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E-Transaction without Using Trusted Third Party Based On RSA Signature

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Abstract:

E transaction allows to support two parties exchange their obligation over the internet. Based on the RSA algorithm we are going to deal this protocol in this paper. In the existing or previous system , use of third party seems to increase the risk in dealing. In this paper we are going to built an independent web application by removing third party. We Are going to provide security between dealing parties.RSA –based act of finding such a solution, since the third party(court) is going to involve in the condition if and only if one of the dealing parties is cheated or the channel is misused. Furthermore the proposed system introduced new technology i.e., Trusted E-Transaction if any party is cheated with the other party then whole transaction is terminated. Active Bundle which is mediator that contain private confidential data proposed system gives security and improve the performance virtual machine that contain protection rules and policies.

The RSA Algorithm is used for signing and verifying identity the digital signature is the combination of private and public key. the private key plays the role of senders own signature. the senders public key plays the role copy of signature which are available to the public.

Keywords: RSA Algorithm, Private Key, Secret Key, E-Transaction, Web Application.

I. Introduction

Secure Transaction Plays an important role in web application. in particular situation where dealing parties do not believe on each other. in the paper based scenario, E-Transaction is simple fact due to existence of "concurrently". That is both dealing parties take an active part in transaction where one party is demanding something and the other party providing it over the internet, therefore each dealing parties provide legal document to each other that shows both dealing parties agreed with the deal. If of the party tolerate the agreement, the other party put the case on the other dealing party to a judge in court.

As the E-Transaction is most popular and important in the world .it specifies to need a mechanism that permits dealing parties to sign digital contract over the internet. finally when the two dealing parties have legal copies of transaction for dealing, if any dealing party is tried to cheat on the other party then the transaction is terminated and any one of the dealing party break the deal or unable to complete deal then form party can take the action against the dealing party in court.

II.Related Work

From this strategy,the issue of E-transaction related to huge topic:E-Transaction i.e.,the way of handling two mistrusted dealig parties to purchase product over the web application in legal way, therefore dealing parties will get product or nothing.

The importance of our paper is to providing security in E-transaction.

In Previous scenario of deal signing in transaction untrusted E-transaction .

Following are the key points in online dealing protocols:-

1) Keys(private key, public key, message secrete key) without using Trusted third party .

2) Incase, Dealing E-transaction under the observation of Trusted third party Above point helps to both dealing parties in Personal information, deal related information, transaction Related information exchange over internet in "encrypted form". If one of the dealing parties break the deal or disagree with with One of the dealing criteria then another dealing parties Can make a claim in court (trusted third party).The major advantage of our paper is that We are removing Trusted third party Involvement at the time of deal, involvement can occur if and only if One of the dealing parties break the deal or contract .

III. Implementation

Our protocol is based on RSA signature which is to provide security. More specifically, the new protocol satisfies the following desirable properties.

1) Fairness: Our protocol guarantees the two dealing parities involved to obtain or not obtain the other's contract simultaneously. This property implies that even a dishonest party who tries to cheat cannot get an advantage over the other party.

2) Abuse-Freeness: If the protocol is not executed successfully, any of the two dealing parties cannot show the validity of the intermediate results generated by the other to other party.

3) Security : For security purpose we are going to use RSA algoritm to provide security.

4) Compatibility: In our protocol, each party's commitment to a contract is a standard digital That is more clearly stated to solve for given $d \cdot e \equiv 1 \bmod \varphi(n)$).

It often compute digital signature using the single extended Euclidean algorithm. Using the pseudo code in the Modular integers section, inputs a and n correspond toe and φ(n),respectively.

C) that is more clearly stated to solve for d given $d \cdot e = 1 (\bmod \varphi (n).)$.

This is often compute digital signature using the extended Euclidean algorithm in information assurance. Using the pseudo code in the digital signature of Modular integers section, inputs are 'a' and 'n' correspond to the e and φ(n), respectively is kept as the private key exponent in digital signature. The public key in digital signature is mostly consists of the modulus 'n' and the public (or encryption) exponent ein digital signature. The private key in digital signature is made up of the modulus n and the private key (or decryption) exponent determined d(multiplicative inverse), which it must be kept secret. p, q, and φ(n) are also be kept secret in digital signature because they can be used to calculate d in digital signature.

VI. Architecture

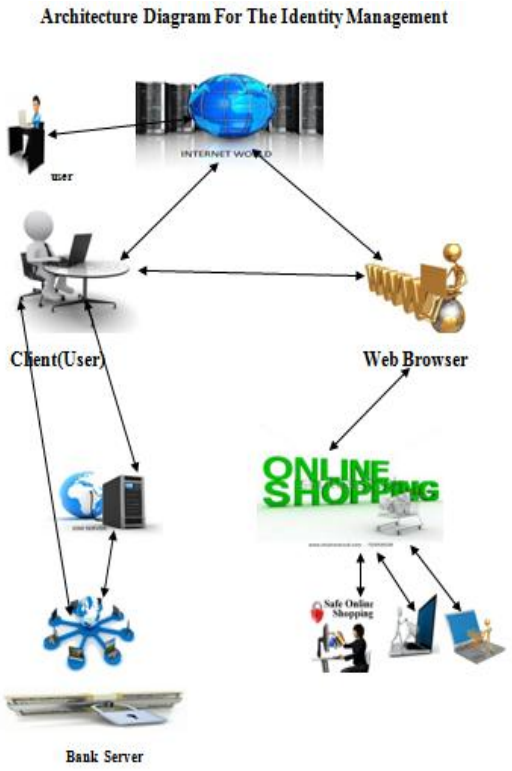

Fig : Architecture Diagram

V .Modules

1) **Bank Server :** Bank Server is used for the transactions purpose only. When the customer purchases the product the after that purchasing the he need to do the transactions at that time customer connect with the bank server. Bank 1sever ask the security question before the transaction for e.g. location, phone number etc.

The Bank server just do the transaction, they also have idea about product are purchased from IDM(Identity Management).

2) **Client :** The main Moto of the client is to purchase the product from the web site. Before purchasing the product or login to the web site the client want to do compulsory register his details .If the client is the already visited the website then he want just enter the user name and password. Client is connected to all modules such as Bank Server, Web application, IDM, Service Provider.

3) **Service Provider :** Service Provider provides all the services to client by giving the product details. Service Provider provides the key to the bank server and IDM.

4) **Identity Management:** In Identity Management it maintains the security of Bank Server and the Web-application because of these it provide the security of password, transaction details etc.

VII. Conclusion

1. With the immense growth in the popularity of Secure Identity Management without using Trusted third party privacy and security have become important concern for both public and private sectors.
2. IDM is one of the core components in privacy and security management.
3. We propose an approach for building IDM system without using TTPs, these in the solution allows to use the IDM application on untreated host.
4. With the immense growth in the popularity of Secure Identity Management without using Trusted third party privacy and security have become important concern for both public and private sectors.
5. IDM is one of the core components in privacy and security management.

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