INTERNATIONAL RESEARCH JOURNAL IN ADVANCED ENGINEERING AND TECHNOLOGY (IRJAET) E - ISSN: 2454-4752 P - ISSN : 2454-4744
VOL 2 ISSUE 6 (2016) PAGES 1277 - 1280
RECEIVED : 25/10/2016. PUBLISHED : 01.11.2016
November 1, 2016

PRIVACY PRESERVING SOCIAL NETWORK USING CHATTING PROTOCOLS

[1]N.Priyanga, [2]R.Narmatha,
[1]PG Scholar, Dept Of CSE, AVS Engineering College
[2]Asst prof, Dept Of CSE, AVS Engineering College.

Abstract:
A privacy issue regarding social networks nowadays is the fact that users' posted data is stored on company-owned servers, adding a third person in between the sender and the receiver. We propose Square Pigeon, an android application which offers a fresh take on the traditional social network model. A server is used for all administrative and coordination overhead to lighten the load off the mobile devices. Security and privacy are provided through bypassing the server and using a p2p network to send all shared data. The use of mobile devices as a main platform presents resource constraints, such as energy efficiency and quota availability, and reliability constraints since we need to offer an acceptable QoS compared to current social networks. Sending data p2p decreases the QoS, but this is compensated by the added security. A performance analysis for transmission rates and delays is therefore conducted.

Keywords - Square Pigeon, p2p network, QOS.

1. INTRODUCTION

Android is a mobile operating system (OS) based on the Linux kernel and currently developed by Google. With a user interface based on direct manipulation, Android is designed primarily for touch screen mobile devices such as smart phones and tablet computers, with specialized user interfaces for televisions (Android TV), cars (Android Auto), and wrist watches (Android Wear). The OS uses touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a virtual keyboard. Despite being primarily designed for touch screen input, it also has been used in game consoles, digital cameras, regular PCs (e.g. the HP Slate 21) and other electronics. Android is popular with technology companies which require a ready-made, low-cost and customizable operating system for high-tech devices.

2. RELATED WORK

In this paper[1]"A Peer-To-Peer based chat system" Creating a simple chat system using a client/server model is very easy, and can be done in less than a day if the programmer is used to network programming. All that is needed is a server application which can supply the location of a speci c user to a client requesting that user and a client application that will connect to a given location for a user. A chat system with a Peer-To-Peer model is a lot more dicult to create. The main issue with such an application is the fact that the location for anyone is simply not known for sure. In this paper[2]"Performance of Content Replication in MobiTribe: a Distributed Architecture for Mobile UGC Sharing" An increasing portion of traffic in mobile networks comes from users creating content and uploading it to the Internet to share it. The capacity of mobile networks is a limited resource and uploading high resolution content consumes a large part of it. We introduce MobiTribe, a distributed storage cloud consisting of mobile devices for storing the content created on the phones. It can serve requests for content and take advantage of networks with spare capacity to deliver the content at a lower cost. We propose a content distribution and replication algorithm which achieves

this goal. The performance of the algorithm is evaluated using empirical data traces of WLAN availability patterns of mobile devices, showing that it is possible to achieve 99.98% availability of a content via WLAN while minimising content distribution to an average of 2.69 replicas.

In this paper[3]" MobiTribe: Cost Efficient Distributed User Generated Content Sharing on Smart phones" Distributed social networking services show promise to solve data ownership and privacy problems associated with centralized approaches. Smart phones could be used for hosting and sharing users data in a distributed manner, if the associated high communication costs and battery usage issues of the distributed systems could be mitigated. We propose a novel mechanism for reducing these costs to a level comparable with centralized systems by using a connectivity aware replication strategy. We develop an algorithm for grouping devices into tribes for content replication among intended content consumers and serve it using low-cost network connections. We evaluate the performance of the algorithm using three real world trace data sets. The results show that a persistent low-cost network availability can be achieved with an average of two replicas per content. Additionally, cellular bandwidth consumption and energy consumption of users are evaluated analytically using user content creation and consumption modeling. The results show that the proposed mechanism lowers monetary and energy costs for users compared to non-mobile-optimized distributed systems irrespective of the content demand model.

3. PROPOSED SYSTEM

The Proposed system uses the Peer-to-Peer application which is more effective than when compare to the existing client-server application . Further the proposed system uses the server only for communicating the peers and not for sharing the data . The Main advantage of peer to peer network in social network is that it gives complete control over whatever data is shared . It also Decrease in the load on the network by avoiding the packets sent to the server.

4.1.1 MODULES

- Module I–Establishing Connection
  - Mobile Application
  - Server Application
- Module II – Data Sharing
- Module III – Interface Design

4.1.2 ESTABLISHING CONNECTION

- Mobile Application :
  - Mobile application registers the client ID to the user.
  - It sends Client Id to the server.
  - Client Id is used for communication.
  - Add contact to start communication.
  - Checks the contacts status on server.
  - Sends message to the contacts via server.
- Server Application :
  - Registers the client Id
  - Checks for the requested recipients Id
  - Sends the message to the recipient by push notification
  - Generates Client Id if client Id is not available
  - Shows the user's status

4.3.3 DATA SHARING

- Using the communication details provided by the server, the peer connects to the corresponding peer using the IP address and port number.
- Message is send via the connection created.
- Data such as images, audio, video and files can be shared in similar way as the messages.
- Peer application updates the information in the server when server request for the updates.

4.3.4 INTERFACE DESIGN

- Interface is developed to show the following details :
  - Group the messages based on the sender
  - User profile picture
  - User status
  - Whether the user is online or not
  - Whether the message is delivered or not
  - Whether the user is typing or not
  - Last seen by the user
  - Show error message if any occur

CONCLUSION

A social networking application that differs from others in that all users control their data. Users send data peer-to-peer without passing by the server. A server is used to reduce some load off the mobile phones by keeping track of users' information and implement a load balancing algorithm. The performance and power consumption of Square Pigeon were tested. The results were pleasing and proved that the application does not add any significant load that would cause any lags or major battery drainage. This means that, with additional features and enhancements, the application could be used as a replacement for traditional social networks on mobile phones with the extra motivation of enhanced security. Encryption can be added in our application for further security, by applying encryption protocols when sending links from users to the server. For this to be feasible, several criteria are needed such as: efficiency of user key revocation, encryption header overhead, etc. Encryption algorithms similar to the ones presented in 10 would be considered.

FUTURE WORK

Encryption can be added in our application for further security, by applying encryption protocols when sending links from users to the server. For this to be feasible, several criteria are needed such as: efficiency of user key revocation, encryption header overhead, etc. Encryption algorithms similar to the ones presented in 10 would be considered. Adding data replication to the system, i.e. automatically sending the data from the host to one of the recipients, will help with increasing the availability of the data 11. Thus, even if the host goes offline after posting media, the data will still be available at the selected recipient. The load balancing algorithm that determines which user acts as a host for the content can be improved by adding several criteria to the host selection process. These criteria can include connectivity to low-cost networks, battery life, fairness, etc.

REFERENCES:

1. K. Thilakarathna et al., "Performance of Content Replication in MobiTribe: a Distributed Architecture for Mobile UGC Sharing," IEEE 36th Conference on Local Computer Networks (LCN), Bonn, 2011

2. K. Thailakarathna et al., "MobiTribe: Cost Efficient Distributed User Generated Content Sharing on Smartphones," IEEE Transactions on Mobile Computing, Volume: PP, Issue: 99, July, 2013.

3. K. Thilakarathna et al., "MobiTribe: Demonstrating Device Centric Social Networking on Smartphones," 10th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), New Orleans, USA, 2013.

4. N. Asokan, "CrowdShare: Secure Mobile Resource Sharing," in 11th international conference on Applied Cryptography and Network Security, Berlin, 2013.

5. F. Bari," Persistent Naming for P2P Web Hosting," IEEE International Conference on Peer-to-Peer Computing (P2P), Kyoto, 2011