LBINT

LiveBox Srl does not release declarations or guarantees about this documentation and its use and decline any expressed or implied commercial or suitability guarantee for a specific purpose. LiveBox Srl reserve one's right to review this publication and to make changes to the content, anytime, without any obligation to notify it to any person or entity about that revisions or changes.

In addition, LiveBox Srl does not release declarations or guarantees about any software e in particular does not recognise any expressed or implied commercial or suitable guarantee for a specific purpose. LiveBox Srl reserve one's right to review this publication and to make changes to any LiveBox software part, anytime, without any obligation to notify any person or entity about that revisions or changes.

LiveBox is a private cloud software that allows you to store, share and edit data stored in a corporate datacenter offering an high security level. It is a multiplatform system accessibile from every mobile and remote device that guarantees business continuity and protects corporate files at all times.

For further details regarding LiveBox platform functionality and the use of its applications we ask you to refer to our web site: http://www.liveboxcloud.com and to the technical documentation contained in it.

LiveBox Support Team

Index

1. LIVEBOX, A PRIVATE FILE SHARING

LiveBox is a private file sharing platform with a client/server architecture. The server is located inside of the customer infrastructure, ensuring privacy and security of the data.

Having an internet connection with public IP (or recorded on a dynamic naming service) it is possible to guarantee accessibility from remote. It can be realized from standard compatible browsers HTML5 (IE 10, Firefox, Chrome, Opera, Safari), from OS Android systems (4.x), from iOS systems (from 6.x), from Windows systems (from XP SP3, 32 bit or 64 bit), from Mac OSX (>= 10.7). During 2014 will ensure the platform support Windows Phone 8.

The paradigms that lead to our development platform are two:
- The installation and the use inside your own hardware infrastructure.
- Sharing contents, in a private and secure way, without files relocation.

2.   INTEGRATION

2.1   LDAP AS AUTHENTICATION

LDAP protocol defines the method of the access to the client level server data.
LiveBox is integrated with an authentication system based on protocol RFC 1777[1] LDAP.

LDAP standard is fully utilized in the OS Unix and Microsoft to manage contents related to the organizations that can be represented by a hierarchical tree scheme.

In Microsoft, LDAP protocol is generally utilized in the Active Directory services for the management of the issues related to a domain Microsoft architecture (PC, Server, Printer, Share, Users, Groups, Organizational unit, Subdomains). Every LDAP object can be characterized from different elements. For example, the user can be linked to an email account, a telephone number, all membership groups.

LiveBox is able to offer authentications to the external applications able either to interface with LDAP or to certify its own users coming from LDAP database.

1. Security

   If you choose to utilize an external authentication source and identity management based on LDAP, users' passwords and credentials are not stored inside on LiveBox.

2. More systems, same credentials

   LiveBox offers a lot of advantages in terms of management of interconnected applications with it. It is possible for example to utilize your own username and password to access to your own PC, your own LiveBox AGENT and to your own corporate mailaccount.

3. Better and quickly

   - To semplify password management: more is password number to manage, higher is the possibility that are utilized similar password and it is easier to store, decreasing security level;
   - To semplify access management to the different services;
   - To semplify the management and definition of security policies.

---

[1] http://www.ietf.org/rfc/rfc1777.txt

3. ENTEPRISE SERVICE BUS

The process that leads to the LiveBox development is oriented to the realization of applications that are innovatives, secures and scalables. In this path our partner have an important role in this evolutive path .

To make LiveBox development more efficient and cooperative, our team has begun a process that will allow the fully compatibility with MuleESB.

MuleESB is an Enterprise Service Bus, SOA oriented, able to manage the communication and external services integration with our platform. MuleESB Framework development allows, in a simple and immediate way, the distribution of specific applications for LiveBox and the module extensions of preexisting modules in our architecture.

The following image describes applicative layers and its interconnections.
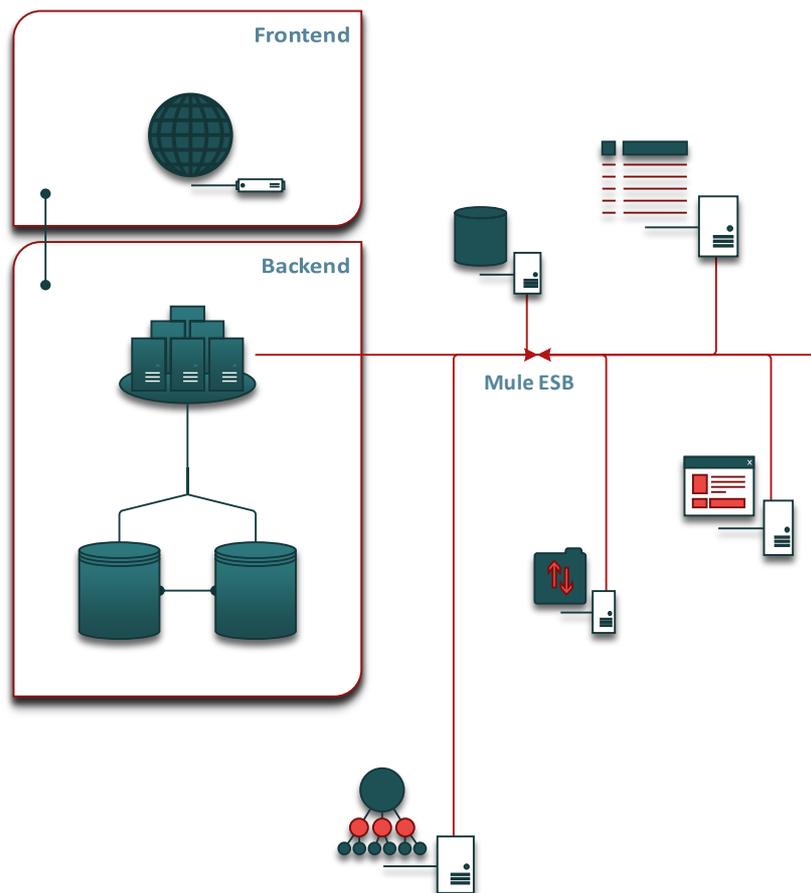
As represented in the image, MuleESB (the ESB that LiveBox utilizes) is represented like as a backbone through wich transfer software services and application components. It is connected with LiveBox backend and, through a message routing system, the infrastructure can listen on implementation to install after.

The main MuleESB characteristics are:

1. **Service creation and hosting** – Exhibit and host services reusable, using MuleESB as a services container.
2. **Service mediation** – Protect services from formatted messages and protocols, separating the business logic from messaging, and enables the location-independent service calls.
3. **Message routing** –allocates, filters, joins and enables a sequence on messages based on contents and rules.
4. **Data transformation** – exchanges data through differents transport formats and protocols.

3.1   TO EXTEND LIVEBOX FEATURES

MuleESB can be utilized like an extension instrument. In this case is possible to develop plugin, supervision instruments, and/or other applications to connect to the bus to communicate with the infrastructure.

The development of the integration components can happen through instruments supplied from MuleESB SDK[2]

The IDE recommended is Eclipse.

---

[2] http://www.mulesoft.org/documentation/display/current/Mule+Fundamentals

4. LIVEBOX API

LiveBox shows a big services quantity REST utilized like API through HTTP POST. The format utilized is JSON, either in request or response.

4.1 CUSTOM CLIENT DEVELOPMENT

Through the utilize of LiveBox API is possible to develop unofficial client. The purpose of this kind of realization can be an ad-hoc client referred to the user demand, or to write an application semplified and/or limitated in accordance to the official one.

This is the list of the API availables and usables:

- Login
    1. services/Login.php
    2. services/LoginAuthPin.php
    3. services/RefreshToken.php
    4. services/GetDomainList.php

- Logout
    1. services/Logout.php

- List
    1. services/List.php

- Download/Upload
    1. services/FileDownload.php
    2. services/FileUpload.php

- Crud
    1. services/CreateFolder.php
    2. services/Delete.php
    3. services/Rename.php
    4. services/Move.php
    5. services/Copy.php
    6. services/UnDeleteFile.php

- Trash
    1. services/GetDeleted.php
    2. services/PermanentlyRemove.php

- Share
    1. services/Share.php
    2. services/GetUserGroups.php
    3. services/GetUsersInGroup.php
    4. services/GetExternalShared.php
    5. services/GetMyShared.php
    6. services/GetShared.php
    7. services/Unshare.php
    8. services/GetSharedUsers.php
    9. services/RemoveShare.php
    10. services/GetLink.php

- Crypt
    1. services/FileCrypt.php
    2. services/FileDecrypt.php

- Categories
    1. services/GetStandardCategories.php

- Mail
    1. services/imap/GetAccountList.php
    2. services/imap/ImapAttachmentDownload.php
    3. services/imap/DeleteAccount.php

- Network Share
    1. services/samba/GetAllSambaShare.php
    2. services/samba/ImportFromSambaShare.php
    3. services/samba/ExportToSambaShare.php

- Search
    1. services/SearchUserAndGroup.php
    2. services/SearchFile.php

- Info
    1. services/GetFileInfo.php
    2. services/GetApplicationInfo.php

- Versioning
    1. services/GetVersioning.php
    2. services/RestoreVersioning.php

For the API whole list visit the specific technical documentation.