

Principal Consultant Principal Consultant Principal Consultant - Avalon Consulting LLC Round Rock, TX CISSP HAHCD HCAHA Authorized to work in the US for any employer Work Experience Principal Consultant Avalon Consulting LLC 2014 to Present

- * Provided training, best practices recommendations and support for a Multitenant Marketing Technology Services company to secure their Hortonworks cluster by installing and configuring Kerberos, Knox and Ranger.
- * As the CDH Hadoop Administrator in the Operational Management lane of a Cloudera Business Transformation plan for CenturyLink, implemented a new Data Lake composed of four Hadoop clusters totaling 149 nodes for DEvelopment, PROduction, Continuous Integration and Disaster Recovery over a 12 week period. All clusters were created and configured, Kerberized and secured with TLS wire encryption and HDFS encryption at rest to meet the client's needs to meet multiple compliance standards. Knowledge transfer was a major component of the engagement; three new Hadoop administrators were trained to operate and manage the new Data Lake.
- * Performed POC deployment of Apache Metron as a Security Operating Center for Domino's Pizza and developed custom data source parsers and enrichment topologies for ArcSight and other security data sources
- * Performed POC conversion of Oracle Pro*C Merchandising System to Hive/Impala to demonstrate improved SLAs on AWS to support pre-sales opportunity for a Hadoop Distributor
- * Performance benchmarking and tuning a representative 10-node cluster with advice on configuring dynamic service pools for Acxiom Corporation.
- * Secured (Kerberos, Ranger and Knox) a relatively new HDP cluster for Shaw Industries and taught a basic security training program for admins and business users.
- * Provided Elasticsearch performance tuning of a cluster and queries used by CSRs for retrieving insurance documents at VSP.
- * Provided consulting services for an Elasticsearch-based audio transcription analysis application for CollabIP.
- * Performed various Elasticsearch and Kibana development services for PPS.
- * Designed a high-level architecture and developed technological alternatives to replace an existing credit card processing system\data warehouse using Hadoop/Spark/Kafka for BarclayCard USA.
- * Developed a Hadoop-ElasticSearch cluster using HDP on ASW and S3 to analyze video segment analytics for NBC.
- * Secured a HDP 2.2 cluster (Kerberos/Falcon/Ranger/Knox) for Kohls.
- * Upgraded 2 60-node clusters (CDH 5.0 -

5.3) and configured Cloudera Navigator for Caterpillar. * Configured and tuned BDR between production and disaster recovery clusters for Wells Fargo Securities. * Upgraded a 70-node cluster (HDP 1.3 - 2.1) with pre- and post-benchmarking and validation for T-Mobile. Contract Cloud Software Engineer Cisco Systems 2014 to 2014 * Development of RESTful API middleware to interface Cisco Intelligent Automation for Cloud (IAC) client and backend Service Catalog/Process Orchestrator. * Development of a secure repository (keystore) for IAC client based on OpenStack's Barbican repository and Keystone authentication service. * Development of a generalized archiving/deletion/export facility for Cisco IAC 4.1. Contract Field Engineer EMC2 Corporation 2014 to 2014 Installation of Pivotal Hadoop distribution on EMC2 data appliance for two US clients. Client Services Engineer Zenoss, Inc 2013 to 2013 * Developed Python extension modules (ZenPacks) to the Zenoss monitoring/administration system for Enterprise client-specific hardware and software components, including 3Par storage, CloudStack, Multiple Hadoop distributions, and Apache HBase. * Architecture Review of Open-software projects for next-generation Enterprise monitoring, including HBase, OpenTSDB, Memcached, Spring Python Contract Senior Python Developer Hewlett-Packard 2012 to 2013 * Sole responsibility for break/fix of RepDV (Reputation Digital Vaccine), a database of malicious IP addresses and DNS entries gathered worldwide, used to control HP TippingPoint Intrusion Protection System (IPS) and Security Monitoring System (SMS) appliances; re-establishment of a three-tier development/staging/production build environment; and re-architecture of RepDV to introduce greater modularity and isolation between data aggregation, database management, and package product production. * RepDV, which consists of Python and Twisted, maintains a 60GB database of exploit data that is graded, aged and completely turned over every 24-hours through a batch update process run every 2 hours. Tipping Point IPS and SMS appliances worldwide are updated with deltas every 2 hours and full replacement packages every 12-24 hours, depending on model, as needed by threat severity. RepDV constitutes ~20% of HP's Enterprise Security Software revenue. * Evaluation of Hadoop for next-generation RepDV processing. Senior Architect A Cloud For Everyone 2011 to 2013 * Designed and implemented a POC 10-node Apache Hadoop/CentOS cluster. * Designed a portfolio of Big Data/HPC clusters

from 20 CPUs/112TB mini-rack (table top) to 144 CPU/0.5PB single rack costing \$50k to \$272k and marketed in the San Antonio, TX area. * Adding at-rest encryption to Apache Accumulo. Senior Virtualization Engineer US Army Medical Information Technology Center - Fort Sam Houston, TX 2011 to 2012 Fort Sam Houston, TX 2011 - 2012 Contract Senior VMware Virtualization Engineer - AD/Exchange Group, Systems Operations Branch, Sustainment Division, USAMITC * Tier 3 support of VMware Virtualization for Army Medical Command and Military Health System (MHS) users worldwide. * Upgrade of Datacenters from VMware Infrastructure 3 to vSphere 4/ESX to ESXi. * Virtualization of Microsoft Tier I applications (2008 SP 2/R2, AD, SharePoint, Exchange) including Physical to Virtual and direct Virtual. * Automation of VMware operations using PowerShell/PowerCLI on Windows and Python and Perl on Linux, including build out, configuration and management/reporting. * Maintenance of virtual networking at the L2 and L3 layer, VLANs and NIC bonding/teaming. * PKI-E System Administrator - responsible for the procurement and management of Army X.509 certificates for OSs, VMs and Application Servers for the AD/Exchange Group. * Build, Provision and Manage HP ProLiant Blade Servers, C7000 Enclosures and P4000 Storage systems. Contract System Administrator NewTek - San Antonio, TX 2011 to 2011 * Designed and Implemented Zenoss and Nagios network operations/monitoring center. * SQL Server to Oracle migration of Enterprise CMS. * Security incident investigation. Owner / Senior Officer A Computer For Me - San Antonio, TX 1998 to 2010 A sole proprietorship software and hardware company dedicated to serving the requirements of the client. Specializing in secure Linux-based cluster computers for High-availability database, High-performance computational requirements, or Big Data/Batch processing * Built and operated a 6-node POC Hadoop cluster and developed MapReduce programs for a US Climate study that processed the entire NOAA National Climatic Data Center temperature data set (~37GB) for 1901-2010 to determine decade-to-decade temperature change * Designed and operated DataCenter for USAF clients on a 2-year contract, including Internet connection and local network, rack space, power, and cooling to support a surface chemistry study * Installed, stress-tested, and operated client specified software including operating systems (Linux), compilers (Portland Group HP FORTRAN and C/C++; Intel

C++), databases (Oracle w/RAC, MySQL, Firebird embedded), web servers (Apache, IIF), parallel processing software (MPI-CH, PVM), parallel file systems (Luster; Red Hat GFS, monitoring software (Nagios); schedulers/queuing software (Maui scheduler; Moab; NQS) Data Layer Expert Trinity Millennium - San Antonio, TX 2007 to 2007 * Implemented Python/C/MySQL replication for government mainframe re-engineering project. * Designed and implemented ETL using DTS and SSIS on SQL Server. Senior Research Analyst/Database Administrator Division 20 CNWRA Southwest Research Institute - San Antonio, TX 1988 to 1998 Responsible for the integrity and availability of data and systems for the Division, while providing all Information Systems Security functions from planning through auditing. * Implemented multiple mainframe Information Management Systems using AS, SQL/DS, REXX, REXSQL, and STAIRS and re-implemented mainframe systems and new client-server using GALAXY, Verity, Oracle, C++, PL/SQL and embedded SQL * Operated a Production/Test/Development environment by migrating changes as developed. * Tuned databases and optimized queries and indices * Architected of a high-level secure capacity network design, installed bastion host on DMZ with application gateway and implemented packet filter firewall on Cisco routers. Education B.S. in Chemistry University of Notre Dame - Notre Dame, IN May 1980 Skills ORACLE (10+ years), C++ (10+ years), Hadoop (10+ years), HADOOP (10+ years), APACHE (10+ years) Certifications/Licenses Hortonworks Apache Hadoop 2.0 Certified Developer September 2014 to Present Hortonworks Certified Apache Hadoop 2.X Administrator October 2014 to Present CISSP April 2017 to April 2020 I have held and renewed the CISSP certification since 2007 Additional Information * Over 25 years of experience in full life-cycle design, development, and support of systems application architecture * Extensive experience performing as lead database administrator on multiple mainframe and mini systems and multiple database implementations (relational, object, full text and NoSQL) * Extensive experience and training with security and information standards including HIPAA, FISMA, DISA STIGs and NIST * Over [10] years of hands-on experience designing, building, installing, administering and upgrading cluster systems (10-256 nodes) for high-performance, high-availability and "Big-Data" requirements * Designed and implemented Big Data infrastructure using multiple Hadoop

distributions and subcomponents Current Technical Skills * Virtualization: VMware, Citrix/Xen, VirtualBox, Docker * Operating Systems: Red Hat Enterprise Linux/CentOS 5, 6 and 7; Debian/Ubuntu/Kubuntu; Windows 7, 8, 2008R2, 2012 * Relational DBMS: SQL/DS; DB2; Oracle RAC; MySQL; PostgreSQL * Object DBMS: CACHE; SQLAlchemy * Hadoop Distributions: Stock Apache; Cloudera CDH5; Hortonworks 2.X * MapReduce/Hadoop Ecosystem: Hadoop, HDFS, HBase, Spark, Sqoop, Flume, Pig, Streams, Cascading, Storm * Hadoop Cloud: Cloudera Director, Hortonworks Cloudbreak * NoSQL: Accumulo, Neo4J, Cassandra, MongoDB * Languages: Python, Java, Ruby, R, C++ * Monitoring: Zenoss; Nagios; Ganglia; Cacti; OpenTSDB * Version Control: Git, SVN, Mercurial * Provisioning: Vagrant, Whirr * Development Frameworks: Griffon, Spring Data, Django, Flask * Cloud: vCloud Director, OpenStack, Cisco Intelligent Automation for Cloud (IAC) * AWS: StarCluster, Eucalyptus, Whirr * Text-Search: Lucene, Solr, ElasticSearch * Data Visualization: D3, IPython, NumPy, pandas, matplotlib, SciPy * Mobile: jQuery and jQuery mobile

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