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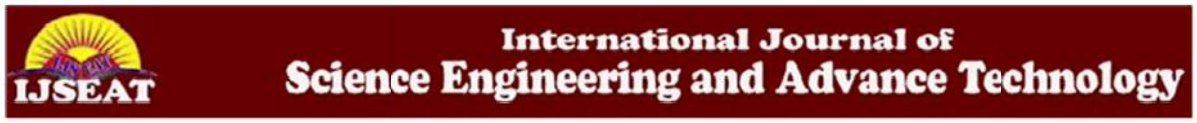

Efficient Query Processing For Integrity and Privacy Validation In WSN

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ABSTRACT:
To reserve secrecy, we body a guide for each sensor placid data element via pseudo-random hash function and Bloom filters and converts top-k queries into top assortment queries. To game reserve honor, we advise a data barrier algorithm to dividing wall each data item into an interlude and award the partition data with the data. The emotionally involved information warrants that the sink can attest the veracity of query results. We strictly ascertain that our order is safe as houses under IND-CKA security model. Our untried results on real-life data show that our style is true and real for huge network sizes.

KEYWORDS: sensor, query, top-k queries

1INTRODUCTION:
A sink helps as a fatal device that sends inquiries to the storage nodes and saves the sensor data of attention. Due to the rank of two-tiered sensor network building, numerous profitable storage nodes, such as StarGate and RISE have also been developed. The storage nodes proposal two main welfare slikened to a formless sensor network model, the storage nodes are accountable for the group, storing and broadcast of the sensual data from the sensors to the sink. The devices save an important amount of vigor by eradicating sensor to sensor relay broadcasts towards the sink and extendthe life of the network. The storage nodes have more calculating power and storage volume than the sensors. So, the sink can subjectmultifaceted queries, such as the variety or top-k queries, to savenumerous data items in a solitary query. This protects the sensor nodes' vigor and network bandwidth obligatory for replying the sink queries.

2LITERATURE SURVEY:
with the benefit of semantic ontology WordNet, we size a workernotice model for discrete user by investigating the user's search history, and approve a keep count mechanism to direct user interest quickly. To discourse the borders of the typical of "one size fit all" and keyword particular search, we proposition two PRSE outlines for changed search intentions. General tryouts on real-world dataset corroborate our breakdown and appearance that our anticipated solution is very resourceful and current.

We propose a new technique that can map CGs to vectors. Following, we vigorous the repaid results based on "text summarization score". Also, we recommend a rudimentary idea for SSCG and give a meaningfully better arrangement to content the safety assurance of searchable symmetric encryption (SSE). Lastly, we select a real-world dataset the CNN dataset to test our scheme. The results got from the trial show the efficiency of our proposed scheme.

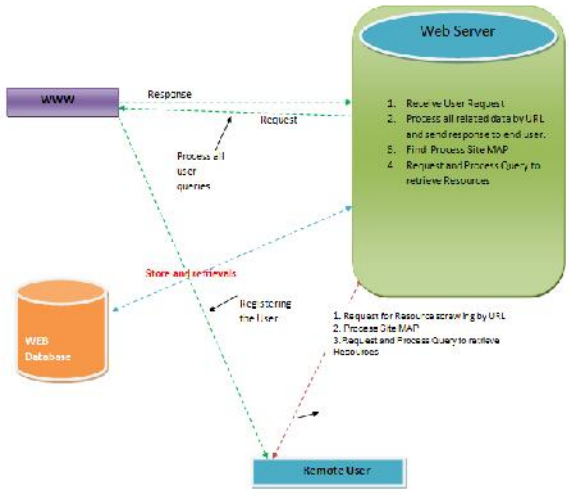
3PROBLEM DEFINTION:

The arrangements to current method can be originated alike in cloud computing and database domains. These works can be alienated into three classes: bucketing schemes, order preserving schemes, and public-key schemes. Hacigumus et al. proposed the first bucket divider scheme to query encoded data items lackingpermitting the server to see the careful data values.

4PROPOSED APPROACH:
Theschemesuggests the first secure top-k query dispensation scheme that is safe under the IND-CKA security model. The data confidentiality is certain by encryption as well as a cautiouscohort of data indexes. We brand two key aids in this paper. The first influence is to alter a top-k query to a top-range query and embraceconnectionchallenging to test whether a data item should be comprised in the query result or not. The additionalinfluence is the data partition, index selection, and interval information implantingmethod. This methodpromises that at least one data item of each device collected data will be encompassed in a query effect and lets the sink to

prove the truth of query result lacking extra confirmation objects.

5SYSTEM ARCHITECTURE:



6PROPOSED METHODOLOGY:

Source

The Source triggers all the devices and allocates temperatures to all the cells, uploads their data to the specific storage node. It will store in cell. The service provider, can opinion the criticized file in the storage node, He can substitute the injected malicious files to its Original file in the cells, and can notify to the specialist about the spiteful files in the cells.

Router

The Expert can subject queries to save the sensor readings. The centralrow is calm of a small number of storage-abundant nodes, called *storage nodes*. The lowest tier entails of a large number of resource-constrained ordinary sensors that intelligence the environment. The expert issues good queries to save the wantedhelping of sensed data. We limit ourselves in this scheme to deliberating top-*k* query, which is one of the most instinctive and normally used queries.

Storage Node

The storage node saves a reproduction of received sensor readings and is accountable for replying the queries from the expert. The temperature will be stowed with their tags such as node name, temperature, status, digital sign, and modified temperature in Storage Node, Also the data file will be also stowed with their tags such as node name, file name, secret key, status, digital sign, and with ranks in Storage Node, Storage nodes are storage-abundant, can connect with the expert*via* direct or multi-hop communications, and are expected to distinguish their allied cells. The Storage Node can also opinion the Attacker details.

Cell

The sensor nodes are typicallydivided into disjoint groups, each of which is allied with a storage node. Each cluster of sensor nodes is called a *cell*. The sensor nodes in a cell form a multi-hop network and always frontward the sensor readings and file details to the linked storage node.

End User

The End user can admission the top k file details and top k temperatures of the cells in related Storage node. The End user can appeal and gets file fillingsreply from the consistent Storage node. If the file name and secret key is precise then the end user is receiving the file reply from the Authority and storage node.

Topk Query Processing

TheTopk queries in a centralindeterminate database, which delivers a good contextual for the beleagueredspreaddispensationproblematic. The query response can be got by investigative the tuples in descendent ranking order from the sorted tablewhich is still denoted as T for ease. We can effortlesslycontrol that the highest ranked k tuples are certainly in the answer set as long as their self-assurances are better than p since their qualifications as PT-Topk answers are not reliant onon the being of any other tuples.

Attacker

Attacker is one who is inoculating the file by adding malicious data to the consistent storage node. The Attacker can also adapt the temperature in the cells.

7TOP-RANGE QUERY ALGORITHM:

INPUT: SENSOR NODES, STORAGE NODE, SINK

STEP1: the approximated uniform distribution of the sensor values on the sink.

STEP2: sink node needs to accurately estimate a range which is equivalent to the top-*k* query.

STEP3: ranges top-ranges as they always start from the lower bound 0

STEP4: The value of *d_* is important as it denotes the reference value for the top-*k* items to be retrieved.

STEP5: This process continues until the value of the low bound and the upper bound of a searching range become equal.

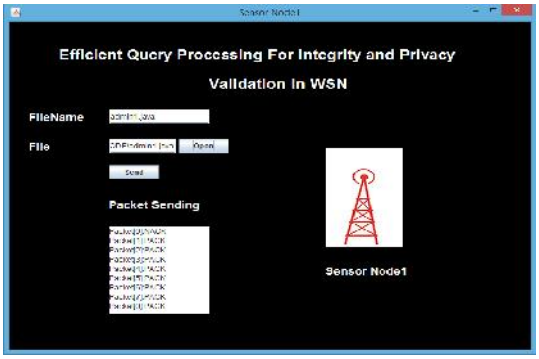
STEP6: the sink wants to query *k* smallest data item.

STEP7: the storage node returns a query result containing *k_* data items to the sink.

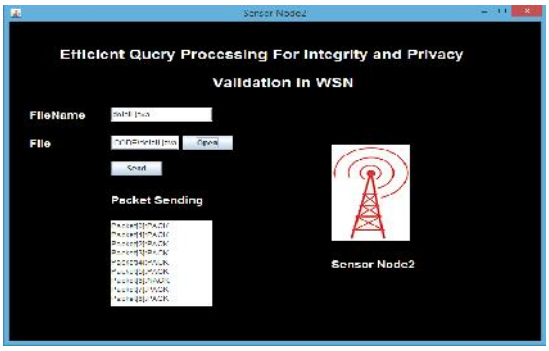
EXTENSION WORK:

Proposing sufficient set and necessary set to sensor networks with tree topology. To further improve query processing performance by facilitating sophisticated in-network filtering at the intermediate nodes along the routing path to the root.

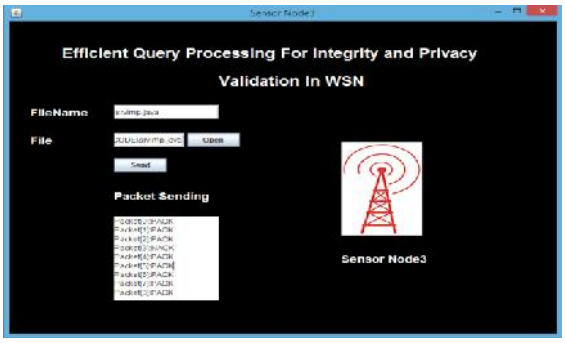
8RESULTS:



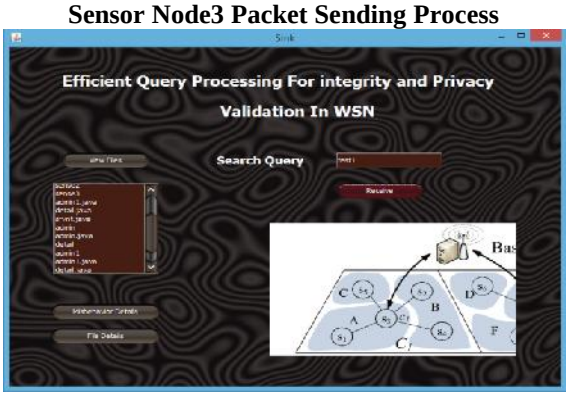
Sensor Node1 Packet Sending Process



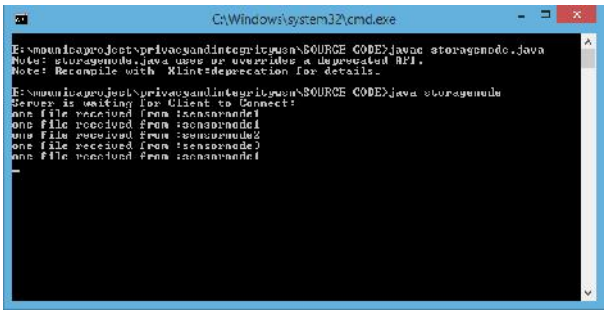
Sensor Node2 Packet Sending Process



Sensor Node3 Packet Sending Process



Search Query Processing in



Finally packets sended to reciver

9CONCLUSION:

The data confidentiality is certain by encryption as well as a cautious generation of data indexes. We make two key contributions in this paper. The influence is to alter a top-k query to a top-range query and adopt association testing to test whether a data item should be comprised in the query result or not. This alterationlets the storage node to find k smallest or biggest data values lacking using arithmetical comparison operations, which is a key method for the arrangement to be safe under the INDCKA refuge model. This methodassurances that at least one data item of each sensor composed data will be comprised in a query result and agrees the sink to confirm the honesty of inquiry result deprived of extra verification objects.

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