



**Years of Experience:** 20+

**Contact Information:** [Dana\\_Cottrell@Dantechcorp.com](mailto:Dana_Cottrell@Dantechcorp.com)

**Citizenship:** US; Natural born citizen

**Availability:** Within two weeks notice

**Remuneration:** C2C

### **CERTIFICATIONS:**

- \*\* AWS Certified Solutions Architect - Professional
- \*\* AWS Certified Solutions Architect - Associate
- \*\* AWS Certified SysOps Administrator - Associate
- \*\* AWS Certified Developer - Associate
- \*\* ITIL Foundation v3
- \*\* TOGAF 8
- \*\* Project Management Professional Certification (PMP)
- \*\* Microsoft Certified Technology Specialist, Microsoft Office Project 2007, Managing Projects (MCTS)
- \*\* Certified Scrum Practitioner (CSP from Scrum Alliance)
- \*\* Professional Scrum Master (PSM from Scrum.org)
- \*\* Sun Certified Java Programmer (SCJP) version 1.4
- \*\* WebMethods Certified Business Partner, Integration Developer version 6.5
- \*\* IBM LotusNotes Certified Principal Release 4.0
- \*\* SEI/CMM L2, L3 trained and experienced

### **HIGHLIGHTS:**

- Seasoned in large scale technology transformation planning and implementation, particularly in the areas of Cloud migration, operations, and organizational transformation/modernization
- Technical leadership experience in driving strategy to logical, effective, and actionable solutions
- Mature presentation and interpersonal skills, particularly when communicating technical complexity to diverse and non-technical stakeholders
- Highly knowledgeable in accomplishing consensus building and alignment on technical realizations of key objectives and targeted outcomes
- Proven ability to deliver logical and practical end state architecture as well as the accompanying transition architectures with emphasis on standardization, risk reduction, and complexity reduction

### **EXPERIENCE:**

10/2017 – Present Dantech Corporation

King of Prussia, Pennsylvania

Industry: Aerospace, Defense, and Security

Cloud Operations Lead

Client: Lockheed Martin

Act as a Subject Matter Expert to the organization for Cloud Operations. Implement a Cloud Operations model and framework, based upon Cloud and AWS best practices. Evangelize and educate on AWS native tools, technologies, and concepts. Evaluate current enterprise operations model, functions, and organization. Strategize and document the future-state vision for operations functions and organization. Facilitate discussions and working sessions of the current state cloud strategy and how it aligns with its future state strategy and vision for Cloud operations. Identify and document desired strategic business and technical outcomes and overall value proposition. Discuss operational, delivery, workforce, and capability gaps that could impede cloud strategy, adoption, and migration. Create and conduct workshops to inform and educate various teams on AWS best practice, Cloud best practice, Cloud Operations model, and AWS services and tools. Assist and support Cloud Migrations. Provide in-house Cloud consultation in the following categories:

## Resume of Dana Cottrell

---

- Agile Development: Operations Scrum of Scrums, Team Integration, Infrastructure-as-Code, Development patterns, Test Automation, Test Driven Development, Processes, and Policies
- Business Continuity: Backup & Restore, Disaster Recovery, High Availability, Processes, and Policies
- Incident and Problem Management: Processes, Policies, Automation, Ticketing Tooling integration, and Knowledge Base
- Configuration Management: Configuration Management, License Management, Automation, CMDB, Image Management, Enterprise repository, Processes, and Policies
- Change & Release: Change Management, Release Management, Deployments, Processes and Policies
- Monitoring: Performance, policy, data, security, infrastructure, and application
- Request Management: Service Catalog, pre-approved provisioning
- Cost Management: Tagging, Billing Automation, Reporting, Policies, and Processes
- Capacity Management: Monitoring, Automated Notification, Automated Shutdown, Policies, and Processes

This position requires the familiarity with, but limited to, the following technologies: Python, Java, Node.js, AWS Gov Cloud, AWS Direct Connect, AWS S3, AWS RDS, AWS VPC, AWS IAM, Active Directory, AWS ELB, AWS EC2, AWS CloudWatch, Bash, SQL Server, SQL, DNS, Windows 2016, AWS Linux, Remedy, AWS CloudFormation, PowerShell, Ansible Tower, AWS SSM Automation, AWS SSM Patch Manager, AWS Trusted Advisor, AWS Lambda, AWS Config, AWS Dashboard, AWS Service Catalog, Service Now, JIRA, Confluence, Spark, Active Directory, .NET, Team Foundation Server, AWS Code Deploy, AWS Code Pipeline, AWS Organizations, McAfee, Qualys, OpNet, BitBucket, GitHub, Splunk, FedRAMP

04/2017 – 09/2017 Dantech Corporation

Houston, TX

Industry: Space

Cloud Architect

Client: NASA Johnson Space Center

Accelerated development of a Cloud environment by providing Architecture, Configuration and Automation in accordance with NASA technology and security standards as well as AWS and technology best practices. Provided in-house Cloud Consultation to help define standards and requirements to further Cloud use and adoption. Delivered a fully automated workload that encompasses monitoring, logging, infrastructure, backup/recovery, configuration, security, and deployment. Leveraged the fully automated workload as a model to demonstrate AWS capability to Development Teams. Partnered with Cloud Computing and NOC teams to derive the best integration model between existing networks and AWS, particularly in the areas of identity federation and privilege. Deliver implementation documentation describing how to replicate and/or run all provided configurations during this engagement.

This position requires the familiarity with, but limited to, the following technologies: AWS Gov Cloud, AWS Direct Connect, AWS S3, AWS RDS, AWS VPC, AWS IAM, Active Directory, AWS ELB, AWS EC2, AWS CloudWatch, Bash, SQL Server, SQL, DNS, Windows 2016, AWS Linux, Remedy, AWS CloudFormation, AWS Lambda, Xceedium, AWS Code Deploy, AWS Organizations, AWS Trusted Advisor, AWS Config, Splunk, FedRAMP

05/2015 – 04/2017 Dantech Corporation

Cambridge, MA

Industry: Education

Cloud Architect

Client: Harvard University Information Technology (HUIT)

Deliver technology frameworks and technical leadership in support of HUIT's initiatives in cloud computing and automation, with a focus on the design of systems and services that run on cloud platforms. Report into the Engineering and Architecture organization, but embedded into the Cloud-DevOps effort to provide architectural guidance and best practices. Additionally, ensure that critical applications were designed and optimized for high availability and disaster recovery. Key areas of responsibility are:

- Cloud Architecture and Design and Development: Act as a Subject Matter Expert to the organization for HUIT Cloud end-to-end architecture including AWS and future providers, networking, provisioning and

management. Develop a library of deployable and documented cloud design patterns, based on the HUIT application portfolio, as a basis for deploying services to the cloud. Demonstrate leadership ability to back decisions with research and the "why", and articulate several options, the pro's and con's for each, and a recommendation. Maintain overall industry knowledge on latest trends, technology etc. Develop solutions architecture and evaluate architectural alternatives for private, public and hybrid cloud models, including IaaS, PaaS and other cloud services. Contribute to DevOps development activities, and complex development tasks. Define optimal design patterns and solutions for high availability and disaster recovery for applications. Assist with disaster recovery testing to prove out architectural design. Demonstrate knowledge of the cloud architecture and implementation features (e.g., OS, Multi-tenancy, Virtualization, Orchestration, Elastic Scalability). Demonstrate knowledge of DevOps tool chains and processes.

- Cloud Consultation: Drive scope definition, requirements analysis, functional and technical design, application build, product configuration, unit testing, and production deployment. Ensure delivered solutions meet/performance to technical and functional/non-functional requirements. Provide technical expertise and ownership in the diagnosis and resolution of an issue, including the determination and provision of workaround solution or escalation to service owners. Ensure delivered solutions are realized in time frame committed; work in conjunction with project sponsors to size and manage scope and risk. Provide support and technical governance, expertise related to cloud architectures, deployment and operations.
- Thought Leadership: Provide thought leadership in industry and to fellow team members across business and technical project dimensions solving complex business requirements. Demonstrate forward thinking around where the organization is going and how technology can support these efforts. Advocate and define cloud architecture vision from a strategic perspective including internal and external platforms, tools and systems.

This architecture position requires the familiarity with, but limited to, the following technologies: AWS DirectConnect, Informatica, VMware VCenter, AWS ELB, AWS EC2, AWS VPC, AWS Lambda, AWS ECS, AWS CloudWatch, AWS IAM, AWS EBS, AWS CodeDeploy, AWS ElasticBeanstalk, AWS Route53, AWS CloudFront, AWS API Gateway, AWS WAF, AWS ElastiCache, Drupal 6+, Bash, Chef, Puppet, Ansible, Python, Java, Apache, Nginx, Oracle RDBMS, Oracle Peoplesoft, PeopleTools, Cobol, Oracle Enterprise Business Server, Oracle Golden Gate, Oracle Rman, MySQL, SQL Server, Maximo, HTML, JQuery, JSON, SOAP, JMeter, CSS, XML, Weblogic, Apache, Tomcat, Spring, Jenkins, BitBucket, GitHub, Maven, SAML, LDAP, SQL, DNS, Windows 2013+, AWS Linux, RHEL 5+, SharePoint, Maestro TWO, Nagios, Splunk, SDLC, Scrum, ITIL, Waterfall, Agile, Atlassian Confluence, Atlassian JIRA, Atlassian HipChat, Slack, Fortinet FortiManager, Fortinet Fortigate, Netscaler Nitro, phpIpam, Cisco Router Provisioning, ServiceNow

09/2012 – 3/2014 Dantech Corporation

Washington, DC

Industry: Finance/Mortgage

Enterprise Architecture Lead

Client: Fannie Mae

Portfolios: Single Family, Multi-Family, Client Engagement (Web), Securitization, Capital Markets

Promote strategy and innovation in the evaluation of emerging and existing systems/technologies and influence the evolution of architectures for corporate strategic initiatives to solve business challenges. Champion a service oriented architecture approach to drive enterprise wide design, research, testing and evaluation of technology solutions that improve and enhance Enterprise Systems' reliability, availability, scalability, and serviceability. Collaborate with internal and external partners to ensure that technology investments and decisions align with the overall Enterprise Architecture guiding principles and business need. Key responsibilities are, but not limited to:

- Direct the overall strategy, architecture and process improvements for the Enterprise Service Platform.
- Introduce and promote architecture best practices.
- Assess the integration of new technologies and POCs.
- Conduct architecture deep-dive reviews of projects and programs as they progress through software development lifecycles.

## Resume of Dana Cottrell

---

- Maintain an organization-wide view of current and future business and application architectures in support of goals and objectives.
- Identify business requirements that impact the enterprise architecture and provide solutions that integrate into the overall architectural vision and strategy.
- Provide leadership and expertise in the development of standards, architectural governance, design patterns, technology trends, enterprise operations, and IT practices.

This architecture position requires the familiarity with, but limited to, the following technologies: VMWare, TCS Server, GemFire, JEE, JMS, Tibco EMS, Tibco Business Works, HTML, Java, JQuery, JSON, SOAP, RMI, JMeter, ApacheBench, CSS, XML, C, Visual Basic, SOA, Weblogic, Apache, Tomcat, Oracle Service Bus, Oracle Fusion, Spring, Jenkins, Selenium, Mercury Quality Center, Cruise Control, Ant, Maven, SAML, XSD, DTD, EJB, Adobe CMS, Adobe Site Catalyst, F5, Remedy, SQL, Oracle RDBMS, MySQL, SQL Server, Sybase, DNS, Windows, Linux, SharePoint, AutoSys, Nagios, Oracle Golden Gate, Splunk, SDLC, Scrum, CMMi, ITIL, Waterfall, Agile

8/2010 – 09/2012 Dantech Corporation

Washington, DC

Industry: Non-Profit Association

Sr. Principal Systems Architect

Client: AARP

Projects: Web and Mobile solutions

Architected and designed mission critical and complex implementations that ensure the 24x7 availability and scalability of AARP web and mobile solutions. Served as a leader and peer mentor during the design, development, implementation, integration, maintenance, and enhancement of custom applications, COTS technologies (e.g., CMS, ESB, Search), web security solutions, and enterprise solutions. Served as a leader for technical efforts related to AARP.org, providing technical and architectural guidance and best practices to peers, partners, and customers. Required to compose both complex visionary and tactical designs for the technical architecture of AARP.org and to successfully execute against that vision. Serves as a member of AARP's Architectural Review Board, ensuring incoming projects adhere to architectural standards. Translated business strategic direction into actionable requirements and architectures. Created and maintained architecture and security documentation templates in support of the architecture lifecycle. Supported escalation-level incident management to ensure operational efficiency and stability, including off hours "on-call" support. Tasked with directly ensuring that application availability, reliability, demand management, and scalability KPIs are achieved as per SLA. This staff architect position leverage the following technologies: HTML, Java, JQuery, JSON, SOAP, PHP, RMI, JMeter, ApacheBench, CSS, XML, C, Cobol, Visual Basic, EDI, SOA, Weblogic, JBoss, Apache, Tomcat, Oracle Service Bus, Oracle Customer Hub, Oracle Identity Management, Oracle Fusion, J2EE, JMS, Spring, CruiseControl, Ant, Maven, Jenkins, SAML, XSD, DTD, EJB, Keystone, Endeca, Adobe CMS, Adobe Test & Target, Adobe Site Catalyst, F5, MicroStrategy, Remedy, Oracle Identity Manager, SEO, SQL, Oracle RDBMS, MySQL, DNS, Akamai, CDN, CRM, CTI, IVR, Aspect, Windows, Linux, CentOS, Keynote, Gomez, Cenzic, SharePoint, Nagios, Oracle GoldenGate, Splunk, SDLC, ODLC, CMMi, ITIL, Waterfall, Agile, iOS SDK

6/2010 – 8/2010 Dantech Corporation

Reston, VA

Industry: Education

Interim Sr. Director of Operations, Technical Services

Client: College Board

Projects: SAT, PN, AP, CLEP and other College Board Programs and Products

Directed daily business process operations in College Board's multi-vendor operating model for the College Board programs and products are adequately supported from a production and technical support standpoint and can remain up and running in a high quality, high reliability manner. Drove strategy in the continual effort to meet and improve upon operational consistency and longevity while running daily production operations. Managed the following teams:

- Operations Incident Management – ensures that any/all production incidents (issues, service requests, etc) experienced by internal and vendor operations users are identified, tracked, and resolved.
- Operations Problem Management – proactively searches out underlying problems that cause incidents and drives them to resolution and also plays the role of tier 2/3 support for the Incident Management team.

## Resume of Dana Cottrell

---

- Operations Tools Development and Maintenance – which seeks out and addresses opportunities to gain operational efficiencies and/or cost savings through process improvements which include, but are not limited to, software tools which are implemented or purchased.
- Operations Acceptance Testing – ensures all changes to CB and vendor systems have been tested end-to-end in an effort to prevent significant defects from being deployed into the production environments.

Met continually with key programs' business process owners to validate that operational objectives are met consistently, reliably, and in a manner that is sustainable over the long term. Partnered with the Technology group and multiple external vendors to ensure effective delivery of new and enhanced system functionality, while maintaining existing service levels. Oversaw the augmentation, training, and development of employees and consultants. Reported directly to the Executive Director, Operations Support Services. The following technologies were used: C, Shell Scripting, Java, HTML, XML, Oracle Fusion, Oracle Service Bus, Apache, JBoss, C++, .Net, JMS, SOAP, WSDL, XSD, JNDI, JAAS, XML, XLST, EJBs, Oracle 10, Erwin, Maven, Ant, Junit, Sharepoint, Visio, Microsoft Project, Microsoft Visio, UML, Remedy, Mercury Quality Center

3/2008 – 9/2009 Dantech Corporation

Rockville, MD and New York, New York

Industry: Finance/Capital Markets

Technical Project Manager

Client: FINRA

Project: Regulatory Enterprise Query Service Tool (REQST)

Managed team of 14 (both direct reports and matrixed individuals), with a \$3M budget, for the construction of an enterprise shared service which provides surveillance business intelligence for FINRA member regulatory applications. This application exists to centralize automated analytics used to detect anomalies, exceptions, and possible regulatory infractions across multiple FINRA applications which are used by examiners and regulatory agents. This system is implemented as a cluster J2EE applications and web services which encapsulate Cognos 8 and integrate with business applications via Oracles/BEA's AquaLogic ESB. This effort includes management of the feasibility study as well as the entire project lifecycle project (inclusive of post production activities and successive releases). The project is a critical integration effort using the following technologies: Cognos 8.3 BI \*Server, Cognos 8.3 Java SDK API, SOA, BEA WebLogic 9.2, BEA AquaLogic ESB, Apache Axis, Apache POI, Core J2EE Design Patterns, JAVA 1.5 SDK, JMS, SOAP, WSDL, XSD, JNDI, JAAS, XML, XLST, JAXB2, EJBs, Oracle 10, Erwin, Struts2, Junit, Eclipse, StarTeam, Sharepoint, Visio, Microsoft Project, Microsoft Visio, UML, SOA, OOP, and Log4j.

4/2006 - 3/2008 Dantech Corporation

Washington, DC

Industry: Finance/Mortgage

Architect/Team Lead/Sr. Developer

Client: Fannie Mae

Project: External Market Data Exchange (EMDEx)

Architected, designed, and developed solution for managing the exchange of real-time and bulk market data (i.e., fixed income data) between external third parties and internal Fannie Mae financial market applications via real-time data streams, conflation buffers, and historical querying. This project is essentially an inbound data gateway for the capture, validation, aggregation, collection, and dissemination of market data. The market data is then channeled using feed handlers to third party servers, Caplin and StreamBase for processing and distribution via a Weblogic service layer and custom Java API. This system resolves the problem of decoupling market data-reliant applications from the details of data connectivity, entitlement, governance, security, etc., while receiving data, from various sources, in one normalized fashion. AquaLogic is used to process disparate data sources into one repository for distribution. EMDEx is designed to operate in a Hot/Hot deployment configuration thereby assuring the highest level of availability and reliability. Every component of EMDEx is clustered and every site is mirrored. The project is a very large scale integration effort using the following: Reuters RMDS, DACS, custom RFA feed handlers, Caplin DataSource, Caplin Liberator, Caplin Transformer, StreamBase Adapters, StreamBase processing Engine, BEA WebLogic, BEA AquaLogic ESB, Java RFA1.5, Tibco Rendezvous, Tibco EMS, Tibco Hawk, Core J2EE Design Patterns, JAVA SDK, JMS, SOAP, XSD, WSDL, JNDI, JAAS, XML, XLST, JAXB, EJBs, WLS, WLI, SOA, Oracle, Sybase, Spring, Junit, Eclipse, CVS, Microsoft Project, Microsoft Visio, UML, Sparx Enterprise Architect, Sharepoint, Visio, SOA, OOP, and Log4j.

7/2003 - 9/2005 Dantech Corporation

Washington, DC

## Resume of Dana Cottrell

---

Industry: Finance/Mortgage

Architect/Team Lead/Sr. Developer/Proj Mgr

Client: Fannie Mae

Project: FAPT Message Hub

Architected, designed, developed and deployed an enterprise messaging solution. This messaging infrastructure automated FannieMae's Debt Tracking Application (DTA) which won the 2004 FannieMae Chairman's award for project excellence. DTA is responsible for the automated issuance of short term debt notes. The Message Hub is built upon fundamental, robust design solutions for service architecture and messaging. This project produced a customized integration and messaging service which leveraged the messaging support provided BEA's Weblogic JMS implementation. This solution was designed to migrate to other messaging infrastructure platforms which support JMS should corporate direction change. This service is comprised of a core hub and console. Hubs are configured with routing rules and connectivity details to facilitate dynamic routing, operational independence, and guaranteed delivery across various delivery protocols. Rational Unified Process (RUP) methodology was utilized for the analysis, design and development process. This application was specifically designed for real-time, high volume messaging in financial applications during a 5/12 production environment. The project was primarily a very large scale BEA Weblogic Integration using the following: Core J2EE Design Patterns, JMS, SOAP, XSD, JNDI, JAAS, XML, XLST, JAXB, EJBs, WebLogic 7.0, WebLogic 8.0, WebLogic Integration, WebLogic ESB, Tibco Rendezvous, Tibco Hawk Peoplesoft Integration, MQ API, MQ Series, Oracle, Wiley, Struts, Cactus, Junit, Eclipse, CVS, Eclipse, iPlanet, Microsoft Project, Microsoft Visio, Sparx Enterprise Architect, AOP using Eclipse Libraries, OOP, Log4j, etc.

11/2002 - 7/2003 Dantech Corporation

Washington, DC

Industry: Finance/Mortgage

Architect/Technical Lead/Sr. Developer

Client: Freddie Mac

Project: Electronic Mortgage Services (EMS)

Architected, designed, developed and deployed integrations for automated electronic order processing. EMS is an electronic exchange whereby customers generate and satisfy orders for the servicing of mortgage loans. Standardized integrations were implemented using the industry standard, Mortgage Industry Standards Maintenance Organization (MISMO) over HTTPS. Custom integrations were implemented utilizing either flat file messaging or client-specific XML protocol over HTTPS, FTP. This B2B system was an asynchronous, event-based message processing application integrated with a centric J2EE core solution. Customers are able to conduct business in EMS through either the B2B environment and/or the browser-based web application. Extreme programming (XP) methodology was utilized for the development process. This application was designed for specifically for high volume order processing of appraisal, flood, escrow closing and title products by large customer institutions in a 7/24 production environment. The browser-based web application was designed using known core J2EE patterns Intercepting Filter, Front Controller, Composite View, Business Delegate, Session Faade, etc. The project was primarily a very large scale WebMethods Integration - WebMethods Integration Server 4.6, Core J2EE Design Patterns , Trading Networks 4.5.1, WebLogic 6.1, WebLogic 7.0, SAP, JAVA, JUNIT, CVS, IntelliJ, SiteMinder, XML, JSP, JAXB, EJBs, JMS, JNDI, iPlanet and Oracle.

1/2002 - 11/2002 Dantech Corporation

Washington, DC

Industry: Finance/Mortgage

Team Lead/Senior Developer

Client: Freddie Mac

Project: OMEGA

Designed, developed and deployed a backend billing component for Freddie Macs project OMEGA. Developed a B2B enabled DU Import Loan Origination Module. OMEGA is a online environment for the electronic processing of financial loan products between associated lenders and vendors. The billing facility was comprised of three components. The collection component extracts and aggregates all orders in a given time interval for a selective pool of user organizations. The data necessary for the collection process exists in various data stores throughout Freddie Mac. At the conclusion of the collection process the data is stored logically within the Billing data store. The rating component begins with the collected data and calculates the fees for OMEGA activity based upon lender and vendor contractual pricing policies. The results of the rating engine are formatted and passed to PeopleSoft. The PeopleSoft Financials module accepts the rating results for the generation of invoices. Additionally, a GUI was developed for the billing department to manage the customer pricing policies and provide dynamic reporting. Extreme programming (XP) methodology was utilized for the development process. This billing component was

## Resume of Dana Cottrell

---

designed solely for high transaction based backend processing and Peoplesoft Integration in a 7/24 production environment. Each component exists as a standalone JAVA application for operational use. The browser-based web application was designed using known core J2EE patterns Intercepting Filter, Front Controller, Composite View, Business Delegate, Session Faade, etc. The DU Import module allowed loan originators to transmit and create loan in the OMEGA system eliminating browser-based dependencies in a popular industry format, Desktop Underwriting. The project was primarily a very large scale J2EE implementation using JUNIT, SiteMinder, WebMethods, XML, JSP, Servlets, WebLogic 6.1, JAXB, IntelliJ, CVS, EJB, UML, JNDI, iPlanet , and Oracle.

2/2001 - 1/2002 Dantech Corporation

Washington, DC

Industry: Chemical/Oil/Coal

Team Lead/Architect/Sr. Developer

Client: American Chemical Society

Project: OASYS

Architected, designed, and developed an online abstract submittal application survey application for the American Chemical Society (ACS). Instituted development, staging and production environments for this secured application within the organization's DMZ. One of the aims of the association is to promote/disseminate scientific knowledge. With its many publications, seminars and meetings, the association is the largest chemical information source in the world. The association must constantly be cognizant of all forms of new, highly active, controversial, or necessary research. The purpose of OASYS is provide a secured online venue for scientists to submit abstracts of their research which will ultimately be published or presented in an upcoming publication or meeting. The application was designed specifically from a meeting management perspective with integration into the Publications department content management infrastructure. This development was primarily a very large scale J2EE implementation using UML, XML, JSP, Servlets, JMS, JavaMail, JNDI, iPlanet, Weblogic 6.1, and Oracle. This application replaced an existing application developed using CGI modules, Perl, Sybase, Powerbuilder, MySQL, Websphere, and iPlanet that no longer stably supported the needs of the association. Since documentation did not exist, it was my responsibility to extract current functionality by scrutinizing the existing application. Performed database administration, configuration management, BEA installation, and BEA administration. Additionally, this effort included database design, data migration, data cleansing, user reviews for requirement, user presentations, design documentation, prototyping, staff augmentation, training of employees, and BEA installation and administration.

6/2000 - 2/2001 Dantech Corporation

Washington, DC

Industry: Chemical/Oil/Coal

Team Lead/Architect/Sr. Developer

Client: American Chemical Society

Project: SOLAR

Architected, redesigned, redeveloped, and deployed a secured online survey administration application for the American Chemical Society (ACS). Managed the installation and promotion of the staging and production environments inside the organization's DMZ. This system was developed for the Association to create, administer, manage, and review online surveys from their membership communities. The Association exists for the purposes of its members and had no single, enterprise-wide electronic method to extract and retain feedback. The Association needs this feedback for allocation funding, program management, and targeting/tracking goals. This application effectively diminished the vast paper intensive and tenuous process of extracting feedback from uses and, for the first time, allowed the organization the capability to produce metrics from its constituent base. This development was primarily a very large, intensive Cold Fusion redevelopment effort with iPlanet, Oracle, HTML, DHTML, Javascript, JAVA, and Actuate. Additionally, this effort included requirements analysis, application prototyping for user review and approval, configuration management, documentation, training, installation and deployment.

7/1999 - 6/2000 Dantech Corporation

Washington, DC

Industry: Medicine

Technical Team Lead

Client: Association of American Medical Colleges

Project: STARS Meeting Module

Architected, designed, developed, and deployed both Intranet and Internet components of a Meeting Registration application. Designed the target hardware and network infrastructure necessary to support a high-volume, critical, and secure application. This system was designed for the Association of American Medical Colleges (AAMC) to

## Resume of Dana Cottrell

---

effectively streamline and manage all of their constituency meetings, which is their primary function. Every year the AAMC manages over 50,000 meeting registrations for various functions all over the United States. This system is to replace a series of legacy HP3000 programs that were cumbersome and no longer able to meet the growing needs of the association. This is an E-Commerce application developed using iPlanet, Websphere, ASP, HTML, DHTML, Javascript, Java, RMI, Oracle, C, Crystal Reports and Cold Fusion. The Intranet application is responsible for managing meetings, constituent registrations, payments, refunds, cancellations, accommodations, security and expense reporting. The external application is responsible for accepting constituent registrations and allowing users to manage their own registration information thereby eliminating the necessity of several faxes and phone calls to AAMC. Additionally, this effort included requirements analysis, application prototyping for management review and approval, documentation, configuration management, testing, training, installation and deployment.

2/1999 - 7/1999 Information Engineering Services

Alexandria, VA

Industry: Finance/Capital Markets

Team Lead/Architect/Sr. Developer

Client: FINRA (formerly NASD), OGC

Project: Office of General Counsel Tracking, Retrieval, and Workflow (TRWS) System

Architected, designed, developed and deployed an enterprise solution which consists of both web and client/server components. Designed the hardware and network infrastructure that supported this critical and secure application. Configured the development, staging, testing, and production environments behind institutions VLAN. This system was designed to allow NASD legal departments to securely create, track, and research legal documents while allowing authorized NASD personnel to view OGCs progress, view the documents, and query document information. This system integrates with MDYs RMS, iManage and Documentum. This client/server component consisted of a Visual Basic application that used with ActiveX controls and MFC classes. This VB application integrated with both a SQL Server database and an Oracle database that are also accessed by the Intranet web application. The Internet application consisted of Cold Fusion, JSP, and ASP in order to provide a web front-end which closely resembled the client/server component with limited functionality. iPlanet, IIS, JSP, JDBC, Java, Cold Fusion, Visual Basic programming, SQL Server native programming, Oracle programming, C++, HTML, Crystal Reports, and Action Technologies workflow were used to develop this project. This application was designed to serve a user community of 4000. Additionally, this effort included requirements analysis, application prototyping for management review and approval, documentation, configuration management, testing, training, installation and deployment.

3/1998 - 2/1999 Information Engineering Services

Alexandria, VA

Architect/Senior Developer

Industry: Finance/Capital Markets

Client: FINRA (formerly NASD), Administration

Project: Centralized Purchasing System

Architected, designed, developed, and deployed a secured and highly transactional web application which integrates with several Peoplesoft Financials modules. Designed and configured the development, staging, testing, and production environments. The web front-end was responsible for creating purchase requests, validating purchase requests, tracking requests for approvals, submitting requests to Peoplesoft Financials via JDBC, and returning information from Peoplesoft regarding ordering and delivery. This system was developed using IIS, Netscape, HTML, Cold Fusion, Java, JDBC, SQL, SQR, Oracle Packages, Action Technologies Workflow and Visual Basic. This system was designed to service all purchase requests corporate-wide and resolve problems due to budgeting, tracking, reporting, and status generation. This application was designed to serve a world-wide user community. Additionally, this effort included requirements analysis, application prototyping for management review and approval, documentation, configuration management, testing, training, installation and deployment.

3/1997 - 3/1998 Information Engineering Services

Washington, DC

Internet Architect/Senior Developer

Industry: Finance/Capital Markets

Client: FINRA (formerly NASD), Administration

Project: Admin Services Automation

Redesigned, developed, and implemented Intranet Corporate Travel Request and Purchase Request Systems for the Administrative Services department. This automated workflow system was designed to streamline costs, track requests, aid reporting, enforce business protocol and integrate with Peoplesoft HRMS. This system was developed



## Resume of Dana Cottrell

---

using Action Technologies workflow system, HTML, SQR, SQL, database procedures and triggers, and Java to server a user community of 4000.

10/1996 - 3/1997 Information Engineering Services

Washington, DC

Senior Developer/LotusNotes Administrator

Industry: Education

Client: US Department of Education

Project: U.S. Department of Education Financial Aid Website

Designed, developed, and implemented an online system for the Financial Aid office of Higher Education. This site includes an online hyperlinked library of financial aid newsletters, legislation, Dear Colleague Letters, announcements, and various publications dated back to 1994. In addition to the library, this site included electronic mail notification content, membership registration, membership customer services such as account maintenance, customized searching, saved searches, and topic-based indexing. This site was developed using LotusNotes Domino technology, LotusScript, HTML, JavaScript, and Java. This site serves a community base of over 30,000 users from various higher educational institutions.

4/1996 - 10/1996 Information Concepts, Inc.

Washington, DC

Senior Developer

Industry: Finance/Capital Markets

Client: FINRA (formerly NASD), Member Regulations

Project: Formal Actions Tracking System

Managed and directed all technical development, re-engineering and maintenance as a Technical Team Lead while the project moved from the development phase into actual enterprise-wide production and utilization for all NASD Regulations staff. The Formal Actions front-end GUI, which was designed in Visual Basic, handled 10,000 to 30,000 transactions per day (100 GB) across all of the NASD regulatory offices as they penalized market participants for unethical practices in trading. The back-end, which resided on Sequent machines, included numerous shell scripts and C programs which aggregated and migrated data from both the front-end processing and the Tandem COBOL enterprise system into a centralized Oracle repository and, finally, into each local Oracle repository.

2/1996 - 4/1996 Information Concepts, Inc

Washington, DC

Senior Developer

Industry: Finance/Capital Markets

Client: FINRA (formerly NASD), Membership

Project: Central Repository Records Entitlement Server

Designed and developed a server which allows NASDAQ to entitle firm employees. This server will provide differing levels of access to proprietary CRD information about NASDAQ market participants. The server is a compilation of two programs developed on a Sequent under UNIX. One was developed using AnsiC to integrate components of NASD security (an in-house logon validation library) and transaction management (UNIX Tuxedo ETP). The other program was developed using Pro\*C to update an Oracle database with the appropriate firm information. This server was designed to process 1,000 to 5,000 requests per day (approx 100Mb) from firms all over the country and respond under a 30 second time constraint per request. The client communicates with the server using a series of import and export views that are converted from Visual Basic front-end to middle-tier C business server through a C++ DLL. I worked closely with the client developer to devise error messaging, to design import and export data structures, and to develop a seamless interface library (DLL).

1/1996 - 2/1996 Information Concepts, Inc

Washington, DC

Senior Developer

Industry: Finance/Capital Markets

Client: FINRA (formerly NASD), Membership

Project: Central Repository Records Registration Server

Designed and developed a server which registers each installment of the CRD (an NASD custom program) software suite. All participating firms are required to register their software before any of the CRD applications can be accessed. The server is very similar in design and development to the Entitlement Server and was also designed to process under a 30 second time constraint.

9/1995 - 1/1996 Information Concepts

Washington, DC

## Resume of Dana Cottrell

---

Senior Developer

Industry: Finance/Capital Markets

Client: FINRA (formerly NASD), Market Surveillance

Project: Market Maker Price Movement System

Designed and developed a system to analyze all trades made on the NASDAQ Stock Market each day to identify and report trading patterns which might violate compliance rules. A user interface allowing users to review trading patterns was developed in Visual Basic and accessed an Oracle database through a custom client/server interface using TCP/IP Sockets, RMI and ODBC. The back-end processes were developed on a Sequent with Pro\*C and Tuxedo under UNIX. The system analyses 500+ Mb of daily trading data in an Oracle database in excess of 200 Gb. Additionally, I was responsible for the technical design, coordination of development effort by team programmers and system component integration.

9/1993 - 9/1995 LEXIS-NEXIS

Washington, DC

Senior Programmer

Industry: Legal

Client: LEXIS-NEXIS

Maintained, enhanced and assisted in developing unique and complex textual databases and related products/features on the LEXIS-NEXIS service. Analyzed and resolved operational, production, and quality problems which hinder the database availability and/or customer usage (e.g., telecommunications, JCL corrections). Designed source code for data conversion programs using C, C++, Visual C++ and Visual Basic with Muscle and PDQComm libraries. Programmed in-house shareable modules to maximize code reusability and decreased production time.

10/1989 - 11/1992 Paramax/Unisys Defense Systems

Lanham, Maryland

Industry: Military/Defense

Client: NASA

Computer Engineer

Provided network administration services and programming support for engineers assigned to NASA Goddard Space Flight Center clients. Installed and supported Novell network servers. Administrated user accounts and configured user machines (NICs, sound cards, modems, etc.). Designed, programmed, and maintained databases in Oracle, Paradox, Lotus 1-2-3 and FoxPro. Developed UNIX shell scripts, Lotus 1-2-3 macros, and Oracle procedures to automate applications and network monitoring. Created numerous software applications in Fortran77 and C++ for engineers to input and maintain their scientific records. Each project required a different software application and each engineer preferred that his program meet his own individual needs (i.e., feature/functionality, database integration, interface design, etc.)

### **EDUCATION:**

12/2000 Johns Hopkins University US-Maryland-Baltimore

Master's Degree

Computer Science/Artificial Intelligence

5/1995 University of Maryland US-Maryland-College Park

Bachelor's Degree

Computer Science/Math

### **Development Methodologies:**

RUP, XP, UML, Scrum, Waterfall

### **Programming Languages:**

Java, C, Visual Basic, C++, FORTRAN, Pascal, Informix4gl, Embedded SQL with Pro\*C and ESQL/C, Tuxedo, MFC, Windows32-API, Lisp, Perl, Python

### **Development Tools:**

JBuilder, Dreamweaver, NetObjects Fusion, ColdFusion Studio, Visual Studio, VisualAge, Jcreator, IntelliJ, WebGain, Eclipse, Tibco BusinessWorks 5.x

### **Scripting:**

UML, XML, XSL, WML, HTML, DHTML, Jscript, JavaScript, LotusScript, UNIX Shell, Perl, Rexx, ASP, ColdFusion, JSP, CGI, PHP, Bash

### **Search, Reporting and Business Intelligence:**

Cognos, Impromptu, Crystal Reports, Actuate, MS Access, Endeca, Kibana, AWS ElasticSearch

### **Workflow Software:**

Action Technologies Metro, Fujitsu iFlow, BEA WLI, AWS Simple Workflow Service

### **Protocols:**

J2EE, CORBA, COM, DCOM, WSDL, UDDI, SAML, SOAP

### **Integration and Application Servers:**

Weblogic, Websphere, iPlanet, Jrun, JBoss, Tomcat, AquaLogic, Tibco Active Matrix, TcServer, Nginx, Apache

### **Caching Servers:**

Gemfire, AWS ElastiCache, Memcached, Redis

### **Payment Integration:**

PayPal, Google Wallet

### **Messaging Protocols**

XML, WSDL, WISL, UDDI, JMS, WebLogic JMS, MQ API, Tibco EMS, Tibco RV

### **Data Servers:**

StreamBase, Caplin

### **Content Management:**

Vignette, iManage, Day/Adobe Communicate, AWS S3

### **Access Software:**

SiteMinder, eMeta, Active Directory

### **Databases and Packages:**

SQL Server, Oracle, Sybase, DB2, Informix, FoxPro, Paradox, QMF, Access, LotusNotes, MySQL, RDS

### **Design Tools:**

Erwin, Toad, Enterprise Architect

### **Operating Systems:**

UNIX, AIX, LINUX, Windows, Windows NT, Windows2000, Netware, VMS, RHEL

### **Computer Hardware:**

Sun Sparc, Sequent, VAX, MAC, IBM, Honeywell, HP, PC and Compatibles

### **Test Systems:**

Mercury Quality Center, LoadRunner, WinRunner, Selenium, Apache Bench, Gomez, JMeter, JProfiler

### **Code Management:**

SCCS, Harvest, Visual SourceSafe, PVCS Version Manager, CVS, Cruise Control, Clover, ClearQuest, ClearCase, StarTeam, Jenkins, Maven, ANT