

Design of The Protecting Information Brokerage System Against Intruders

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Abstract

Information Brokering Systems rely on brokers for the control and access to host systems, protection of transmitted data - like privacy of data location and data consumer; but if the brokers itself are functioning improperly then privacy can be leaked out by metadata such as query and access control rules exchanged within the IBS ,so privacy of brokers is overridden, thus the architecture shown in this design phase approach helps to preserve privacy of multiple persons routing decision among a selected set brokering servers in the IBS

Keywords

Brokering Server, Metadata, Privacy, Routing Decision

I. Introduction

By allowing many brokers to be connected together into a network, we can have many clients as we wish all logically connected together - and running as many message brokers as we need based on the number of clients and network topology. For the sensitive data and autonomous data providers, a data-centric overlay is the more practical and adaptable solution consisting of data sources and a set of brokers that make routing decisions based on the content of the queries.

Data sources are loosely federated for providing unified and transparent data access by connecting through a set of brokers and queries are sent to local broker and routed according to metadata till the right data server is reached

II. System Architecture

The System Architecture of Information Brokering Systems is shown in Fig (1)

A. Modules

Information Brokering System Architecture consists of following modules

- Data Owner
- IBS Router
- Remote User
- Brokering Server

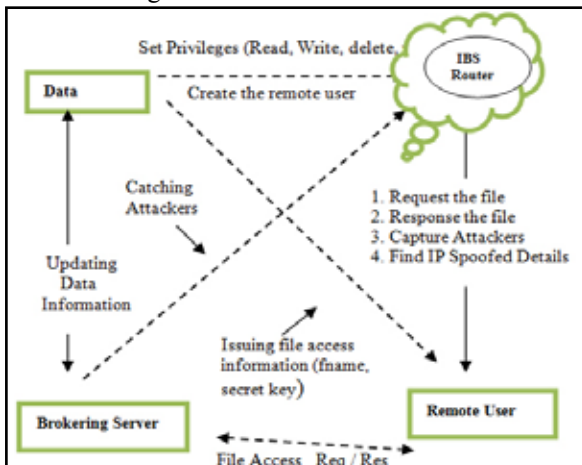


Fig.1: System Architecture

Data Owner

Before uploading files into IBS Router. He has to register himself and responsible for setting the privileges, Issuing access information of the files

IBS Router & Remote User

The interaction between IBS Router and Remote User includes request and response of file, functioning and displaying the statistics of capturing eaves dropping attackers, spoofed details etc...

Brokering Server

It includes request and response from Remote user to Sever and updating of data information from Data owner to brokering server and if Data owner granted write privilege then remote users updated data has been uploaded to brokering servers and notified to Data owner

III. Design Layout

A. Data owner

The system flow of data owner for uploading files is as shown in the Figure (2) and explained as follows:

Step 1: Data owner uploads the files into IBS Router

Step 2: Checks for the User account if registered Upload is successful else notify owner/user to register

Step 3: File access by giving privileges and store in IBS router

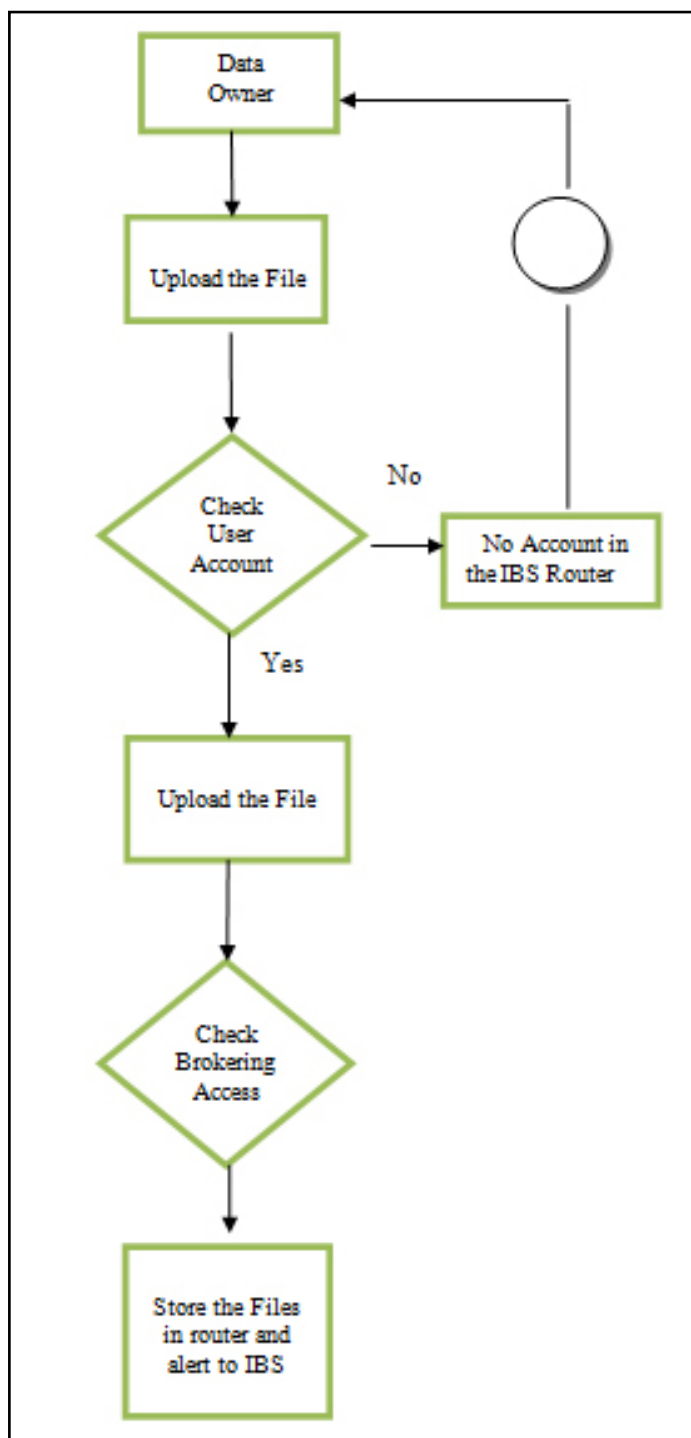


Fig. 2: Design Layout of Data owner

B. Remote User

The system flow of data receiver for receiving files is as shown in the Figure (3) and explained as follows:

- Step 1: Receiver Requests the File
- Step 2: Checks the Account in IBS router, if no account exists intimates the receiver and status of eaves dropper in appropriate broker is stored in IBS Router
- Step 3: if yes checks Filename, Secret key. If invalid and status of attacker is stored in IBS Router.
- Step 4: After proper secret key and proper filename concerned file is issued to Receiver

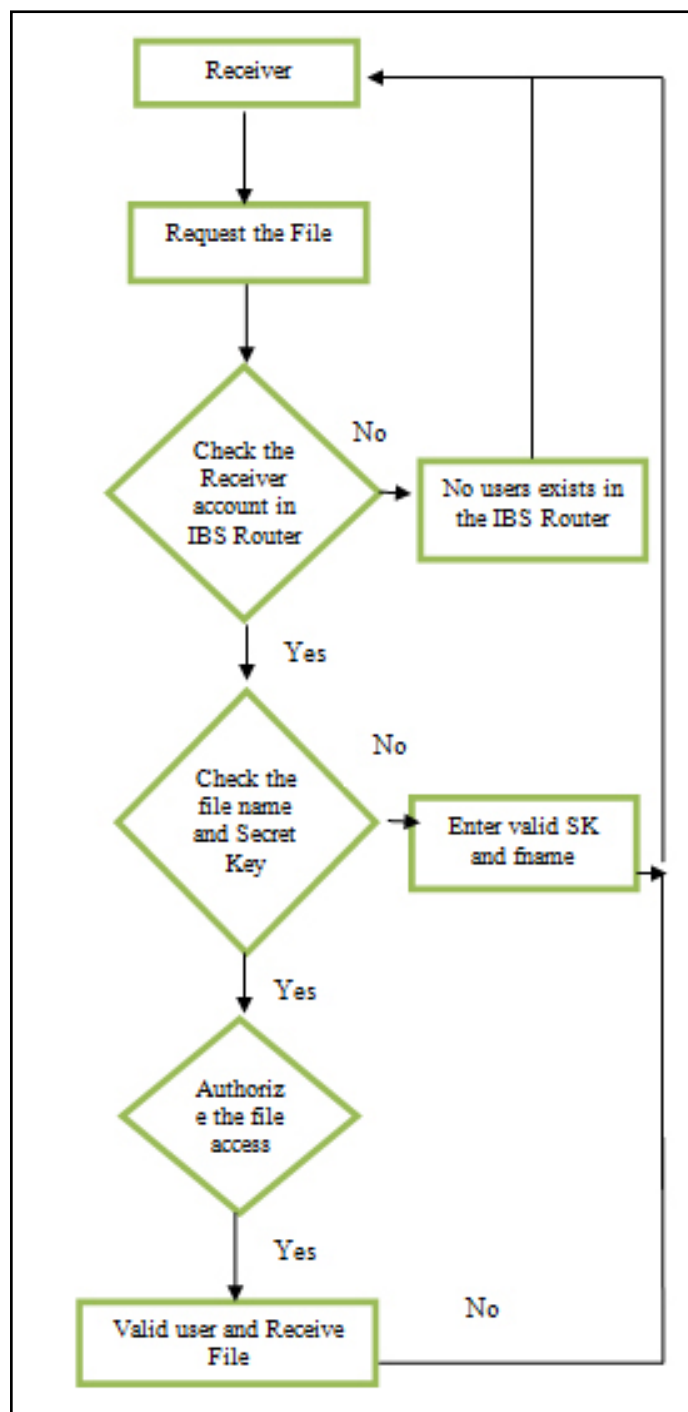


Fig. 3: Design Layout of Remote User

C. Data Flow Diagram of the System

The Data Flow Diagram (DFD) is a graphical representation of the flow of data through an information system. It enables you to represent the processes in your information system from the viewpoint of data. The DFD lets you visualize how the system operates, what the system accomplishes and how it will be implemented, when it is refined with further specification

The DFD diagram for our IBS shown in Fig.4

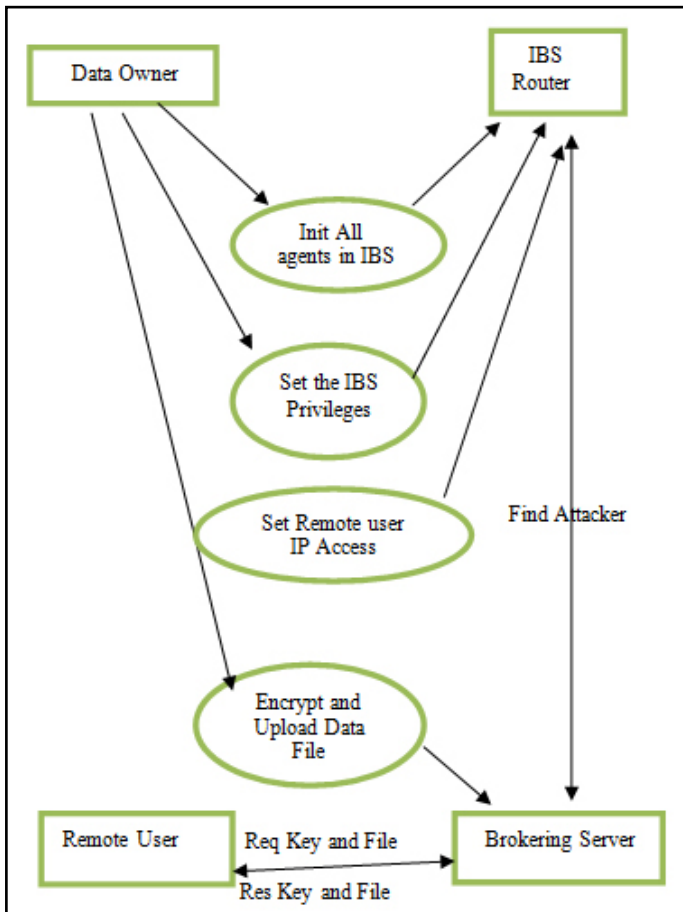


Fig 4: Data Flow Diagram

D. Use Case Diagram of The System

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. Use case diagram is a graphical overview of the functionality provided by a system in terms of actors or user, their goals (represented as use cases), and any dependencies between those use cases.

Use case diagram for our IBS is shown in Fig.5

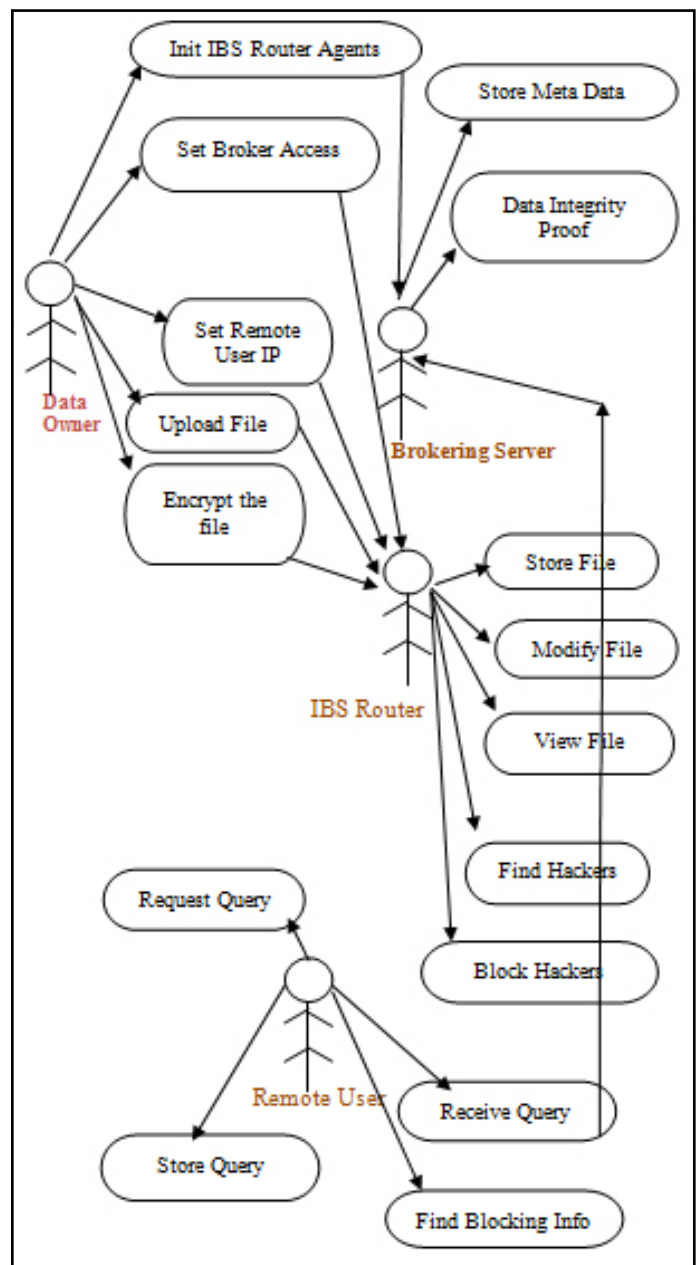


Fig. 5: Use Case Diagram

IV. Conclusion

In this paper we have given overview of the design techniques that we use for scheme. With these techniques we show privacy can be achieved for the brokers in information brokering system

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Authors Profile



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