

## DATA ADMINISTRATION SPECIALIST

<b>RESOURCE CATEGORY</b>	Cybersecurity
<b>RESOURCE KIND</b>	Personnel
<b>OVERALL FUNCTION</b>	The Data Administration Specialist mitigates and responds to immediate and potential cyber threats.
<b>COMPOSITION AND ORDERING SPECIFICATIONS</b>	<ol style="list-style-type: none"> <li>1. This position can be ordered as a single resource or in conjunction with a NIMS typed team (Cyber Incident Response Team).</li> <li>2. Discuss logistics for deploying this position, such as security, lodging, transportation, and meals, prior to deployment</li> <li>3. This position typically works 12 hours per shift, is self-sustainable for 72 hours, and is deployable for up to 14 days</li> </ol>

Each type of resource builds on the qualifications of the type below it. For example, Type 1 qualifications include the qualifications in Type 2, plus an increase in capability. Type 1 is the highest qualification level.

COMPONENT	SINGLE TYPE	NOTES
<b>DESCRIPTION</b>	The Data Administration Specialist: <ol style="list-style-type: none"> <li>1. Develops and administers databases and data management systems that allow storage, query, and use of data</li> <li>2. Responds to crises or urgent situations within the pertinent domain to respond to and mitigate immediate and potential cyber threats as part of the NIMS Type 1 Cyber Incident Response Team</li> </ol>	Not Specified
<b>EDUCATION</b>	Not Specified	Not Specified
<b>TRAINING</b>	Completion of the following <ol style="list-style-type: none"> <li>1. IS-100: Introduction to Incident Command System, ICS-100</li> <li>2. IS-200: Incident Command System for Single Resources and Initial Action Incidents</li> <li>3. IS-700: National Incident Management System, An Introduction</li> <li>4. IS-800: National Response Framework, An Introduction</li> <li>5. Database Administration Principles</li> <li>6. Information Security Fundamentals and Essentials</li> </ol>	Not Specified

Superseded

COMPONENT	SINGLE TYPE	NOTES
<b>EXPERIENCE</b>	<p>Agency Having Jurisdiction (AHJ)-documented and validated knowledge, skills, and abilities demonstrated in the following areas:</p> <ol style="list-style-type: none"> <li>1. Data administration and data standardization policies and standards</li> <li>2. Data backup, types of backups, and recovery concepts and tools</li> <li>3. Data types: structured, unstructured, binary large object</li> <li>4. Data mining and data warehousing principles</li> <li>5. Different technologies for data storage including tape, optical, or disk</li> <li>6. Data storage area networks (SAN) and the data file system tools</li> <li>7. Network attached storage technologies</li> <li>8. Database management systems, query languages, table relationships, and views</li> <li>9. Digital rights management</li> <li>10. Enterprise messaging systems and associated software</li> <li>11. Network access, identity, and access management</li> <li>12. Operating systems</li> <li>13. Policy-based and risk adaptive access controls</li> <li>14. Query languages such as Structured Query Language (SQL)</li> <li>15. Sources, characteristics, and uses of the organization's data assets</li> <li>16. Characteristics of physical and virtual data storage media</li> <li>17. Database theory</li> <li>18. Personally Identifiable Information (PII) and Payment Card Industry (PCI) data security standards</li> <li>19. Database misconfiguration and vulnerabilities</li> <li>20. Different database models such as relational versus object oriented</li> <li>21. Industry standard database products,</li> <li>22. Database encryption types</li> <li>23. Database logging capabilities and techniques</li> <li>24. Allocating storage capacity in the design of data management systems</li> <li>25. Conducting queries and developing algorithms to analyze data structures</li> <li>26. Designing and implementing databases and systems</li> <li>27. Developing data dictionaries, models, and repositories</li> <li>28. Generating queries and reports</li> <li>29. Optimizing database performance</li> <li>30. Data recovery mechanisms from various storage formats</li> <li>31. Network attached storage technologies</li> </ol> <p>AHJ-validated experience demonstrated in the following areas:</p> <ol style="list-style-type: none"> <li>1. Analyzing and defining data needs, specifications, and planning for anticipated changes in data capacity needs</li> <li>2. Developing and implementing data mining and data warehousing programs</li> <li>3. Network attached storage technologies</li> </ol> <p>(Continued)</p>	<p>The knowledge, skills, and abilities align with the National Initiative for Cyber Education (NICE) National Cybersecurity Workforce Framework.</p>

Superseded

COMPONENT	SINGLE TYPE	NOTES
<b>EXPERIENCE</b>	(Continued) 4. Developing data standards, policies, and procedures 5. Installing and configuring database management systems software 6. Maintaining database management systems software 7. Maintaining directory replication services that enable information to replicate automatically via optimized routing 8. Maintaining information exchanges through publish, subscribe, and alert functions that enable users to send and receive critical information 9. Managing the compilation, cataloging, caching, distribution, and retrieval of data 10. Monitoring and maintaining databases to ensure optimal performance 11. Performing backup and recovery of databases to ensure data integrity 12. Providing a managed flow of relevant information via web-based portals or other means, based on mission needs 13. Providing recommendations on new database technologies and architectures	
<b>PHYSICAL/MEDICAL FITNESS</b>	Not Specified	Not Specified
<b>CURRENCY</b>	1. Participates in exercise, drill, or simulation at least once every year 2. Background checks as applicable law permits and requires 3. Active security clearance	Provider must carry out and use any background checks as applicable law specifies. This may include a background check completed within past 12 months; sex-offender registry check; and a local, state, and a local, state, and national criminal history.
<b>PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS</b>	1. Technical qualifications equivalent to Department of Defense Directive (DoDD) 8570 Level 2 certification 2. Database Administrator Certification (DAC) 3. Information Assurance Certification (IAC)	Not Specified

Superseded



## Position Qualification for Cybersecurity Cybersecurity

### NOTES

Nationally typed resources represent the minimum criteria for the associated category.

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### REFERENCES

1. FEMA, NIMS 508: Cyber Incident Response Team
2. National Initiative for Cybersecurity Education, National Cybersecurity Workforce Framework, v.2, May 2014
3. Department of Defense Directive (DoDD), 8570 and Global Assurance Information Certification (GAIC), January 2014

Superseded