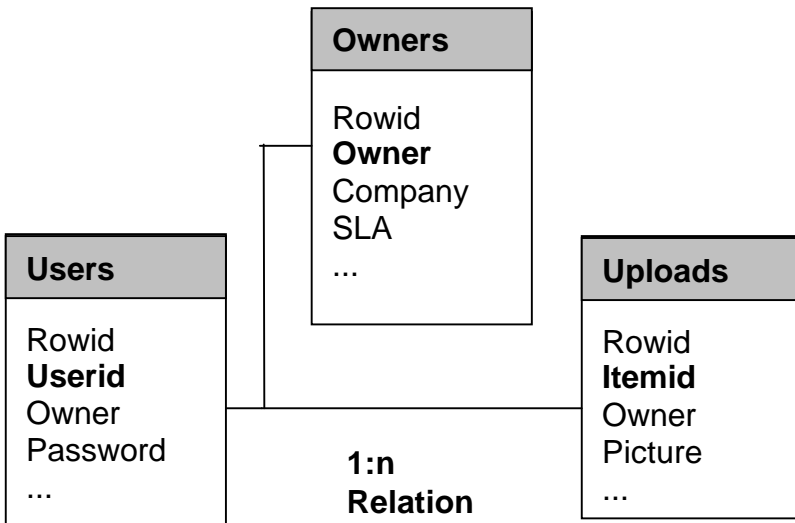
PDB Database Design

The PDB relational database is based on a MySQL or Oracle Database. Thus, it incorporates standard SQL-database features as:

1. *SQL-Interface*
2. *Tables & Indexes*
3. *Mutiuser Access*

The Oracle database belongs to the fastest SQL-databases of the world. The PDB database can easily store some million records at best performance, i.e. the response time is always under 3 sec.

On a 1 CPU Computer, the PDB is able to process more than 100.000 Inserts per hour, while users working on the PDB database.

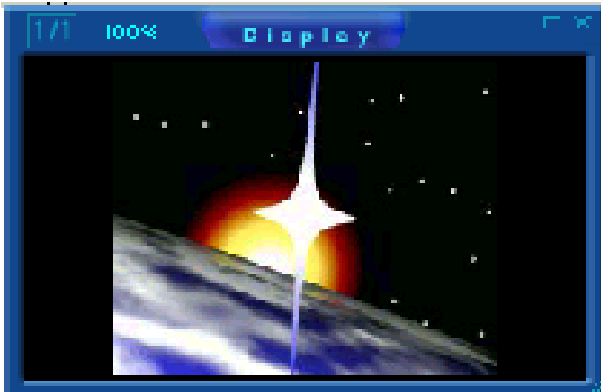


The PDB database main tables.

Sound Files & Video Clips

Of course, you can upload sound files and video clips, which will be automatically timestamped, categorized and labeled.

However, especially video clips require at least DSL speed to watch them online.



Picture this!

PDB as Virtual Machine

Basically, a virtual machine is a computer in a computer. For example, you can run several linux boxes on a Windows XP or Vista computer. The linux Boxes could run different distributions and/or versions. Thus, you can run Red Hat and SuSE simultaneously on a Windows Computer.

To run a computer in a computer is an amazing experience, which is called an emulation. Of course, an emulation is always slower than running the operating system directly on hardware. However, the additional functionality of running XP and Linux simultaneously is amazing.

Running virtual machines rather than real computers saves you a lot of money, time and space, especially, when you run a lot of software tests or develop software on different platforms. Virtual machines reside in a directory, which can easily be copied or moved to another location. You might even run the Virtual Machine from an USB disk on a Notebook.

Virtual Machines can easily be closed and restarted in seconds without booting the operating system. OBS provides its Picture Database as an Out of the Box Solutions on DVD or USB Stick.

You only need to copy the OBS virtual machine from DVD to your hard disk and start it using the VMware Player, which resides on the same media.

System Management Glossar

Bit

Smallest information Unit

Byte

Smallest data transfer unit of 8 Bits, that make a character.

Computer

Sophisticated System, which can run various software.

Ethernet

Very popular LAN Topology, which runs on 10, 100 and 1000 Mbit/sec.

Firewall

Device, that controls IP-Traffic.

GUI

Graphical User Interface

Hub

Central Device, which all devices on a lan segment connect to.

Internet

World Wide IP-Network

Internet Protocol

Communication Protocol, which runs on the internet.

Network Node Manager

Sophisticated Software, which uses SNMP to manage IP-Devices

Operating System

Basic Software, which drives the hardware of a computer.

Picture Database

Database that can store and display pictures.

SQL

Standard language for querying relational databases.

Switch

Sophisticated Bridge, that is designed for maximum speed.

World Wide Web

Virtual Network of WebServers, that connect to the Internet.