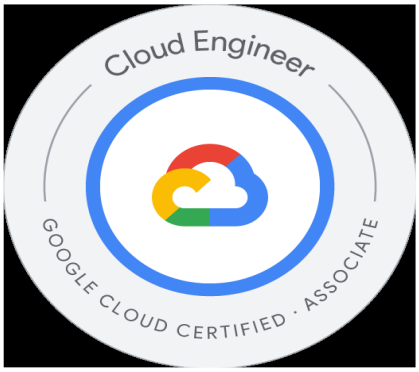
ARUN KUMAR VERMA



ORACLE CLOUD INFRASTRUCTURE FOUNDATIONS 2020 CERTIFIED ASSOCIATE

ORACLE CLOUD INFRASTRUCTURE 2019 ARCHITECT ASSOCIATE

Email: **akv999@gmail.com**

Phone: 1-303-809-8604(C)

SUMMARY:

- **Expert** in cloud computing, design, development, and management of robust, secure, scalable, highly available and dynamic solutions for on-premises, cloud, Hybrid
- **Google** Certified **Professional Cloud Architect**
- **Google** Certified **Associate Cloud Engineer**
- **Oracle** Cloud Infrastructure **Foundations** 2020 certified Associate.
- **Oracle** Cloud Infrastructure 2019 **Architect** certified Associate.
- **Microsoft Azure** Fundamentals certified
- Highly skilled and experienced Cloud Architect. As the **Cloud Architect**, played a pivotal role in supporting key initiatives and platforms, including the establishment of Cloud COE, **SRE** practices, DevOps implementation, Serverless architecture, Kubernetes orchestration, Containers management, Infrastructure-as-Code (**IAC**) automation. Expertise in Google Cloud Platform (Google Cloud Platform), Amazon Web Services (**AWS**), and Azure coupled with a deep understanding of enterprise architecture and networks. Outstanding troubleshooting skills and a proven track record of delivering scalable and reliable cloud solutions.
- **5+** years of experience in designing, deploying, and managing cloud infrastructure on GCP, Azure and Oracle Cloud Infrastructure
- Using Domain Driven Design for design and development of applications
- Knowledge of services such as **Compute Engine, Kubernetes Engine, Cloud Storage, Cloud SQL, Network, and BigQuery** type technologies
- Proficient in **Docker/Kubernetes** programming
- **Microservice** design and development

- Well-versed in Continuous Integration and Continuous Delivery (**CI/CD**) practices, and **Automated Deployments**.
- Knowledge of networking concepts such as **DNS**, **TCP/IP**, and **load balancing**
- Strong problem-solving and troubleshooting skills
- Strong ability to multi-task and work independently
- Team and business leadership experience
- Great communication and interpersonal skills
- Experience implementing security solutions
- Comfortable working on a team
- Team and business leadership experience
- Great communication and interpersonal skills
- Experience implementing security solutions
- Comfortable working on a team
- Setup Backups
- Setup and execute **DR/HA**
- Worked as Senior Principal Support Engineer for Oracle Corporation supporting Exadata
- Oracle Certified Professional (OCP DBA) for oracle versions 8, 8i,10g,11g and 12c.
- Good experience in cloud architecture and development

- Oracle 19c: installed binaries and created database, function, procedure, profile, users, refreshed schema. Setup OEM for monitoring and configured rman for backup, restored and recovered and database and SQL tuning. Upgraded database from 12c to 19c, implemented unified database auditing and transparent data encryption.
- Very devoted, hardcore technical person, like to solve challenging issues.
- I am expert in installation, configuration, backup, recovery, upgrade, patching, migration, SQL tuning and database tuning.
- I like to automate any routine task by shell scripting.
- I possess secondary skills in Unix and windows administration.
- I am an excellent learner, mentor and a team player, and I enjoy sharing my knowledge.

WORK AUTHORIZATION: Citizen of USA

Security Clearance: Public trust

EDUCATION: Master in Electronics and Communication Engineering, University of Roorkee, India 1984
Bachelor in Electronics Engineering, Bangalore University, India 1981

Certifications:
11/10/2023-> Google Cloud Architect Professional
09/22/2023-> Google Cloud Certified Associate Cloud Engineer
03/16/2023 -> Azure Fundamentals
04/24/2020 -> Oracle Cloud Infrastructure 2019 Architect Associate
04/15/2020-> Oracle Cloud Infrastructure Foundations 2020 Associate
12/23/2015-> Oracle Database 12c Administrator Certified Professional
01/31/2011-> Oracle Database 11g Administrator Certified Professional
01/22/2007-> Oracle Database 10g Administrator Certified Professional
02/29/2000-> Oracle 8i Certified Database Professional
12/27/1999-> Oracle 8 Certified Database Professional

AWARDS:

- Assistant Secretary of Labor for Mine Safety and Health Certificate of Recognition for Historic Achievement Award for Outstanding Achievement in Reaching the lowest Fatality

- Rate of 0.0114 and All-Injury Rate of 2.73 in Mining History. United States Department of Labor, USA 2011
- HAC OI&T Award of Appreciation for participating in the Successful delivery of the Medicare Crossover project. Unites States Department of Veteran Affairs, USA Sep 27, 2010

- ISO 9001 Implementation Award, Steel Authority of India, India 1995-1996

SKILL SET:

Cloud/WEB: Azure, Oracle Cloud, AWS, Visual Studio Code, HTML5, CSS3, JavaScript 3.0, NodeJS, express, npm, Eclipse 2020 03, Advanced HTML, Oracle 9iAS, Apache, Java 2, XML, FrontPage2000, Dreamweaver3, Cold Fusion 5, J2EE development.

OPERATING SYSTEMS: Linux 4,5,6,7, UNIX (32-bit, 64-bit) Sun Solaris 5.6/5.7/5.8,10,11, HP-UX 10/11, AIX 3.4 patch set level 10, Red hat Linux 4, 5,6,7 COMPAQ Tru64 bit version 5.1, Sequent, SCO UNIX, Windows 2003, Windows 2000 Advanced Server, DOS, Windows NT, VAX/VMS, GCOS-8, JCL, TOPS 10/20.

Scripting: UNIX Shell Scripting (Bash shell, korn shell, perl, python, Windows scripting

Virtualization: VMware vSphere, Hypervisor Type1 (ESXi), Installed Red hat Linux 7.3 on guest machine, Hypervisor Type2 VMWare, Oracle VirtualBox

Oracle/Grid/RDBMS: Oracle 6/7/8/8i/ 9i,10g,11gR2, 12c,18c, 19c, Real Application Cluser (RAC), 9iAS, OEM grid control, Oracle Enterprise Manager (OEM) 12c, Oracle Forms 3/4/4.5/5.0, Reports 2.5, Menu, Pro*C, SQL, SQL+, PL/SQL, RMAN. OEM, SQLJ, Import/Export, SQL*Loader, Developer 2000, Discoverer, SQL, PL/SQL, Standby Database, Oracle Data Guard, Unified Auditing, Transparent Data Encryption.

SQL SERVER: 2000, SQL SERVER 2005, SQL SERVER 2008, Access, dBase III, PostgresSQL 9,10,11,12.3

Other Databases: MongoDB, Cassandra, Postgres, Hadoop, Yugabyte

Security: Data masking, Sub Setting, Data Redaction, Transparent Data Encryption, Unified Auditing.

SDLC: Waterfall, agile, DevOps

CI/CD: Github, Jenkins, DevOps, Trivy, Anchore

ETL: Informatica 8, 9, 10, Power Mart, Power Centre 5.1, 6.2, Data Stage, Oracle Data Warehouse Builder, OBIEE

BACKUP TOOLS: RMAN, Veritas NetBackup, BMC PATROL, TIVOLI STORAGE MANAGER (ADSM), EMC, SAN, DBBoost

Active directory: MS Active Directory

Ticketing System: Remedy, Team track, Service now

DBA/APPS DBA: Installation, upgrade and patching of Oracle 7,8,8i,9i,10g,11g,12c, 19c, 11g RAC, 19c RAC, 11i, Re-linking of executables, migration and upgrade of database and applications, Administration, Backup of types physical/logical, hot and cold. I have designed and implemented complete RMAN solution for backup and recovery. Performed incremental backup of type 0 and level 1 and recovery. Recovery of various types including point in time recovery, Performance Tuning, Replication, Network Administration, Raw partition, cooked partition, monitoring of database and disk usage using Unix Shell-script OEM, DBARTISAN, Quest Toad, Manugistics, AWR, ADDM, performance tuning. Installed Cassandra, CSQL, created keyspace, table, performed dml on table. Exported, imported data from flat file.

Data warehouse/ Senior Technical Architect: Studied, Architected, designed, developed, modified, created data warehouse of large sizes using SDLC method. Performed extraction, transformation, and load of data, ODI. Created Hadoop 2.10.0 cluster on ubuntu, Tableau

Agile Methodologies: Service now, DevOps

DBMS (IDMS II): DMIV (Network Model on Mainframe, Honeywell Bull), RDBMS (Oracle)

Middle Tier: WebLogic, Oracle fusion development

Network/Cloud: Created a forest, domain, domain controller, joined servers to domain, firewall, Assigning static IP to server. Created public and private cloud network, compute, storage, load balancer.

LANGUAGES: Java, VC++ 5.0, MFC, Visual Basic 5.0, C++, C, Fortran-77, COBOL

VERSION CONTROL: ClearCase, PVCS, JIRA, GitHub

Major EMPLOYMENT HISTORY:

Wells Fargo N.A. March 21 2022 to Nov 30 2023, Full time, Irving, TX
Apex Systems, Arizona Public Service, Phoenix, Arizona June 2021 to Jan 2022 Contract work, Remote
Western Area Power Administration Jan 2019 to Oct 2019, Full time, Colorado
Oracle Corporation Inc. Jan 2015 to September 2018, Colorado Springs, Colorado
Cognizant (Health Net), Jan 2014 to Dec 2014 Full time California
Oracle Corporation, Oracle consulting, Sep 2013 (Helped install RAC) Contract work LA, CA
Mines Safety and Health Administration (Federal Gov.)/CNSI/DMINC, Jan to Aug 2013 Contract work
Oracle Corporation June 2009 to Aug 2010 Full time, DTC, Denver, CO
BearingPoint, June 2003 to March 2007 Full time Greenwood Village, CO
MASTECH/i-Gate Capital/EMPLIFI May 2000 to May2003 Full time PA
Steel Authority of India 23 Sep 1985 to 31 Oct 1999 Full time

EXPERIENCE:

Wells Fargo N.A.
Dallas,Tx

Title: Senior Engineer March 21, 2022 – Current

- Worked as a Senior Database Engineer in EDM group.
- Supported Wells Fargo EDM database on Oracle, Postgres, YugaByte, and MongoDB. Supporting internal IT divisions using servicenow ticketing system and Jira Kanban card and on-call rotation
- Undergone mandatory and security trainings
- Rearchitected database design to improve performance
- Implemented interval table partitioning with table having 75+ million rows
- Developed shell script to automate export and import of database
- Refreshed schema from production to non-production environments
- Implemented tablespace encryption
- Completed Google Certified Associate Cloud Engineer
- Completed AZ-900 Azure cloud certification
- Essential Google Cloud Infrastructure: Foundation
- Docker and Kubernetes, DevOps, Jenkins, Trivy, Anchore
- Completed Building a Modern CI/CD Pipeline with Jenkins
- Getting Started with Docker
- Multipass/VirtualBox
- Docker Swarm
- Docker Deep Dive
- Installing and Configuring Splunk
- Getting Started with Kubernetes
- Completed Postgres training
- Completed YugaByte training
- Trained in Big Data HDFS, Mapreduce, Spark, Hive, Pig
- Using Kanban board to update work that are unrelated to ticket or INC ticket
- Installed Kubernetes cluster and developed application to access Mongodb from mongo-express
- Installed ubuntu and centos servers
- Install ansible and created ansible playbook
- Mentoring team members on cloud technologies

Environment: Oracle 19c, Oracle RAC, Exadata, Oracle 19c, Postgres, MongoDB, Azure, Data Redaction, Auditing, Transparent data encryption, SecureCRT, Service-Now, Jira, Azure DevOps, AWS, GCP, Azure, PulseID, Agile methodologies, KanBan, Linux, OEM, Terraform, Ansible, Kubernetes, Splunk

Apex Systems/Arizona Public Service
Phoenix, Arizona

Title: Senior Oracle DBA July 19, 2021 – Jan 21, 2022

- Worked as a fire fighter. I was deployed wherever there is a critical issue that needed to be solved.
- Initially I was assigned to restore recover vision database related to nuclear power plant, the second assignment was project: GIS, then third assignment was project SCORE. I was assigned to SCORE project as previous DBA resigned due to stress.
- I was the main DBA for SCORE (Supply Chain Optimization) project and I was supporting requirements from multiple vendors working on SCORE project (IBM, Wipro, Cognizant, PWC, ApexSystems)
- Managing all four environments Dev, Test, QA and Prod (creation, backup, restore, recovery, performance tuning, user support).
- Deployed Oracle 19c binaries using gold image and upgraded databases
- Created database using dbca response file.
- Reviewed and redesigned the backup and restore for the organization for not only restoration from any physical failure but in minimum time
- I established procedure to restore the table when no logical backup was available.
- Implemented data redaction for sensitive data like, SSN#, DOB, Balance. Implemented data masking and data subsetting
- Developed the roadmap for Database Upgrade, migration, and consolidation
- Implemented transparent data encryption
- Implemented unified auditing
- Trained the team on multi-tenant feature
- Developed script to run long running rman restore in background mode
- Planning migration to cloud
- I was assigned the task to allow non dba to perform some of the dba tasks. This was a challenging task. I developed procedure to allow offshore team to manipulate Guaranteed Restore Point (Create, List and drop GRP) so that onshore team does not get disturbed in off hours.
- Created Guaranteed Restore Point and flashed back database to a named Guaranteed Restore Point
- Developed PL/SQL code and configured cron job to automatically drop Guaranteed Restore Point older than 7 days.
- Developed shell script to create large number of database users reading the list of users from a file.
- Automating regular task by scripting
- Created databases for IBM Maximo application. This task involved, database creation and database refresh, schema refresh. Function, profile creation and role assignment to users.
- Created roles for IBM application Maximo, Maximo read, Maximo support, Birt_Qry
- Developed script that was to run a sql on all the databases running on a server.
- Performed database patching
- I have been working like a go to person, helping the whole team. Worked in a team and all DBA approached me for solution to their problems.
- Completed VDI Access/ Security Training
- Installed Casandra and configured replication consistency, performed dml using CSQL, and exported and imported from flat file.
- Using agile methodology. I am member of multiple SCRUM boards

Environment: Oracle RAC 12.2, Oracle 19c, Data Redaction, Auditing, Transparent data encryption, SecureCRT, AWS, Azure, GCP, IBM Maximo, MobaXterm 10.8. Service-now, Azure DevOps, VMWare client VDI, PingID, CyberArk, Password Agent 2017, Casandra, CSQL, Agile methodologies, Hadoop, Kubernetes

A-IT, **Parker, CO**

Cloud Architect

- Title: Cloud Architect Nov 2019 - June 2021
- Devoted time to acquire cloud knowledge
- Completed certification in Oracle cloud fundamentals
- Completed certification in Oracle cloud Architect
- Architecture the complete design of a secured cloud infrastructure using load balancer, internet gateway, private and public network, compute, storage.
- Created cloud architecture using Terraform and Ansible.
- Docker, Kubernetes, Docker Swarm
- Created CI/CD pipeline
- Used github as repository and source control
- Created application to ingest stream data using Kafka
- Created cloud infrastructure using AWS, Oracle and Azure cloud
- Hadoop, Mapreduce, Spark

Environment: Oracle Cloud, Cloud Infrastructure, Terraform, Ansible, CI/CD pipeline, DevOps, Kubernetes, Kafka, AWS, Oracle, Azure, GCP, cloud, REST API

Western Area Power Administration "WAPA
Lakewood, Colorado

IT Specialist

- Title: IT Specialist (Data Management) Jan – Oct 2019
- I was working as a Specialist and solved issues faced by team.
- Developed future plan of database upgrade and migration
- Developed shell script to automate routine DBA tasks
- Designed and configured RMAN backup and recovery for any physical failure and restore.
- Backup Design is such that recovery can be done in minimum time
- Provide database disk usage so that disk procurement can be done in timely fashion to meet the future need.
- Developed procedure to migrate non CDB to CDB
- Upgraded OEM
- Developed procedure for patching Exadata
- Implemented data redaction for masking Social Security Number and date of birth field of customer so that when call center employees retrieve the customer data, they will see only last 4 digits of SSN and for DOB only month and date will be shown.
- Created multiple redaction policies for different user requirements. Implemented data masking and susetting.
  Environment: Oracle Exadata X6, Oracle Exalogic, Linux 6, Oracle RAC 12.2, Securecrt, IBM Maximo

Oracle Corporation Inc. Jan 2015 to September 2018
Colorado Springs, Colorado

Senior Principal Support Engineer

- Title: Senior Principal Support Engineer
- I was part of Oracle Exadata Support Team and supported X2, X3, X4, X5, X6, and X7 for any HW, SW, patching, performance, networking issues.
- Worked on Service Requests of severity Sev-1 to Sev-4.
- Platinum support, incident management, patching
- Oracle RAC/ RDBMS versions 19c, 18c,12c,11g
- Performed WebEx sessions with customer to resolve Sev-1 SRs
- Successfully completed training on following topics:
- Exadata Database Machine Administration Workshop
- Exadata Boot Camp
- Exadata DB Server Patching
- Oracle Database 12c: Cluster ware Administration Ed 1
- Oracle Database 12c: New Feature for Administrators Ed 2
- Oracle Database 12c: RAC Administration Ed 1

- TFA
- 12.2 RAC and ASM training
- ZDLRA
- Anti-corruption Foreign corrupt practice act
- Sexual harassment Awareness course
- ACS Security Training module: Security Incidence
- Specific Personal Information and HIPPA Protected Health Information Handling requirement (2018)
- Ethics & Business conduct course

Environment: Oracle Exadata clients X2, X3, X4, X5, X6 and X7, Linux, GoldenGate, DataGuard

Cognizant (Employee ID: 411767) Jan 2014 to Dec 2014

Manager

Title: Manager (Projects)
- Client **(**Health Net**)** Rancho Cordova, CA
- Obtained position of Trust security clearance
- Architected Data Ware House design for storing and retrieving large amount of data
- Implemented 11gR2 feature (interval partitioning)
- Implemented data redaction so HIPAA Privacy & Security rules may be adhered and PHI and PII data is appropriately hidden from public
- Created many policies catering to different type of users. Implemented all type of redactions Full, partial, random, expression, none.
- Used 12c OEM Cloud control to monitor the database performance
- Provided DBA supported to application team
- User complained about database being slow, found blocking lock, killed the blocking session to improve the database performance.
- Made performance improvements to databases
- Used SQL Developer to Tuned SQL queries and implemented the indexes and profile
- Analyzed AWR and ADDM reports for tuning the database and high-cost SQL.
- Used 12c OEM Cloud control to monitor databases.
- While security clearance was in progress, I utilized time in training
- Completed 12c DBA training from skillsoft.
- Completed training in HIPAA Privacy & Security Certificate
- Completed training in Oracle Fusion Middleware 11g: WebLogic & BI Server Architecture & Installation by Sideris Courseware Corporation
- Completed training in Diagnosing Oracle Clusterware and Node
- Completed training in Oracle Database 11g: High Availablity in RAC
- Completed training in Oracle Database 11g: Configure, Manage, and use services in RAC
- Completed training in Oracle Database 11g: RAC Database and Oracle Clusterware Administration
- Completed training in Oracle Database 11g: RAC Performance Tuning
- Completed training in Oracle Database 12c: Managing Security
- Completed training in Networking and UNIX Name Resolution
- Trained colleague on Unix shell scripting and Unix commands
- Received training from colleague on WebLogic administration

Environment: Oracle Exadata clients Oracle 11g, 12c, Linux, GoldenGate, DataGuard, Weblogic

Employer: Oracle Corporation, Senior Technical Support Engineer, Full Time
7700 Technology Way, Denver, Colorado 80237
June 2009 to Aug 2010

Senior Technical Support Engineer

- Worked as **Senior Technical Support Engineer** at Oracle Corporation, Denver.
- Supported JDEdwards

- Trained colleagues to install and manage oracle binaries on VMware and Linux.
- Prepared training material on Unix and Unix shell scripting
- Received accelerated training on Oracle 11g: RAC and Grid Infrastructure Administration from Oracle Corporation

Environment: RAC, Grid Control, Oracle 11g, 10g, 9i, 8i, 8, 7.3.4, Oracle Data Guard, JDEdward, VMware, Linux

BearingPoint, Full time, June 2003 to March 2007
6399 S Fiddlers Green Cir, Greenwood Village, CO 80111

Senior Technical Architect/Senior oracle DBA

- Worked as Sr. Oracle DBA on Integrated Property Tax System.
- Managed the production, test, training and development database for 24X7X365 support
- Developed Perl scripts for data migration, cold backup, hot backup, export of the database
- Developed Unix scripts for monitoring the health of the database which is run by cron and in case of any failure script generates e-mail notification
- Cloned the databases
- Set up cron job to check alert log for any ORA- errors, Check listener up, Disk usage
- Implemented complete RMAN backup and recovery solution for full and incremental backup and recovery.
- Developed shell scripts to perform automatic RMAN backup using crontab and script notifies in case of failure.
- Tuned a SQL and brought down the response time from 13 minutes to less than a minute.

Environment: Oracle 10g, Sun Solaris 10, WebLogic 9.2, Savvion 7.0, J2EE, Eclipse, Windows 2003, MS SQL Server 2000

MASTECH/i-Gate Capital
1000 Commerce Dr., Suite 500, Pittsburgh, PA 15275
May 2000- May2003

- Database administration of Production, development and test instances of Oracle versions 7.3, 8, 8i, 9i on VMS cluster and Windows 2000 cluster on failsafe mode.
- Installed Oracle 8i, 9i on VMS and Windows 2000 and upgraded the database from 7.3 to 8i and then from 8i to 9i
- Developed script/VMS DCL Script to monitor max extent, next extent, broken jobs, invalid objects, alert logs, export logs, load logs of all databases, run batch jobs
- Developed PL/SQL stored procedure and set up batch jobs to load data into database from the files that come from mainframe. Also written batch script to save last 10 days data files for diagnostics purposes.
- Generated output from Oracle database and ftp to mainframe.
- Developed PL/SQL procedure for generating report on daily, weekly, monthly, quarterly and yearly basis.
- Developed Pro*C programs for ETL
- Modified Pro*C programs to include new fields and populate these fields based on logic.
- Refreshed development database from production
- Restructured database to improve the availability and performance of the system
- Developed Knowledge Base for existing system
- Reverse engineered the database in All Fusion ERWIN 4.1
- Administered COGNOS IMPROMPTU Version 6.0.3 and Created catalogs in COGNOS for users to retrieve data from database
- Developed COGNOS reports for users.
- Used Oracle Enterprise Manager and Embarcadero DBArtisan 7.1.0 for database administration

Environment comprised High Availability Alpha 1200 Cluster Fiber channel, Disk array HGS80, VMS 7.3 64bit, TCPIP 5.1, ECO 5, Compaq DL380, Compaq Evo, Compaq DL-380 (clustered), Microsoft Cluster Server

Windows 2000, Oracle 7.33, 8, 8i, 9i, RMAN, ERWin, COGNOS, Veritas Net Backup, Virtual Network Computing VNC 3.3.3 R2, Reflexion 8.0.2, Veritas NetBackup

Research And Development Center for Iron And Steel
Sep 1985 - Oct 1999
Computerization of Purchase Department

Project 1
- Installation of Oracle binaries
- Creation of database instances
- Developed strategy for Backup and restore
- Regular Backup (hot/cold/logical) of the instances
- Recovery of the database
- Database administration, extension of table space, increasing max extents, rebuilding indexes, revalidating invalid objects
- Developed shell script to check listener status and database instance status
- Tuning of the initialization parameters
- Tuning of SQL
- Interacted with users gathered system requirements, designed and developed logical and physical model of the database
- Network administration
- Development of Pro*C program

Environment: Aviion, Unix, k-shell script, Oracle 8, Developer 2000, Designer 2000, Windows NT 4.0

Computerization of Information And Documentation Center
Project 2
- Interacted with users gathered system requirements, designed and developed logical and physical model of the database
- Creation of database instance
- Configuration of user profiles
- Backup (hot/cold/logical) of the instances
- Recovery of the database
- Installed and configured OEM
- Tuning of the database
- Network administration

Environment: Oracle 8, Designer 2000, Developer 2000, Windows NT 4.0

Development of Library Management System on Oracle/UNIX platform
Project 3
- Studied the existing manual practices.
- Interviewed the client for evaluation of the user requirements.
- Designing of DFD and ER-Diagram and Table Instance Chart.
- Estimation of database size.
- Coding of Database creation script.
- Coding of the DDL (SQL script).
- Developed PL/SQL code for forms, functions, procedures, LOV and reports for this project.
- Backup (hot/cold/logical) of the instances
- Recovery of the database
- Tuning of the database
- Network administration

Environment: Aviion 5500, UNIX, Oracle 6, 7, Forms 3, Menu, Reports, UNIX

Operational Database on Indian Blast Furnaces
Project 5
- Creation of Schema and subschema.
- Created the database and initialized the files.
- Developed COBOL program for input of data and generate reports.
- Setup IIDS for interactive query

Environment: Honeywell Bull Mainframe, G-COS8, DM-IV, IDMS-II, COBOL, JCL

Development of Mathematical Model for Blast Furnace
Project 6

- Developed FORTRAN program for blast furnace mathematical model. Own a software copyright on this model.
- Developed graphical program to show the output of the model graphically
- Setup IIDS for interactive query

Environment: Sun Sparc 20, Sun Solaris, FORTAN 77

Improvement in performance of Blast Furnace
Project 7
As a programmer I was responsible for the following:

- Development of FORTAN programs
- Collection of operational data
- Analysis of the various parameters

Environment: VAX/VMS, FORTRAN