March 20, 2018

U.S. Department of Homeland Security

U.S. Citizenship and Immigration Services

To Whom It May Concern:

Dear Sir/ Madam,

The purpose of this letter is to confirm that Abdul Azeem Shaik will provide contract services to our client, CitiGroup Inc, to work on an ongoing project for their company; there is no anticipated end date for the project at this time, and we anticipate that it is a long-term project. Incedo Inc., is the implementation partner for this CitiGroup Inc project and the project is being executed at CitiGroup Inc premises in Building G, 3800 Citigroup Center Dr, Tampa, FL-33610.

Abdul Azeem Shaik working for the client at the onsite location below, has been arranged through a contract between specialized information technology service company Vdrive IT Solutions Inc and Incedo Inc., to end client CitiGroup Inc .

This is to confirm that Abdul Azeem Shaik, an employee of Vdrive IT Solutions Inc, is under contract with Incedo, Inc. to have Abdul Azeem Shaik provide software development services as a Hadoop Administrator at the client site CitiGroup Inc.

Abdul Azeem Shaik is required to work on a full-time basis (40 hours per week). This project is an open-ended project with a possible long-term extension to benefit CitiGroup Inc and is located at Building G, 3800 Citigroup Center Dr, Tampa, FL-33610. LCA / job posting has been put up at this work location.

Abdul Azeem Shaik will perform the duties required to fulfill the terms of our contract and continue to be an employee of Vdriveinfo IT Solutions Inc. Abdul Azeem Shaik will not be an employee of Incedo, Inc. or CitiGroup Inc , Vdriveinfo IT Solutions Inc will retain exclusive authority and control over the consultant's employment, salary, benefits, work assignments and termination.

According to the service requirements for the above-mentioned contracts, Abdul Azeem Shaik is responsible for the following duties on the CitiGroup Inc project.

As a Hadoop Administrator his responsibilities include:

* Design, and build distributed, scalable, reliable Big Data/Hadoop platform for data pipelines that ingest and process data at scale and in real-time with Hadoop ecosystem - hdfs, Yarn, Solr, Hue, Sentry, Kafka, Impala, Kerberos, oozie, Zookeeper, mapreduce, hive, Hbase, pig, sqoop, MySQL and apache spark.
* Installation and configuration of Cloudera and Hortonworks provided stacks CDH5.x, HDP2.6 Apache Hadoop, Linux (Redhat, Centos & Ubuntu), MySQL applications, OS & Kernel Level patches and upgrades, CDH5 & HDP upgrades.
* Manage Bigdata/Hadoop Platform resources to assure maximum system performance by understanding business requirements. Review performance stats and query execution/explain plans, and recommends changes for tuning Hive/Spark queries.
* Interact with global team members and stake holders to better understand the scope, requirements of projects, working proactively & independently to address project requirements, and articulate issues/challenges with enough lead time to address project delivery risks
* Setup Abinitio infrastructure, Custom build applications to ingest data into big data/hadoop platform from various sources and perform transformations, Data Visualizations, generate reports for business use and provide ready to use infrastructure for participating projects.
* Source huge volume of data from diversified data platforms and perform analysis of large data sets using components from the Hadoop ecosystem
* Implemented Encryption, Kerberos Security Authentication, sentry and Upgrade complex patches across clusters and review security management best practices including the ongoing promotion of awareness on current threats, auditing of server logs and other security management processes, as well as enterprise established security standards.
* Install, configure and automate all the jobs for for pulling the data from FTP server, Flume, Sqoop, Kafka, NDM, sftp and support analytic tools like Datameer, Platfora, Microsoft R and Paxata.
* Deploying custom build scala code, applications, avro files, scripts, creating external tables at given HDFS locations in various SDLC environments like DEV, SIT, UAT, PROD and COB. Assisting project users to configure/automate jobs through workflow/schedulers like Oozie.
* Create Linux scripts for automation of daily tasks on OS level using shell & python and setup up the machines with Network Control, Static IP, Disabled Firewalls, Swap memory.
* Assist Bigdata developers on Partitioning, querying the data in Hive and advice on the usage of bigdata resources for given code to ensure and avoid over usage of resources.
* Perform capacity planning, performance tuning, implement automatic failover with zookeeper failover controller and support cluster maintenance, Backup and recovery for Bigdata clusters.
* Monitored multiple Hadoop clusters environments using Ganglia and Nagios, speculative execution of jobs running on the cluster to obtain optimal performance and troubleshoot Job issues, Hive/Hadoop issue, Impala queries, user Quota issues and fix performance issues.
* Perform Disaster Recovery and Housekeeping activities on a regular basis to avoid fallout and data loss on big data clusters using BDR, Distcp , Rsync, sftp and implemented Fair scheduler and capacity scheduler to allocate fair amount of Big data resources to all running jobs.

We expect that Abdul Azeem Shaik will continue to perform the above duties for CitiGroup Inc for a long-term period until further notice.

Sincerely yours,

Gaurav Singh Gaur

AssistantVice – President