



ARAHE SOLUTIONS SDN BHD

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# FaçadoCollab™ Technical Whitepaper

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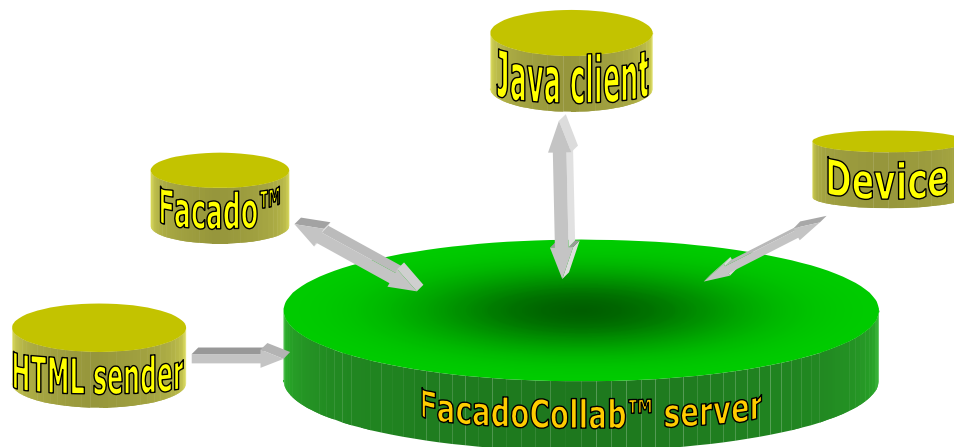
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## Introduction

FaçadoCollab™ is a patent pending Message-based framework that allows real-time collaboration between different parties on the Internet. Real-time here means that there is no delay (network latency excepted) between the moment the message is sent and the moment the other party receives it. This is unlike HTML based collaboration systems that require the user to refresh his page to view the changes in content.

With FaçadoCollab™, it is possible to build applications that connect users on the Internet and allow them to exchange information instantaneously or receive update from the server in an asynchronous manner (pushing of information).

## Architecture



FaçadoCollab™ consists of a server side framework and a client component.

The server framework is responsible for handling the messages and routing them to different users.

The client component is responsible for sending and receiving messages.

Both components (server and client) are built on the Java technology, the server using the Java Servlet technology and the client side using a java runtime environment (java 1.1 and above). Typically, the client executes in an Internet browser (Java 1.1 or java 2), a desktop computer or a device (Personal Digital Assistant or Hand Phone).

An HTML page can become a limited client as it can send messages but cannot have information pushed to it without the help of the java client (small applet embedded in the HTML page).

### Messages

FaçadoCollab™ is a message-based framework. Each message contains the following information:

- The user identifier of the sender
- The list of user ids of the recipients
- The data, formatted using XML
- The type of the message
- The time and date when this message was sent
- Comments

The type of message is particularly important because rules and dispatching mechanisms are based on it.

For example, in order to receive a message of a specific type, a user must subscribe for this type of message.

### FaçadoCollab™ Server

This software component, based on the Java Servlet framework, is responsible for handling all the messages that transit between different parties.

It keeps track of all the clients that are currently connected and the type of messages that they are ready to receive.

Based on this information, the server is able to rout messages to all the recipients.

Default business rules are implemented as part of the server framework, but custom business rules can be plugged.

This is especially the case for rights management and message persistency: developers can write their own adapters to verify rights or save the messages in a database, depending on certain business rules that are particular to the application.

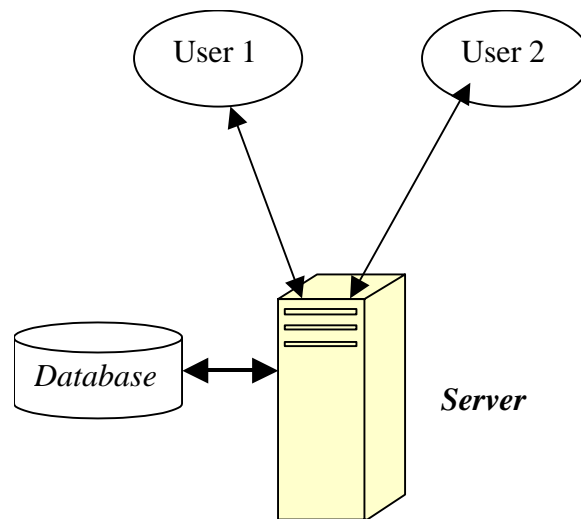
The default behavior applicable to sending of message is that, if the user is logged in, the message is routed to him, whereas if he is not logged in, the message is saved in database for future retrieval when he logs in again.

## Deployment Configurations

In order to scale with the business, FaçadoCollab™ server can be deployed in 3 types of environments: standalone, clustered and distributed version.

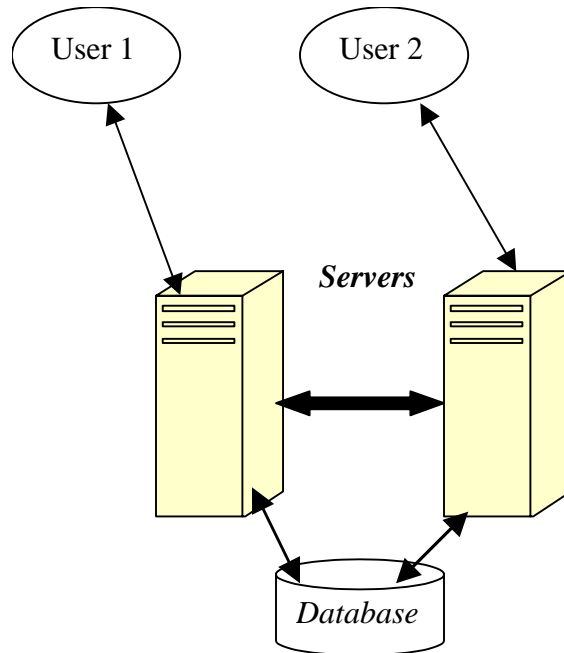
### Standalone Version

In this configuration, there is only one FaçadoCollab™ server. The server keeps track of logged in users and routes messages directly to them.



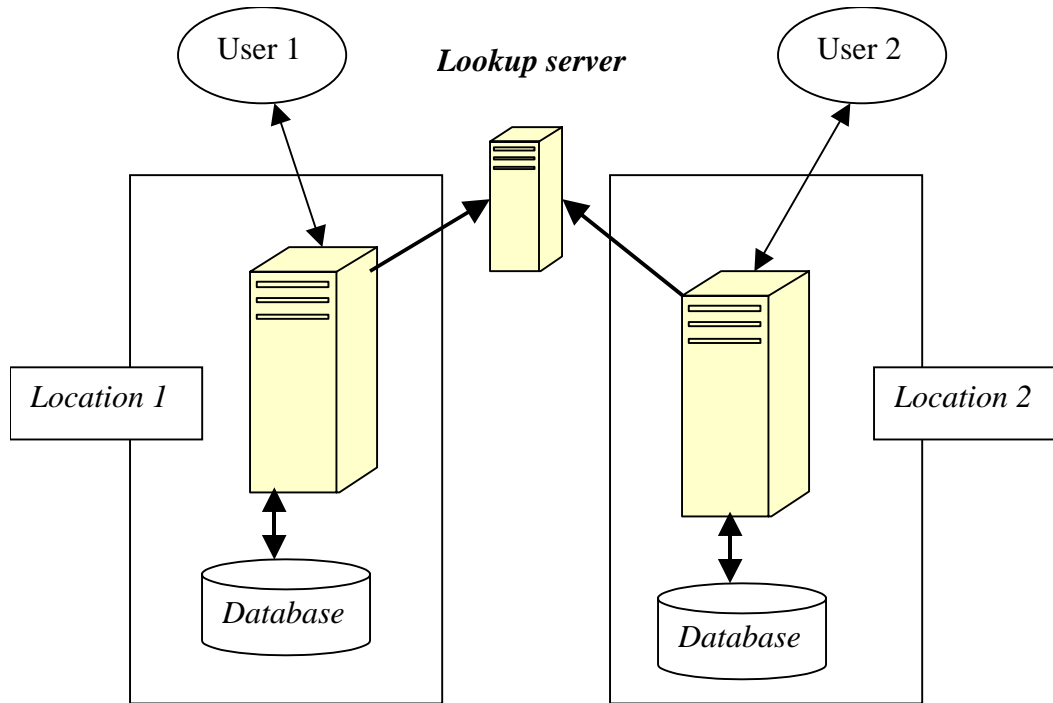
## Clustered Version

In this configuration, several servers are clustered to offer more scalability. Users can seamlessly connect to different servers and the routing of messages between servers is done automatically.



### Distributed Version

In this configuration, several servers, in different locations, are used to host the application. Users are likely to connect to any of the distributed servers, and messages are routed through these different servers seamlessly for the user. This is made possible by the use of a lookup server that will establish the link between the different servers in the distributed environment



### FaçadoCollab™ Client

This software is responsible for connecting to the server, sending, receiving and dispatching the message to application components that require this message. It is also responsible for informing the server of the types of messages that the application is ready to receive.

Application components written on top of this framework can register for a specific type of message, and when such a message is received, be notified with the content of the message.

FaçadoCollab™ client can be embedded into a small applet in order to give push functionality to an HTML application.

### FaçadoCollab™ and Façado™

When coupled together, Façado™ and FaçadoCollab™ allow businesses to build highly interactive, event-driven applications where users can exchange all types of messages.

The interactivity of Façado™, the real-time exchange of information and push capabilities of FaçadoCollab™ bring the Internet experience to another level.

Sharing files, instant messages and even user interface widgets (for instance, a calendar widget that both parties can view and modify at the same time) are some of the possibilities offered to the users.