

## Jacques Makhoul

### **Summary:**

More than 15 years of IT experience in systems analysis, design, development, testing and project management experience. Extensively worked on ORACLE Tools and ORACLE Applications in various business areas. Proficient in application development methodologies and phases.

### **Expertise includes:**

- 12 years of ORACLE Applications (Distribution, Manufacturing, Financials, Sales & Service) experience. Worked on versions 12 and 11i related to ERP/CRM.
- Managed functional, technical development, support and maintenance, related to customizations and performance of Oracle Applications suite.
- Lead in customizing modules ASO, OM, QP, WSH, AR, and PO.
- Functional/Technical lead in setup, customization, system administration, data conversion and interface programming and generating Reports and concurrent programs in Oracle applications.
- Expertise in Functional analysis, establishing business rules and process flows, design Flexfield structures, segments, value sets, GAP analysis, configuration setups and validations.
- Proficient in developing or modifying forms/reports using Oracle Forms/Reports and written Oracle Alerts.

### **Technical Skills:**

**Hardware:** Sun SPARC/Solaris, HP-UNIX, IBM PC/Compatibles

**Software:** Oracle 11g/10g/9.x, Developer 10g/9i/6i/ (Forms, Reports), PL/SQL, Toad, SQL Developer, SQL\*Plus, Workflow Builder, BI Publisher, SQL\*Loader, Java, Oracle Application Framework (OAF), Oracle Application Development Framework (ADF), Business Process Execution Language (BPEL), Fusion Middleware, Service-Oriented Architecture (SOA), Weblogic, JDeveloper, Flexera, Discoverer, Clearcase, Visual Source Safe, Kintana, TestDirector, Sharepoint, HPQC

**ORACLE Applications:** 12(12.1.3) / 11i(11.5.10), Order Management, Quoting, Advanced Pricing, Inventory, Shipping, Receivables, Purchasing, iProcurement, Service Contracts, Installed Base, Bill of Materials, Work-in-

Process, Costs, Material Requirements Planning, Advanced Supply Chain Planning, Product Information Management, Engineering, Global Order Promising, Warehouse Management System, iStore, Depot Repair, Payables, General Ledger, Cash Management, Fixed Assets

**Programming Languages:** Developer 10g/9i/6i (Forms, Reports), Workflow Builder 2.6, PL/SQL, SQL\*Loader, SQL\*Plus, Oracle Application Framework (OAF), Oracle Application Development Framework (ADF), Business Process Execution Language (BPEL), Web Services, JDeveloper, Java EE, Applet, Servlet, JDBC, C/C++, C-Shell, Bourne Shell, Korn Shell, Awk, Unix Cron, ftp, HTML, XML

**Operating Systems:** Sun Solaris, HP-UX, Unix, Linux, Microsoft Windows

## **Education :**

Bachelor of Science, Business Administration: Summer 1990

California State University, Chico

Emphasis: Management Information Systems

Concentration: Database Systems

## **Work Experience:**

**Google, Mountain View, CA**

**Sr. Oracle Applications Consultant/Architect**

**Jun. 2013 –Present**

Involve in the drumbeat planning project focusing on the coordination of all the forecasting and planning activities to ensure the output of Oracle ASCP is synchronized and accurate along with Oracle EBS Customization and SOA Integration related to Order to Cash, Procure to Pay and Flexera licensing and entitlement.

## **Responsibilities involved:**

- Provide Functional Specifications and Design Specifications in support of contracts, item management and tracking, forecasting and planning processes.

- Configure and set-up various Oracle Applications modules such as Order Management (OM), Service Contracts (OKS), Install Base (CSI), Advanced Supply Chain Planning (MSC), Inventory (INV) and Advanced Pricing (QP).
- Work with the business in order to design the service contract conversion process which includes contract status and version, attachments, pricing policies, billing type, schedules and history of previous invoices, renewal rules, invoicing rules, accounting rules, payment terms and the level of coverage.
- Perform Service Contracts setups such as contract items, standard coverage and subscription templates, billing profiles, automatic renewals, contract approval for integrating with Approvals Management Engine (AME), service pricing for integrating with Advanced Pricing.
- Perform Install Base setups such as relationship types for parties, accounts and contacts along with other Oracle Applications modules such as Inventory, Order Management, Receivables, Bill of Materials for integration with Install Base.
- Create and modify service contracts using Oracle standard APIs in OKS\_CONTRACTS\_PUB.
- Create and change Install Base item instances using Oracle standard APIs in CSI\_ITEM\_INSTANCE\_PUB while using CSI\_INSTANCE\_RELATIONSHIP\_PUB for managing instance-to-instance relationships and CSI\_SYSTEM\_PUB for grouping item instances under Systems.
- Design the architecture processes for Flexera licensing integration with Oracle Install Base, Service Contracts, Product Data Hub and Customer Data Hub using outbound and inbound interfaces in order to send the required data to Flexera and obtain the licensing information.
- Work on different licensing integration scenarios such as Split and Transfer, Transfer of Ownership, Expiration / Termination, Subscription Contracts and Order Fulfillment.
- Work with the SOA team related to the use of Web Services in order to integrate the required data with the FlexNet Operations Cloud system.
- Collaborate with the Engineering team related to the Single Sign-On feature offered with FlexNet Operations so that the user can only be authenticated once in the system.
- Work with the Engineering security team regarding the installation and configuration of digital certificates to use with FlexNet Operations.

- Develop a PL/SQL API which generates a list of user defined activities mapped to Oracle concurrent programs and returns the data to a JAVA GUI so that the user can select a particular activity in order to perform the setups of flow activities.
- Provide a PL/SQL API which accepts a particular setup flow from the GUI and returns the setup header and lines data related to the forecast and planning activities to allow the user to update the required setup header or line records.
- Work on an Oracle Concurrent program which reads different run time log data from different Oracle Instances based on a user setup rules and constraints for certain identified activities during a particular planning cycle and then generates the planning snapshot data.
- Create a PL/SQL API which returns planning activities related information such as overall flow status and activity detail status for a particular setup flow based on the concurrent program generated snapshot data in order for the GUI to display a subway map to the user.
- Purchasing setups related to Employee P-Cards, Supplier P-Cards, Global Agreements and customization of workflows for routing information according to business rules.
- Implement AME Approvals for a Position Hierarchy approval structure to use in iProcurement.
- Work on the integration of iProcurement items associated with contract purchase agreements to reference complex pricing rules in Oracle Advanced Pricing so that the item's price can be considered during checkout.
- Develop Web Services and Orchestration using BPEL for Oracle EBS integration.
- Work on different integration interface types such as PL/SQL APIs, Business Events, Open Interface tables using Application Adapter and Integrated SOA Gateway while leveraging Oracle Integration Repository.
- Provide Price Book program by integrating with the Oracle API QP\_PRICE\_BOOK\_PUB.CREATE\_PUBLISH\_PRICE\_BOOK to generate a price book showing list and net prices for a specific customer and then published the output as XML and email messages.
- Implement dynamic pricing calculations using Formula for Price Break Lines based on Unit Price Application Method.

- Work on adding different operating units to use Internal Requisitions / Internal Sales Order flow and set up the cascading of date through a profile option POR: Sync up Need by date on IR with OM.
- Work on the design of different Oracle Workflow Function Activities as part of the Oracle Workflow customization related to Flexera licensing integration.
- Work with end users on gathering business requirements and determine the best solutions that meet business needs.
- Conduct Document Deliverable reviews and obtained the business approval.
- Provide Test Plans and Test Cases in support of Quote-to-Cash (Q2C) processes and load them into HPQC for different testing environments.
- Coordinate Integrated Testing and User Acceptance Testing and signoff.
- Application performance during development and modification.

**Environment:** Unix, Windows7, Linux GNU, Oracle 11g/10g/9i, Oracle Applications 12.1.3/11.5.10, ASO, OM, QP, BOM, INV, EGO, WSH, AOL, TCA, AR, PO, AP, OKC, OKS, CSI, GOP/ATP, IBE, SOA, OAF, ADF, Weblogic, JDeveloper, Oracle Workflow, Forms/Reports 10g/6i, PL/SQL, Toad, SQL Developer, SQLPlus, Packages, Flexera, PVCS, Kintana, HPQC.

**Cisco Systems, San Jose, CA**  
**Sr. Oracle Applications Consultant/Lead**  
**Sep. 2012 –May. 2013**

Involved in the Quote to Cash process design related to Oracle EBS Release 12/11i Customization and Integration.

**Responsibilities involved:**

- Provided impact assessment on Cisco Commerce Workspace (CCW) Quoting and Ordering related to the migration of existing SJPROD Oracle database(9i) to Oracle database (11g) CG1PRD.
- Created high level diagrams depicting the existing SJPROD and proposed CG1PRD related processes impact on the Quote-to-Order (Q2O) process flow.
- Customized Service Contracts QA Check Processes for extra validation required by the business.
- Created and modified Install Base item instances and instance relationships.

- Developed a PL/SQL package invoked by a concurrent program to create Bill Of Materials (BOM) models, classes and options using the vanilla BOM Process API (process\_bom).
- Worked on a PL/SQL program in order to update BOM components by integrating with the BOM process API (process\_bom).
- Worked on a PL/SQL program to compare the assembly's delivery type to the component's delivery type using different business rules.
- Created Oracle Form Personalization in order to alter the behavior of the vanilla BOM Define Form to meet various business rules by changing properites, executing built-ins and displaying messages.
- Worked on the migration of custom forms (6i) in the R11i environment to forms (10g) in the R12 environment.
- Developed a PL/SQL program to compare the setups of different BOM header and line attributes in different environments such as R11i and R12 and generated an Excel file showing the differences in the BOM setups.
- Provided queries related to User-Defined Attributes (UDA) by accessing tables in the Oracle EGO schema corresponding to Product Information Management (PIM).

**Environment:** Unix, Windows7, Linux GNU, Oracle 11g/10g/9i, Oracle Applications 12.1.3/11.5.8, ASO, OM, QP, BOM, INV, EGO, WSH, AOL, TCA, AR, PO, AP, OKC, OKS, CSI, WMS, GOP/ATP, IBE, SOA, OAF, ADF, Weblogic, JDeveloper, Oracle Workflow, Forms/Reports 10g/6i, PL/SQL, Toad, SQL Developer, SQLPlus, SQLLoader, Views, Packages, Triggers, PVCS, Kintana, Cisco Docs, HPQC.

**Oracle Consulting / NetApp, Sunnyvale, CA**  
**Sr. Oracle Applications Consultant/Architect**  
**Jan. 2011 –Aug. 2012**

Involved in the NetApp's Everest project focusing on end-to-end Quote to Invoice (Q2I) process design related to Quoting Portal UX and Oracle EBS Release 12 Customization and Integration of pricing, discounting and promotion.

**Responsibilities involved:**

- Designed the Quote-to-Cash (Q2C) processes by providing Business Process Architecture Document Deliverables (BP080).

- Provided Functional Specifications (MD050) and Design Specifications (MD070) in support of different Quote-to-Cash (Q2C) processes.
- Application Setup Document Deliverable (BR100) related to Order Capture (ASO), Order Management (OM) and Advanced Pricing (QP).
- Created a Qualifier/Pricing Attributes extension PL/SQL API package in order for the automatic eligible discount to be applied based on certain partner, customer/end user and quote attributes.
- Developed a custom Tier2 pricing call extension to determine the Tier2 eligible discounts when the Apply Reseller Discounts button in the custom quoting tool pushed by the end user.
- Calculated Tier2 Reseller Total Discounts, Suggested Discount and Additional Discount and updated a quoting custom table.
- Created an Unlocking Fixed Discounts extension in order to enable authorized users to unlock all fixed discounts on a quote.
- Created an API to lock all fixed discounts on a quote after every pricing call if the quote had any lines with a discount applied that had the discount Descriptive Flexfield (DFF) where the fixed discount was set to 'Yes' and the line quantity was less than or equal to the volume threshold number.
- Developed a Custom Ignore Pricing extension used to skip pricing calls for items that had zero price such as model options based on PIM (Product Information Management) attributes by using the seeded package qp\_custom\_ignore.
- worked on a Promotion Lookup Extension to search for a requested Promotion Code entered on the Manual Promotions/Special Pricing Rules Entry form and if found check if it was active and whether it was flagged as Competitor Information Required.
- Developed an Applied Promotions Extension to retrieve and summarize all automatically and manually applied promotions on a given quote for display on the Applied Promotions region of the Manual Promotion/Special Pricing Rules Entry form.
- Created the logic for an Add/Delete Promotion Extension to add a Promotion Code to all eligible quote lines and initiated repricing of the quote.
- Involved in the quote creation process where the system would integrate with SFDC, Advanced Pricing, TCA, and Sales Contract Metadata for only buying entity on the Quote and would apply it to the Quote according to Defaulting Rules.



- Worked on the Modify Quote process that can take updates to existing Quote and process it and send response back to the calling program. Modify Quote program can be called from different sources such as Quoting Portal, Configurator and Pricing processes for updating an existing single Quote.
- Created a PL/SQL program to update a profile option for a particular user in order to unlock pricing fixed discounts.
- Provided Test Plans and Test Cases (TE020 / TE030) in support of Quote-to-Cash (Q2C) processes and load them into HPQC for different testing environments.
- Supplied Document Deliverables such as Data Conversion (CV040 / CV070) for various conversion elements.

**Environment:** Unix, Windows 7, Oracle 10/11G, Oracle Applications 12.1.3, ASO, OM, QP, AR, BOM, WIP, INV, PO, AP, WSH, OKC, OKS, CSI, WMS, GOP/ATP, IBE, AOL, TCA, SOA, ADF, OAF, JDeveloper, Weblogic, Oracle Workflow, Forms/Reports 10g/6i, PL/SQL, Toad, SQL Developer, SQLPlus, SQLLoader, Views, Packages, Triggers, PVCS, Kintana, Sharepoint, HPQC.

**JDS Uniphase, Milpitas, CA**  
**Sr. Oracle Applications Consultant/Lead**  
**Jan. 2010 –Dec. 2010**

Involved in the Oracle Applications Global Rollout "Passport" Project related to Quote-to-Cash and Procure-to-Pay.

**Responsibilities involved:**

- Designed the Order-to-Cash (O2C) processes related to different regions such as Asia Pacific (APAC), Europe, the Middle East and Africa (EMEA) and Latin America (LATAM) by providing Business Process Architecture Document Deliverables (BP070 / BP080).
- Standard Finished Goods Sales Process deals with available / manufactured items within
- JDS Uniphase (JDSU).
- Sale of Parts to Vendor Process required for sales of parts to JDSU vendors.
- Initial Scheduling Process provides a schedule ship date to the customer for an existing order.



- Rescheduling Process allows a change to the initial schedule date in the order based on customer's request.
- Credit Card, Cash in Advance and Letter of Credit Order Processes help fulfill a customer's request for payment method such as Credit Card, Cash in Advance and Letter of Credit.
- Internal Purchase Order(IPR) / Internal Sales Order (ISO) Process followed in order to procure goods between Oracle sites.
- Vendor Drop Ship Process permits the fulfillment of a customer's demand by shipping items from External Vendor.
- Intercompany Order Process allows the fulfillment of a Sales Order by shipping the items from another JDSU site outside the selling operating unit.
- Business to Business (B2B) for Contract Manufacturers Process followed to fulfill a customer's demand by sending the order information to a contract manufacturer.
- Credit Check Process used during the fulfillment of customer's order to ascertain the credit worthiness of the customer.
- Trade In Process permits the acceptance of a JDSU item / Competitor item from the customer and then to ship a JDSU item to the customer.
- RMA to Credit Process allows the customer to return a product to JDSU.
- Upgrade Process used when customers request an upgrade on an existing JDSU product owned by them.
- Provided Functional specifications (MD050) and Design Specifications (MD070) in support of all the different Order-to-Cash (O2C) processes.
- Application Setup Document Deliverable (BR100) related to Order Management(OM), Service Contracts (OKS), Installed Base (CSI), and Purchasing (PO).
- Integration of Oracle Applications with existing manufacturing local systems by building B2B interfaces in order to support data transmission automatically to eliminate manual and duplicate data.
- Created and registered Concurrent Programs and Request Sets to handle B2B integration based on appropriate B2B partner code.

**Environment:** Unix, Windows 7, Oracle 8i/9i/10G, Oracle Applications 11i (11.5.9/11.5.10), Oracle Applications(12.1.1/12.1.2), ASO, OM, QP, AR, BOM, WIP, INV, PO, AP, WSH, OKC, OKS, CSI, WMS, GOP/ATP, IBE, AOL, SOA, OAF, ADF, Weblogic, JDeveloper, Oracle Workflow, Forms/Reports 6i, PL/SQL, Toad, SQLPlus, SQLLoader, Views, Packages, Triggers, PVCS, Kintana, Sharepoint, HPQC.



**Cisco Systems, San Jose, CA**  
**Sr. Oracle Applications Consultant/Lead**  
**Feb. 2007 –Oct. 2009**

Involved in the Oracle Applications Customization and Integration of pricing, discounting and promotion.

**Responsibilities involved:**

- Designed the Cisco Pricing and Discounting Engine to provide accurate and consistent pricing and discounting across different tools by integrating with the Oracle Advanced Pricing module (QP).
- Pricing and Discounting Engine integrates with Oracle Service Contracts and Oracle Installed Base in order to obtain service related information.
- Provided functional specifications related to the pricing and discounting system and obtained the business approval.
- Translated the business requirements into a technical design and coordinated with the cross-functional teams to get their signoff.
- Created the logic of the Pricing and Discounting Engine, using PL/SQL Packages, which used pricing and discounting rules by using different methodologies in order to return the required pricing and discounting information to the calling application such as Quoting, iStore and Order Management.
- Designed the Quantity-Based Pricing Service by using the Point /Range Price Break type in QP.
- Created Formula and attached to the Price Break Header level in QP to dynamically calculate the list price.
- Created Product and Pricing Attributes including Attribute Linking and Mapping to be used by QP to apply to price list lines.
- Developed the logic of the Get\_Custom\_Price function to calculate the price based on the price break factor, country uplift factor and quantity.
- Developed an Oracle trigger to update the price formula id from the backend by using the QP API Process\_Price\_List.

**Environment:** Unix, Windows, Oracle 8i/9i, Oracle Applications 11i (11.5.9/11.5.10), Oracle Applications(12.0/12.1), ASO, OM, QP, AR, BOM, WIP, INV, OKC, OKS, CSI, WMS, GOP/ATP, IBE, AOL, TCA, OAF, JDeveloper, Oracle Workflow, Forms/Reports 6i, PL/SQL, Toad, SQLPlus, SQLLoader, Views, Packages, Triggers, PVCS, Kintana, Livelink, TestDirector.

**Hitachi Data Systems, Santa Clara, CA**  
**Sr. Oracle Applications Consultant**  
**Jan. 2006 –Dec. 2006**

Involved in the Oracle Applications Customization and Integration of the export compliance process.

**Responsibilities involved:**

- Designed a new process for integrating EASE, Export Automation Software Essentials, with Oracle Applications to automatically apply/release holds on customer sales orders in OM when a customer denied in EASE.
- Translated the business requirements into a technical design and coordinated with the cross-functional teams to get their signoff.
- Set up Systems, Agents, Events and Event Subscriptions using Oracle Advanced Queuing.
- Developed an Oracle trigger for publishing a hold event from EASE and created an Oracle Workflow for subscribing to the published hold event.
- Provided PL/SQL packages that placed holds on sales orders for selected customers and sent notifications to the end users using Oracle Workflow.
- Developed an Oracle form that allowed the users to classify part numbers based upon import/export government rules.
- Registered the form and report concurrent program in the Oracle Applications Object Library.

**Environment:** Unix, Windows, Oracle 8i/9i, Oracle Applications 11i (11.5.9), OM, AR, BOM, WIP, INV, PO, AP, WSH, AOL, OAF, JDeveloper, Oracle Workflow, Workflow Builder 2.6, Forms/Reports 6i, PL/SQL, TOAD, SQLPLUS, SQLLoader, Views, Packages, Triggers, PVCS, Kintana, CMS, TestDirector.

**Intuit Corp, Mountain View, CA**  
**Sr. Oracle Applications Consultant**  
**Jul. 2005 –Dec. 2005**

Involved in the Oracle Applications Customization and Integration of the order booking process.

**Responsibilities involved:**

- Analyzed and designed the booking process to improve the performance, order processing cycle time and process the priority orders as soon as possible.
- Gathered requirements and worked on functional/technical specifications related to the booking system.
- Designed and developed two types of programs which were the master and child booking programs written using PL/SQL packages.
- Set up multiple instances of the concurrent master program in Oracle Applications to run multiple times a day each with different process type and status buckets, order batch size and maximum worker threads
- Provided a child booking program to run in two different modes by getting invoked as a worker in multiple threads based upon different buckets supplied by the master program or run manually as a concurrent program.
- Developed an Order Booking Alert using PL/SQL packages to send an email attachment of errored orders to specified email aliases.

**Environment:** Unix, Windows, Oracle 8i/9i, Oracle Applications 11i (11.5.9), OM, INV, PO, AP, WSH, AOL, Oracle Workflow, Forms/Reports 6i, SQL, PL/SQL, TOAD, SQLPLUS, Views, Packages, VSS, Kintana.

## **Rainin Instruments, Oakland, CA**

### **Sr. Applications Analyst**

**Dec. 2002 –Jun. 2005**

Involved in the Global Oracle Applications Implementation, Upgrade, Customization and Integration related to Order-to-Cash and Procure-to-Pay.

### **Responsibilities involved:**

- Developed an external procedure for computing the discount based on the quantity of the item ordered using QP\_CUSTOM.GET\_CUSTOM\_PRICE function.
- Created Price Qualifiers that checks the Consumer Credit rating and assigns the discount modifiers accordingly.
- Created several different Price Lists, Pricing Formulas, Qualifiers and Modifiers.
- Created and registered a new form in Order Management, using the Template.fmb file that displays final price of the product derived from the Pricing Engine.

- Worked with the business users on issues related to various tasks in Oracle Shipping(WSH) such as trips and delivery planning, pick release, ship confirm and carrier integration with United Parcel Service(UPS).
- Developed programs using SQLLoader and PL/SQL packages to import items from external systems into the Item Master in INV for the master organization and various child inventory organizations.
- Implemented the full cycle of purchasing activities, including sourcing, requisitioning, invoicing, receiving, electronic payments and automatic cash reconciliation.

**Environment:** Unix, HP 9000, HP-UX, Windows, Oracle 8i, Oracle Applications 11i(11.5.9), ASO, OM, BOM, WIP, INV, MRP, ASCP, CZ, PO, AP, CST, WSH, WMS, QP, CS, OKC, OKS, CSI, CSD, ICX, EAM, PN, JDeveloper, OAF, AOL, Oracle Workflow, Forms/Reports 6i, SQL, PL/SQL, TOAD, SQLPLUS, SQLLoader, Packages, Triggers, C-Shell.

## **Sun Microsystems, Milpitas, CA**

### **Sr. Applications Analyst**

**Apr. 1995 –Nov. 2002**

Involved in customizing, integrating and supporting Oracle Order Entry and Receivables, Customer Returns, and AOL Netscape Alliance, - within the ERP architecture of Sun's Oracle Applications Order Entry/Receivables Group. Performed analysis, design, coding, testing and training on all 3 projects.

### **Responsibilities involved:**

- Designed and developed custom Order Import programs for OE to support various order sources such as WEBDESK and EDI in a multi-Org environment.
- Worked on the design and development of the AR Lockbox interface used to load receipt information electronically from bank's tape or file into Oracle Receivables.
- Developed a Java Applet for a Customer Registry prototype.
- Created Servelets to handle information passed from the Applet and HTML Forms and enabled JDBC calls to Oracle for insertion and update of records in the database.
- Configured a Java Web Server and loaded Servelets to establish communication with the Applet and HTML Forms.

# TRUGLOBAL

**Environment:** Sun Solaris, Windows CDE, Oracle 7.3, Oracle Applications 10.7, OM, AR, BOM, WIP, INV, WMS, WSH, PO, AOL, GL, Reports 2.5, PL/SQL, SQLPLUS, SQLLoader, Packages, Triggers, C, Java, C-Shell, Bourne Shell, Awk, Clearcase, StarOffice.

**Target Therapeutics, San Jose, CA**

**Jan. 1992 –Dec. 1994**

**Programmer/Analyst**

**Responsibilities involved:**

- Developed and enhanced existing programs for medical manufacturing environment using Progress and Unix.
- Program and bar code responsibilities for purchasing, inventory control, shipping and process flow controls.

**Environment:** Unix, MFG/PRO, Progress, C-Shell, PC, Macintosh.

**Zacson Corporation, Pleasanton, CA**

**Programmer/Analyst**

**Sep. 1990 –Sep. 1991**

**Responsibilities involved:**

- Worked with clients to analyze and develop telemarketing systems that solved complex business problems using Informix and Unix.
- Assumed responsibility for data collection, reporting and communication of data, i.e., financial, employee and security data.

**Environment:** Unix SCO, Informix, C-Shell.