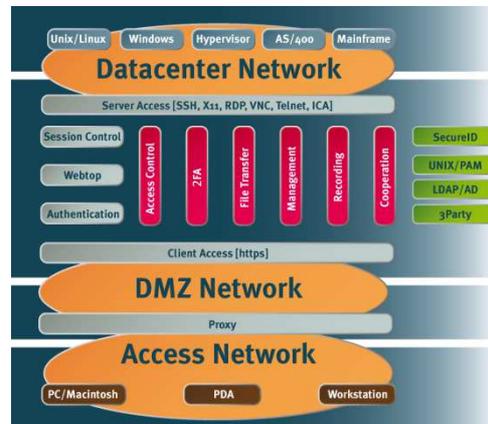


Oracle Secure Global Desktop (OSGD) provides secure and fast access to heterogeneous Linux/Unix and Windows application for users connected from the Internet or Intranet. It's also the perfect tool for system administration and IT operation and maintenance. ToolBox Solution complements with Visulox the standard product Oracle Secure Global Desktop for customers with complex IT infrastructure.

Visulox implements the following features.



**“Accessibility”** complements the feature set of an OSGD Array and OSGD Gateway with Load Balancing, Access Control and token less 2 Factor Authentication.

**“Management”** enables administrator and user groups to have a view of the current application usage. This module was developed to provide an enterprise role based view detached from the OSGD administration tool. The GUI provides views into the OSGD audit information

**“Cooperation”** provides role-based usage of the OSGD Shadow function. Thus, integration of processes for active support through external employees on live-systems using the four-eye-principle is possible. It provides many advantages: knowledge-transfer, mutual support, access control, confidence-building measures via online inspection. Also an enforced four-eye-principle called “Dual Control” is possible.

**“Recording”** defines in the central OSGD configuration that all interaction between the application and the user is recorded onto a video including keyboard entries. This information is available for analyzing at a later time using the build-in or external player. Approximately 3.5 - 10 Mbytes of data are written per hour by each recorded application.

**“File transfer”** gives the user the ability to transfer files between his desktop and the IT-infrastructure. The transfer is scanned and controlled.

**“Report”** Module generates reports about the usage: Who, what, when including granting access and file transfer.

**“Archive”** is an option to implement an automatic transfer of all videos/logged data out of the access zone into revision zone of the datacenter. This guarantees a well defined access process for all collected data.

Anytime discussions of “Fraud Actions” or “Data lost Prevention” on Remote Access Platforms are raised, Visulox is the solution to get compliant.

Visulox, from ToolBox Solution, an Oracle Gold Partner, is well accepted in the market (many customers are in the Telco industry). The solution is very robust, because it is an independent layer in the network.

## ORACLE SECURE GLOBAL DESKTOP

In a Visulox driven environment Secure Global Desktop (4.62 is recommended) is installed with secure connections as usual in /opt/tarantella. There are no additional limitations.

Features like Directory Service integration, third party authentication; intelligent array routing can be used.

The changing's in SGD by Visulox are: maximum session per XPE from 10 to 1, audit logfile, Visulox webtop with 2FA modul

## PHYSICAL COMPONENTS - PLATFORM

Visulox supports any platform which is supported by Oracle Secure Global Desktop.

## PHYSICAL COMPONENTS - DATABASE

Visulox needs for the audit data and runtime a Database. Postgres, MySql and Oracle 10/11 are supported. Visulox expects that the database is redundant.

## PHYSICAL COMPONENTS- NETWORK

Secure Global Desktop can be installed in a multi homed server, different interfaces into different network zones, so configure required security. Visulox can be installed on the Secure Global Desktop Server itself, or even better on an extra server. Recording is consuming server power. See spreadsheet for server calculation.

## PHYSICAL COMPONENTS -VIRTUAL INTERFACE

Visulox provides a common login urls including a webtop load balancing functionality on tier1. This is done via an extra FQDN/IP-Address on an extra virtual or extra physical interface. In Solaris zones the network must be an "ip-Exclusive" stack.

## PHYSICAL COMPONENTS - STORAGE

Visulox records user's interaction and documents the file transfer. The meta data is written into the database, the volume part (video, files) is written into the file store. This is mounted standard files system.

Users interaction occupies between 3.5 - 10MByte/hour per recorded application. i.e. 500Gbyte stores the recording of 10 applications running 24hours for one year.

## LOGICAL COMPONENTS - USER REPOSITORY

Secure Global Desktop can be connected to LDAP or AD. Visulox will connect to LDAP and AD (on LDAP communication) to read the users into its internal users repository. If the connection is configured, the replication is done dynamically. New user in LDAP/AD will be available in Visulox automatic.

With a CLI or the Management Desk it is possible to assign each user his access period, profile or budget.

#### **LOGICAL COMPONENTS - CONTENT SCANNING DURING FILE TRANSFER**

The file transfer works in two steps: Communication between the client via https with the inspection zone, processing with the inspection zone and the destination with sync mode, ftp, sftp or sftp+sshkey.

Depending on the communication path (upload or download) each file is send trough a shell script. The shell script can call an extra installed virus scanner.

#### **LOGICAL COMPONENTS - CRYPTED FILESTORE**

Flash files and files from the file transfer are stored encrypt in the file system

#### **LOGICAL COMPONENTS -PLAYER**

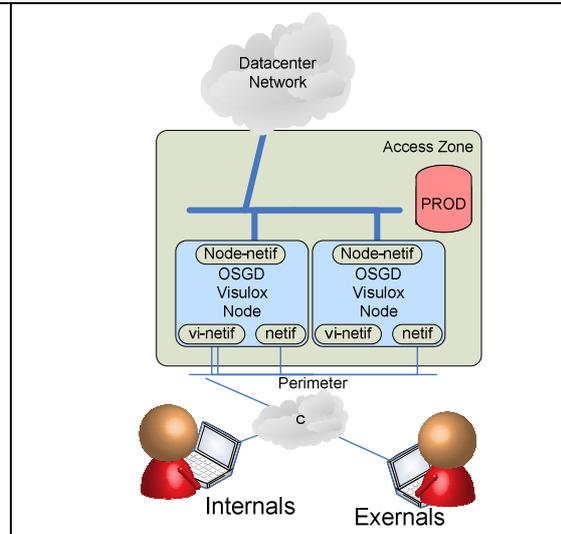
The player for the user's interactions is flash based and requires a browser with flash plug-in.

#### **LOGICAL COMPONENTS - NOTIFICATION**

Visulox has several events: failures of logins, user logs in or out, start or stops of application, token for the two factor authentication. To process on this, a shell interface is provided to call external services like, eMail or text message servers.

## EXAMPLE – 500 APPLICATIONS / REDUNDENT

- Two server (physical, virtual, zone), each 16 Gbyte RAM, 4 x 2.4Mhz-Cores, 500 Gbyte Diskspace
- External Database
- External User Repository
- Three IP Address with FQDN + valid SSL Certificates



## EXAMPLE – 800 APPLICATIONS REDUNDENT/ HIGH SECURE 7 TWO DATACENTER

- four SGD Gateway Servers, 1 Core, 4Gbyte RAM
- four SGD Servers, 6x2.4Mhz-Cores, 16 Gbyte RAM
- four Visulox Server, 6x2.4Mhz-Core, 16 Gbyte RAM
- External Database
- External User Repository
- six IP Address with FQDN + valid SSL Certificates
- reliable communication link between datacenter

