



Citywide Administrative Services

BILL DE BLASIO
Mayor

DEPARTMENT OF CITYWIDE ADMINISTRATIVE SERVICES
BUREAU OF EXAMINATIONS

LISETTE CAMILO
Commissioner

NOTICE OF EXAMINATION

COMPUTER OPERATIONS MANAGER

Exam No. 9046

WHEN TO APPLY: From: April 3, 2019

APPLICATION FEE: \$68.00

To: April 23, 2019

If you choose to pay the application fee with a credit/debit/gift card, you will be charged a fee of 2% of the payment amount. This fee is nonrefundable.

YOU ARE RESPONSIBLE FOR READING THIS ENTIRE NOTICE BEFORE YOU SUBMIT YOUR APPLICATION.

WHAT THE JOB INVOLVES:

Computer Operations Managers, under various levels of managerial or executive direction, with varying degrees of latitude for independent initiative, judgment and decision-making, perform complex and responsible managerial work in managing and directing all aspects of the operation and maintenance of computer, data storage or related data/telecommunications equipment in an IT (Information Technology) unit; plan, organize and control the operation of the unit; are responsible for and supply technical support for all hardware as well as operations and systems software; oversee the maintenance, support and servicing of the equipment; ensure that user requirements and needs are met; set standards and establish procedures for the unit; plan and establish security systems; design specifications and participate in negotiating contracts with suppliers and service contractors; identify and solve operational problems; plan and allocate resources for the unit; recommend, initiate and oversee preparation of specifications and procurement process for the acquisition of hardware/software; coordinate the installation and testing of hardware/software; design, maintain, review and modify controls and reporting systems concerning the operation of the unit, such as statistics on system availability, incidents and problems, job production and documentation of changes in the environment; manage unit staff, make work assignments, ensure employee discipline, conduct training and evaluate performance of employees; direct staff in carrying out agency policies and procedures; consult with users regarding the operation of the unit and system problems; identify needs and plan the budget for the unit; respond to inquiries and complaints; participate in the formulation of overall policies concerning IT and related data/telecommunications activities.

All Computer Operations Managers perform related work and, in the temporary absence of their supervisor, may assume the duties of that position.

Special Working Conditions:

Computer Operations Managers will be required to work various shifts including nights, Saturdays, Sundays, and holidays.

(This is a brief description of what you might do in this position and does not include all the duties of this position.)

THE SALARY:

Salaries will be commensurate with the level of responsibility of the managerial assignment and will be consistent with the Managerial Pay Plan.

HOW TO QUALIFY:

You are responsible for determining whether or not you meet the education and experience requirements for this examination prior to submitting your application. If you are found "Not Qualified," your application fee will not be refunded and you may not receive a score.

You will **not** receive credit for education which you obtain after June 30, 2019 or experience which you obtain after the end of the Application Period (April 23, 2019).

EDUCATION AND EXPERIENCE REQUIREMENTS:

Six (6) years of progressively responsible full-time paid experience supervising or administering computer operations involving a large-scale mainframe, network, or multi-tier computer environment at least 18 months of which shall have been in an administrative, managerial, or executive capacity.

A baccalaureate degree from an accredited college or university may be substituted for a maximum of two (2) years of general experience described above. In the absence of a baccalaureate degree, undergraduate credits may be substituted for a maximum of two (2) years of general experience described above on the basis of 30 semester credits for six (6) months of experience.

A master's degree in Computer Science, Computer Engineering, Electrical Engineering, Business Administration, Public Administration or Management of Administration may be substituted for a maximum of one (1) year of general experience described above. In the absence of a master's degree, graduate credits in Computer Science, Computer Engineering, Electrical Engineering, Business Administration,

READ CAREFULLY AND SAVE FOR FUTURE REFERENCE

Public Administration or Management of Administration may be substituted for a maximum of one (1) year of the general experience on the basis of 30 graduate semester credits for one (1) year of experience. However, undergraduate and/or graduate credits may not be substituted for the eighteen (18) months of experience in an administrative, managerial, or executive capacity.

Experience in an **administrative capacity** must include, but is not limited to, responsibilities such as: monitoring an IT budget; reviewing and approving IT procurement and invoice payments; reviewing and approving contracts with vendors; monitoring and approving IT projects; setting standards and best practices; risk evaluation (e.g., security, reputational, operational); organizational development; chairing or participating in IT Governance and Advisory committees; and/or overseeing vendor relationship management.

Experience in a **managerial capacity** must include, but is not limited to, responsibilities such as: strategic planning for an office/division; creating and implementing policies; setting standards and best practices; defining and documenting project scope; root cause analysis with recommendations; collaborating with other managers and executives to define future state of an IT program; and/or forecasting.

Experience in an **executive capacity** must include, but is not limited to, responsibilities such as: managing multiple groups, areas and/or divisions; formulating the organization's IT strategy/governance; formulating the organization's IT architectural strategy; developing, setting and enforcing the organization's IT policies; and/or developing the organization's IT budget.

Experience in the **supervision of staff** must include, but is not limited to, responsibilities such as: assigning work to staff; monitoring the performance of staff; reviewing the work of staff; training, mentoring and coaching staff; evaluating staff; disciplining staff; writing and administering performance evaluations to staff; and approving time and leave for staff.

The following types of experience are **not acceptable**: superficial use of preprogrammed software without complex programming, design, implementation or management of the product; use of a word processing package; use of a hand held calculator; data entry; operation of data processing hardware or consoles.

The education requirement must be met by June 30, 2019. The experience requirement must be met by the last day of the Application Period (April 23, 2019).

The college or university must be accredited by regional, national, professional, or specialized agencies recognized as accrediting bodies by the U.S. Secretary of Education and by the Council for Higher Education Accreditation (CHEA).

If you were educated outside the United States, you must have your foreign education evaluated to determine its equivalence to education obtained in the United States. This is required only if you need credit for your foreign education in this examination. For more information see the Foreign Education Evaluation Guide in the Required Information section.

You have until midnight Eastern time on the last day of the Application Period (April 23, 2019) to clearly specify in detail all of your relevant education and experience on your Education and Experience Test and submit it in the Online Application System (OASys). Once you submit your Education and Experience Test in OASys, you will not be permitted to submit new or additional information about your education and/or experience online.

You will not receive credit for education which you obtain after June 30, 2019 or experience which you obtain after the end of the Application Period (April 23, 2019).

Residency: City residency is not required for this title.

English Requirement: You must be able to understand and be understood in English.

Proof of Identity: Under the Immigration Reform and Control Act of 1986, you must be able to prove your identity and your right to obtain employment in the United States prior to employment with an agency under the jurisdiction of the Commissioner, Department of Citywide Administrative Services.

HOW TO APPLY:

If you believe you meet the requirements in the "How to Qualify" section, submit an application on the Online Application System (OASys) at www.nyc.gov/examsforjobs. Follow the onscreen application instructions for electronically submitting your application and payment, and completing any required information. A unique and valid email address is required to file online. Several internet service providers, including but not limited to Google, Yahoo!, AOL, Outlook.com, and Mail.com offer free email addresses. **All new OASys accounts require verification before a candidate can submit an application to ensure the accuracy of candidate information. Verification is instantaneous for most accounts, but some accounts may require up to two (2) business days to be reviewed by a staff member and resolved. Email notification will be sent to those creating accounts that require additional documentation before they can be resolved. Please keep this information and the application period deadline in mind when creating your account.** The following methods of payment are acceptable: major credit card, bank card associated with a bank account, or a prepaid debit card with a credit card logo which you may purchase online or at various retail outlets.

If you are receiving or participating in certain forms of public assistance/benefits/programs, or are a veteran, you may qualify to have the application fee waived. For more information on eligibility for a fee waiver and documentation requirements, visit the Fee Waiver FAQ on the Online Application System at <https://a856-eeexams.nyc.gov/OLEE/oasys/FAQFeeWaiver.aspx>.

You may come to the DCAS Computer-based Testing & Applications Centers to file for this examination online and submit a money order payable to DCAS (Exams) or to submit documentation for a fee waiver. The centers will be open Monday through Saturday from 9:00 AM to 5:00 PM:

Manhattan
2 Lafayette Street
17th Floor
New York, NY 10007

Brooklyn
210 Joralemon Street
4th Floor
Brooklyn, NY 11201

Queens
118-35 Queens Boulevard
5th Floor
Forest Hills, NY 11375

Staten Island
135 Canal Street
3rd Floor
Staten Island, NY 10304

Bronx
1932 Arthur Avenue
2nd Floor
Bronx, NY 10457

Special Circumstances Guide: This guide is located on the DCAS website at www.nyc.gov/html/dcas/downloads/pdf/misc/pdf_c_special_circumstances_guide.pdf and available at the DCAS Computer-based Testing & Applications Centers. This guide gives important information about

claiming Veterans' or Legacy credit, and notifying DCAS of a change in your mailing address. Follow all instructions on the Special Circumstances Guide that pertain to you when you complete your "Application for Examination."

REQUIRED INFORMATION:

1. **Application for Examination:** Follow the online instructions, including those relating to the payment of fee and, if applicable, those found in the Special Circumstances Guide.
2. **Education and Experience Test:** Fill out all the required sections displayed onscreen (if applicable). You will have until midnight Eastern time on the last day of the Application Period (April 23, 2019) to clearly specify in detail all of your relevant education and experience on your Education and Experience Test and submit it in the Online Application System (OASys).
3. **Foreign Education Evaluation Guide: (Required only if you need credit for your foreign education in this examination)** : If you were educated outside the United States, you must have your foreign education evaluated to determine its equivalence to education obtained in the United States. The services that are approved to make this evaluation are listed on the Foreign Education Evaluation Guide located on the Department of Citywide Administrative Services (DCAS) website at www.nyc.gov/html/dcas/downloads/pdf/misc/foreigneducation.pdf. When you contact the evaluation service, ask for a **"document-by-document" (general)** evaluation of your foreign education. You must have one of these services submit its evaluation of your foreign education directly to DCAS no later than eight weeks from June 30, 2019.

THE TEST:

Your score will be determined by an education and experience test. You will receive a score of 70 points for meeting the education and experience requirements listed above. After these requirements are met, you will receive additional credit up to a maximum of 100 points on the following basis:

If you have satisfactory, full-time experience in an administrative, managerial or executive capacity in the area of computer operations involving a large-scale mainframe, network, or multi-tier computer environment for:

You will receive:

At least 1 year but less than 2 years	6 points
At least 2 years but less than 3 years	12 points
At least 3 years but less than 4 years	18 points
At least 4 years but less than 5 years	24 points
5 or more years	30 points

You will receive a maximum of one year of experience credit for each year you worked. If you have any of the above experience on a part-time basis, it will be credited according to the equivalent percent of full-time experience. **Experience used to meet the minimum requirements cannot be used to gain additional credit.**

You must clearly specify in detail all of your relevant education and experience on your Education and Experience Test and submit it by the end of the Application Period. You will not receive credit for education which you obtain after June 30, 2019 or experience which you obtain after the end of the Application Period.

CHANGE OF MAILING ADDRESS, EMAIL ADDRESS, AND/OR TELEPHONE NUMBER:

It is critical that you promptly notify DCAS of any change to your mailing address, email address and/or phone number. If we do not have your correct mailing address, email address and/or phone number, you will not receive information about your exam(s), consideration for appointment and/or important information that may require a response by a specified deadline. If you need to update your Mailing Address, Email Address, and/or Telephone Number, read below:

- City Employees - update this information in NYCAPS Employee Service (ESS) at www.nyc.gov/ess
- All Others - update this information on your Profile page in the Online Application System (OASys) by logging into your OASys account and navigating to your Dashboard, then your Profile tab at www.nyc.gov/examsforjobs
- Submit a written request in-person or by mail: DCAS, 1 Centre Street, 14th Floor, New York, NY 10007 or brought in person to the same address Monday through Friday from 9AM to 5PM. Your written request must include your full name, social security number, exam title(s), exam number(s), previous mailing and/or email address, and your new mailing and/or email address

CHANGE OF NAME AND/OR SOCIAL SECURITY NUMBER:

Use the Data Correction Form and follow all instructions for changing your name and/or social security number with DCAS. The following link will provide you with the DCAS Data Correction Form: <https://www1.nyc.gov/assets/dcas/downloads/pdf/employment/dp148a.pdf>.

THE TEST RESULTS:

If you pass the education and experience test, your name will be placed in final score order on an eligible list, you will be given a list number and you will be notified by mail of your test results. The eligible list determines the order by which candidates will be considered for appointment. If you meet all requirements and conditions, you will be considered for appointment if your name is reached on the eligible list. Once a list has been established, it will typically remain active for four years. To learn more about the civil service system go to: http://www.nyc.gov/html/dcas/html/work/civilservice_1.shtml.

ADDITIONAL INFORMATION:**Selective Certification For Certification and/or Special Experience:**

If you have the certification and/or experience listed in one of more of the areas listed below, you may be considered for appointment to positions requiring this certification or experience through a process called Selective Certification. If you qualify for Selective Certification, you may be given preferred consideration for positions requiring this certification or experience. If you wish to apply for this Selective Certification, state the three digit Selective Certification Code ("3 digit SC code") in Section D of the Education and Experience Test. Your certification and experience will be checked by the appointing agency at the time of appointment.

Note: In Section D of the Education and Experience Test, please enter the 3-digit SC code which corresponds to the Selective Certification(s) you wish to be considered for, and separate each with a comma and no space. There should be no more than ten (10) Selective Certification entries per line. For example, if you wish to select Selective Certifications #1, #2, #3 and #4, enter the following in Section D of the Education and Experience Test: 626, CTI, 233, 25C.

1. **Solution Architecture:** At least five (5) years of satisfactory, full-time hands-on experience architecting complex large scale systems that incorporate packaged and custom applications. The experience must include, but is not limited to: application architecture, enterprise architecture, release methodologies, project management, technical support, production support, client/server applications, internet and intranet applications, operating systems (Solaris, Windows), database platforms (Oracle, Microsoft, IBM), application platforms (desktop, mobile, web), application frameworks (Java, .NET), content management systems, portal products, application integration, and Service-Oriented architecture (SOA) development methodologies and environments. **To add Selective Certification for Solution Architecture, enter "626" in Section D of the Education and Experience Test.**
2. **Computer Telephony Integration Systems Administration:** At least five (5) years of satisfactory, full-time experience in administering, designing, developing, implementing, maintaining and/or enhancing Computer Telephony Integration systems and its related platforms. Examples include, but are not limited to: Genesys, PBX, Nortel or/and Avaya Telephony system IIS, Oracle Siebel, MS Dynamics, Oracle CRM, and Salesforce with strong knowledge of Unix, Linux and SQL. **To add Selective Certification for Computer Telephony Integration Systems Administration, enter "CTI" in Section D of the Education and Experience Test.**
3. **Customer Relationship Management (CRM) Systems Administration:** At least five (5) years of satisfactory, full-time experience in administering, designing, developing, implementing, maintaining and/or enhancing industry leading CRM Systems and its related platforms. Examples include, but are not limited to: Oracle Siebel, Microsoft Dynamics, Oracle CRM, Salesforce, Actuate and/or BI Publisher, Visual Studio, IIS, SQL Server, SSRS, XML/XSL/Web Services with strong knowledge of Unix, Linux and SQL. **To add Selective Certification for Customer Relationship Management (CRM) Systems Administration, enter "233" in Section D of the Education and Experience Test.**
4. **Enterprise Web Analytics Administration:** At least five (5) years of satisfactory, full-time experience in administering, implementing, maintaining and/or enhancing of Enterprise Web Analytics Systems and its related platforms. Examples include, but are not limited to: WebTrends Analytics, Google Analytics, and Microsoft SQL Server. **To add Selective Certification for Enterprise Web Analytics Administration, enter "25C" in Section D of the Education and Experience Test.**
5. **Web Infrastructure System Administration:** At least five (5) years of satisfactory, full-time experience in administering, implementing, maintaining and/or enhancing Enterprise Integration Bus and its related platforms. Examples include, but are not limited to IBM WebSphere Broker, IBM MQ, IBM DataPower, WebLogic, iWay, Oracle BPM. **To add Selective Certification for Web Infrastructure System Administration, enter "784" in Section D of the Education and Experience Test.**
6. **Web Content Management Systems Administration:** At least five (5) years of satisfactory, full-time experience in administering, implementing, maintaining and/or enhancing Web-Content Management Systems. Examples include, but are not limited to: Apache Web Server, Microsoft IIS, Tomcat, JBOSS, WebLogic, WebSphere, IBM MQ, iWay, FileNet, Documentum, TeamSite, Portal, Siebel. **To add Selective Certification for Web Content Management Systems Administration, enter "WCS" in Section D of the Education and Experience Test.**
7. **Network Design and Engineering:** At least five (5) years of satisfactory, full-time hands-on design and engineering experience with Cisco Catalyst and Nexus range of switches; routers and F5 load balancers; BGP and OSPF routing protocols; and working with TCP/IP subnetting. **To add Selective Certification for Network Design and Engineering, enter "51C" in Section D of the Education and Experience Test.**
8. **IP Telephony Design and Engineering:** At least five (5) years of satisfactory, full-time hands-on design and engineering experience with Cisco Call Manager, Cisco Contact Center, configuring Voice Gateways, dial-plans and H.323 protocols. **To add Selective Certification for IP Telephony Design and Engineering, enter "386" in Section D of the Education and Experience Test.**
9. **Continuous Process Improvement Management:** At least five (5) years of satisfactory, full-time experience developing and implementing enterprise wide IT processes for a large public organization. Experience must include, but is not limited to working with business owners and subject matter experts to build IT processes from the ground up and/or administering best practice assessments for the implementation of continual process improvements; writing highly technical and detailed system requirements with process controls and exposure to all aspects of enterprise IT and telecommunications, including inputs and outputs to other processes; managing the planning and development of IT processes; conducting review, communication, training, and development of continual improvements of the processes. Must have at least one or more ITIL professional certifications. Examples include, but not limited to: ITIL Foundation v2 or v3, ITIL Practitioner, ITIL Intermediate. **To add Selective Certification for Continuous Process Improvement Management, enter "216" in Section D of the Education and Experience Test.**
10. **ServiceNow Development:** At least five (5) years of satisfactory, full-time experience in analysis, design, development, implementation and maintenance of applications using ServiceNow ITSM platform. **To add Selective Certification for ServiceNow Development, enter "61M" in Section D of the Education and Experience Test.**
11. **Multi-Large Scale System Support Management:** At least five (5) years of satisfactory, full-time experience in design, deployment, and maintenance of Enterprise level SAN and NAS solutions. This experience must include all levels of the project life cycle from architecting to deployment to day to day operations, including troubleshooting Enterprise class data storage systems in multiple OS

- environments. **To add Selective Certification for Multi-Large Scale System Support Management, enter "477" in Section D of the Education and Experience Test.**
12. **NetApp Certified Data Administrator (NCDA) Certification:** A valid certification as a NetApp Certified Data Administrator (NCDA) from Network Appliance. **To add Selective Certification for NetApp Certified Data Administrator (NCDA) Certification, enter "490" in Section D of the Education and Experience Test.**
 13. **Brocade Certified Fabric Administration:** A valid certification as a Brocade Certified Fabric Administrator from Network Appliance. **To add Selective Certification for Brocade Certified Fabric Administration, enter "129" in Section D of the Education and Experience Test.**
 14. **EMC Certified Storage Administration (VMAX Solutions Specialist):** A valid certification as an EMC Certified Storage Administrator Specialist (VMAX Solutions) from Network Appliance. **To add Selective Certification for EMC Certified Storage Administration (VMAX Solutions Specialist), enter "24C" in Section D of the Education and Experience Test.**
 15. **EMC Certified Storage Administration (VNX Solutions Specialist):** A valid certification as an EMC Storage Administrator Specialist (VNX solutions) from Network Appliance. **To add Selective Certification for EMC Certified Storage Administration (VNX Solutions Specialist), enter "24D" in Section D of the Education and Experience Test.**
 16. **EMC Certified Storage Administration (SAN Specialist):** A valid certification as an EMC Storage Administrator Specialist (SAN Solutions) from Network Appliance. **To add Selective Certification for EMC Certified Storage Administration (SAN Specialist), enter "24B" in Section D of the Education and Experience Test.**
 17. **EMC Certified Storage Administration (Isilon Specialist) :** A valid certification as an EMC Storage Administrator Specialist (Isilon Solutions) from Network Appliance. **To add Selective Certification for EMC Certified Storage Administration (Isilon Specialist) , enter "24E" in Section D of the Education and Experience Test.**
 18. **Backup Administration:** At least five (5) years of satisfactory, full-time experience as an administrator of a large scale backup software product such as NetBackup, Networker, TSM, Simpana, Data Protector or Avamar, or five (5) years as a part time backup administrator with the remaining time spent administering either SAN storage, a virtualization hypervisor platform, or both. **To add Selective Certification for Backup Administration, enter "119" in Section D of the Education and Experience Test.**
 19. **UNIX/LINUX Server Administration:** At least five (5) years of satisfactory, full-time experience in UNIX/LINUX System administration; including but not limited to in-depth installation, configuration, administration and tuning of enterprise class servers. Must have experience with technologies including HP VMware Virtualization; Solaris (Volume Manager, Security); RHEL Linux 5.x / 6.x / 7.x; Veritas Products (Volume Manager, Cluster Server); LDAP; TIVOLI; DNS; NFS; LPARS; Sun Enterprise Servers; and/or ProLiant DL58x G-Series. **To add Selective Certification for UNIX/LINUX Server Administration, enter "DAX" in Section D of the Education and Experience Test.**
 20. **AIX Server Administration:** At least five (5) years of satisfactory, full-time experience in AIX System administration. The experience must include but is not limited to configuration and administration of enterprise-class servers including IBM AIX 4.x, AIX 5.1, AIX 5.2, AIX 5.3, or AIX 6.1.4 or higher versions in large-scale data center operations support functions. **To add Selective Certification for AIX Server Administration, enter "363" in Section D of the Education and Experience Test.**
 21. **LAN/WAN Network Engineering:** At least five (5) years of satisfactory, full-time experience with IP switched/routed based network; working knowledge of routing and switching (LAN/WAN), HSRP, GLBP, QOS multicasting, VLANs, VTP, NTP and load balancing; knowledge of IP addressing and subnetting (IPv4/6), routing protocols, including BGP, EIGRP, OSPF and MPLS; basic troubleshooting experience of Cisco hardware/OS software, including 72xx, 39xx, and 29xx series routers, 65xx, 37xx, and Nexus platform layer 2/3 switches. **To add Selective Certification for LAN/WAN Network Engineering, enter "422" in Section D of the Education and Experience Test.**
 22. **Network Operations Management:** At least five (5) years of satisfactory, full-time experience managing an IP switched/routed wide area network consisting of 100 plus nodes. Must have working knowledge of switching/routing protocols; good understanding of load balancing and optical networking technologies; experience with Network Data Center Environments, Remedy and Clarity systems; proficiency with industry standard documentation application software (e.g. Microsoft Visio, Excel, Project etc.); and experience managing a group of six or more WAN network engineers. **To add Selective Certification for Network Operations Management, enter "515" in Section D of the Education and Experience Test.**
 23. **Windows Systems Administration:** At least five (5) years of satisfactory, full-time experience providing technical support in a large-scale environment with Windows 2003/2008/2012 Enterprise Server Platform or more recent version, Active Directory, Microsoft Clustering, and/or remote installation services. **To add Selective Certification for Windows Systems Administration, enter "792" in Section D of the Education and Experience Test.**
 24. **Windows Operations Management:** At least five (5) years of satisfactory, full-time experience managing a Windows Server technical support team. Experience must include supporting a large scale environment with Windows 2003/2008/2012 Enterprise Server Platform or more recent version; Active Directory; Microsoft Clustering; and/or remote installation services. **To add Selective Certification for Windows Operations Management, enter "795" in Section D of the Education and Experience Test.**
 25. **Apple Operations Technical Support:** At least five (5) years of satisfactory, full-time experience supporting Apple systems, including print, graphics and post-editorial support. **To add Selective Certification for Apple Operations Technical Support, enter "AOT" in Section D of the Education and Experience Test.**
 26. **Apple Operations Technical Support Certification:** At least one of the following valid certifications: Apple Certified Technical Coordinators (ACTC) and/or Apple Certified Macintosh Technicians (ACMT). **To add Selective Certification for Apple Operations Technical Support Certification, enter "106" in Section D of the Education and Experience Test.**
 27. **Windows Systems Administration:** At least five (5) years of satisfactory, full-time experience providing technical support in a large scale environment with Windows 2003/2008/2012, Enterprise Server Platform or a more recent version, Active Directory, Microsoft Clustering; knowledge of TCP/IP, LDAP, HTTP, DHCP, WINS, DNS and of Remote Installation Services. **To add Selective Certification for Windows Systems Administration, enter "792" in Section D of the Education and Experience Test.**
 28. **Mainframe Operations:** At least five (5) years of satisfactory, full-time experience in Mainframe operations including a knowledge base in JES2, TSO, and AOC, and production control batch experience working with IBM Workload Scheduler, Omegamon, Netview and mainframe console

- operations. **To add Selective Certification for Mainframe Operations, enter "46B" in Section D of the Education and Experience Test.**
29. **Mainframe Operations Management:** At least five (5) years of satisfactory, full-time experience as a manager with the knowledge base to train staff in upgrading software and hardware and in the use of JES2, TSO & AOC. **To add Selective Certification for Mainframe Operations Management, enter "46C" in Section D of the Education and Experience Test.**
 30. **Windows Desktop Support Engineering:** At least five (5) years of satisfactory, full-time experience in design, development, implementation, maintenance and enhancement of hardware, applications, operating systems and computer imaging in a Microsoft Windows environment. Examples include, but are not limited to: Microsoft Office Suite, Microsoft Operating Systems, Browser based applications (Siebel, .NET Framework, Java) Adobe Suite, McAfee, Active Directory, Microsoft Deployment Tool Kit, SCCM and Bladelogic Client Management. Must have a valid driver license. **To add Selective Certification for Windows Desktop Support Engineering, enter "790" in Section D of the Education and Experience Test.**
 31. **Oracle DBA:** At least five (5) years of satisfactory, full-time experience as an Oracle DBA implementing and managing Oracle RAC environments, Grid Infrastructure release 11.2 or higher on a Unix/Linux environment, ASM cluster Filesystem, implementing instance caging, Oracle Database Resource Manager, Oracle Active Data Guard; Veritas Cluster Server for Oracle, Oracle Advanced Security Option and Golden Gate for Oracle Replication. **To add Selective Certification for Oracle DBA, enter "580" in Section D of the Education and Experience Test.**
 32. **SQL DBA:** At least five (5) years of satisfactory, full-time experience and expertise in Microsoft SQL Server Administration and Development, including SQL server performance management and tuning, database fault analysis and resolution effective Database Backup/Recovery strategy deployment. **To add Selective Certification for SQL DBA, enter "718" in Section D of the Education and Experience Test.**
 33. **Linux Engineering:** At least five (5) years of satisfactory, full-time experience with UNIX & Linux System administration/engineering, including but not limited to experience administering, structuring, architecting, and supporting multi-tier web-based systems that are highly available and capable of handling large throughput and concurrency; experience in Veritas products including Cluster Server, Volume Manager, File System / other clustering & replication technologies, Unix performance tuning; and understanding of Java 2 Enterprise Edition (J2EE) application development concepts. **To add Selective Certification for Linux Engineering, enter "DUL" in Section D of the Education and Experience Test.**
 34. **Messaging & Collaboration Engineering:** At least five (5) years of satisfactory, full-time experience working with MS Exchange, MS SharePoint, MS Lync, Storage Devices (including NetApp and EMC), BES, Windows Server, Archiving Solutions (including Enterprise Vault), eDiscovery, Scripting languages such as vbscript, and PowerShell. **To add Selective Certification for Messaging & Collaboration Engineering, enter "467" in Section D of the Education and Experience Test.**
 35. **VM Ware Support Engineering:** At least five (5) years of satisfactory, full-time experience in virtualization technologies, including but not limited to, vSphere 4.x, 5.x & 6.x, vRA, vROPS, VCO, and NSX. **To add Selective Certification for VM Ware Support Engineering, enter "774" in Section D of the Education and Experience Test.**
 36. **VM Ware Engineering (Wintel):** At least five (5) years of satisfactory, full-time experience in Converged Network Architectures, 10 GB, NFS and Cisco Nexus (1k,2k,5k,7k or higher). **To add Selective Certification for VM Ware Engineering (Wintel), enter "773" in Section D of the Education and Experience Test.**
 37. **Storage Engineering:** At least five (5) years of satisfactory, full-time experience in Storage Area Network design, configuration and administration as well as technical knowledge of major storage platforms and switches, and OS environments including Windows, UNIX and Linux. **To add Selective Certification for Storage Engineering, enter "SAN" in Section D of the Education and Experience Test.**
 38. **Firewall System Operations:** At least five (5) years of satisfactory, full-time experience maintaining responsibility for firewall operational security infrastructure through the identification and evaluation of security protection measures and controls around the technical operations infrastructure. In addition, must have been responsible for the operations and maintenance of enterprise information security firewall controls and for ensuring the appropriate operational security procedure is maintained for information systems, programs and data. **To add Selective Certification for Firewall System Operations, enter "279" in Section D of the Education and Experience Test.**
 39. **Intrusion Prevention System Operations:** At least five (5) years of satisfactory, full-time experience monitoring an enterprise network using Intrusion Prevention System (IPS) Technology for malicious activities such as security threats and policy violations. In addition, using IPS technology to identify suspicious activity, log information, attempt to block the activity, and then apply mitigation. **To add Selective Certification for Intrusion Prevention System Operations, enter "416" in Section D of the Education and Experience Test.**
 40. **Continuous Process Improvement Management:** At least two (2) years of satisfactory, full-time experience developing and implementing enterprise wide IT processes for a large public organization. Experience must include but is not limited to working with business owners and subject matter experts to define process controls, develop system requirements for integration, and identify the inputs and outputs of other processes. Must have experience in building a process from the ground up and/or developing best practice assessments for the implementation of a continual process improvement. **To add Selective Certification for Continuous Process Improvement Management, enter "216" in Section D of the Education and Experience Test.**
 41. **ITSM Implementation, Release & Deployment Support:** At least two (2) years of satisfactory, full-time experience of IT release management, implementing technical infrastructure projects, including planning, scheduling and controlling the migration lifecycle of all new and changed assets from Test to Live environments. Must have experience coordinating the Release Management process, working with multiple cross-functional service delivery teams to complete technical implementations, and managing the implementation, deployment, notification swiftly and accurately. **To add Selective Certification for ITSM Implementation, Release & Deployment Support, enter "418" in Section D of the Education and Experience Test.**
 42. **Asset Management:** At least two (2) years of satisfactory, full-time IT Asset and Configuration Management experience in a large Microsoft Windows enterprise environment. Must have at least one of the following certifications: IAITAM Certification (CITAM, CSAM, CHAMP, CMAM, CITAD, CAMP), ITAM foundations or ITIL v3 foundations. Experience must include tracking and managing the lifecycle of an IT Asset from procurement, receiving, inventory management to deployment and retirement, using Asset Management and Discovery tools like BMC Remedy, AssetGen, ServiceNow, RedBeam, BMC SDE SupportMagic, Bladelogic, ADDM, Sciencelogic, ITOM Discovery. **To add**

Selective Certification for Asset Management, enter "108" in Section D of the Education and Experience Test.

43. **IT Problem Management:** At least two (2) years of satisfactory, full-time experience in IT enterprise, managing a team of Problem Analysts/Support Problem Managers who manage the lifecycle of problems to stabilize IT service delivery and prevent reoccurrence that could impact critical systems. Must be able to ensure that identified problems, tasks and actions are documented in a postmortem to prevent reoccurrences and that all process improvements and resulting change controls are implemented in a timely manner. Must have at least one or more ITIL professional certifications. Examples include, but not limited to: ITIL Foundation v2 or v3, ITIL Practitioner, ITIL Intermediate. **To add Selective Certification for IT Problem Management, enter "42D" in Section D of the Education and Experience Test.**
44. **Incident Management:** At least two (2) years of satisfactory, full-time experience in a large-scale IT enterprise, coordinating infrastructure and application support teams to restore normal service operation as quickly as possible, managing entire incident lifecycle and processes in order to stabilize IT service delivery, driving incident management process, including root cause identification, outage and incident solution, change recommendation and coordination, risk determination, and ongoing communications. Must be able to facilitate calls and ask technical questions to clearly understand issues and articulate possible solutions. Must have a high-level technical background in LAN/WAN concepts, Virtual Machines, Oracle databases, Active Directory, LDAP directories, Windows/Unix Operating systems, Office 365 messaging systems, and procedures for service delivery in ITSM and ITIL. Must have at least one or more ITIL professional certifications. Examples include, but not limited to: ITIL Foundation v2 or v3, ITIL Practitioner, and ITIL Intermediate. **To add Selective Certification for Incident Management, enter "42R" in Section D of the Education and Experience Test.**
45. **Change Management:** At least two (2) years of satisfactory, full-time experience in a large-scale IT enterprise coordinating infrastructure and application changes via a Change Advisory Board (CAB), deep understanding of various change management methodologies and tools (BMC SDE SupportMagic, Remedy & ServiceNow), experience in looking across the enterprise and integrating key information from various major change initiatives, ability to manage the life-cycle of a Change Request from inception to closure; ability to ask technical questions and ensure there are no change conflicts and that backout plans are included, and experience in facilitating meetings and asking probing questions to identify risk. Must have at least one or more ITIL professional certifications. Examples include, but not limited to: ITIL Foundation v2 or v3, ITIL Practitioner, and ITIL Intermediate. **To add Selective Certification for Change Management, enter "168" in Section D of the Education and Experience Test.**
46. **Service Desk Support:** At least two (2) years of satisfactory, full-time experience providing technical and Helpdesk support. Experience must include, but is not limited to Microsoft Office Suite, Microsoft Operating Systems, Browser based applications (Siebel, .NET Framework, Java), Adobe Suite, McAfee, Active Directory, Microsoft Deployment Tool Kit, Microsoft GoToASSIST, Remedy, ServiceNow, and/or Bladelogic Client Management. **To add Selective Certification for Service Desk Support, enter "CSD " in Section D of the Education and Experience Test.**
47. **Quality Assurance:** At least two (2) years of satisfactory, full-time experience as a Quality Assurance auditor or analyst reviewing phone and email contacts in a technical support and Helpdesk environment. Experience must includes creation and maintenance of Quality Assurance forms and checkpoints, monthly report on department and individual performance, data collection and analysis of Quality Assurance Performance, analysis and reduction of perennial issues and errors, data management, advance use of MS Excel, Word, and PowerPoint, performance feedback and corrective action process. **To add Selective Certification for Quality Assurance, enter "SDQ" in Section D of the Education and Experience Test.**
48. **Manager or Helpdesk Support:** At least five (5) years of satisfactory, full-time experience supervising staff in a technical support or Helpdesk environment and quality assurance review. Experience should include but not limited to Microsoft Office Suite, Microsoft Operating Systems, Browser based applications (Siebel, .NET Framework, Java), Adobe Suite, McAfee, Remedy, ServiceNow, Active Directory, Microsoft Deployment Tool Kit, Microsoft GoToASSIST, Remedy, and Bladelogic Client Management. Preferred certifications should include but are not limited to : CompTIA A+ Certification, Windows 7, Configuring (MCSA), Windows 7, Enterprise Desktop Support Technician (MCSA), Windows 7, Enterprise Desktop Administrator (MCSA), Configuring Windows 8.1 (MCSA), Supporting Windows 8.1 (MCSA), Microsoft Office Specialist (MOS), MCSA: Office 365 Solutions Associate, Microsoft Certified IT Professional (MCITP). **To add Selective Certification for Manager or Helpdesk Support, enter "61E" in Section D of the Education and Experience Test.**
49. **Technical Content Analyst:** At least five (5) years of satisfactory, full-time experience designing, managing and maintaining self-service websites for helpdesk technical support, including web design, photo and graphics editing, user experience design, user interaction design, and information architecture design. **To add Selective Certification for Technical Content Analyst, enter "724" in Section D of the Education and Experience Test.**
50. **Workforce Management:** At least two (2) years of satisfactory, full-time experience in IT, including experience with workforce management tools in large multi-platform environments forecasting work volume, scheduling, staffing, tracking real time adherence and conformity, analyzing contact center performance real time and historically, and identifying opportunities to improve performance, driving continuous improvement efforts, managing the coordination of training for Service Desk staff, transforming a Helpdesk to a Service Desk environment; implementing a technical training program, implementing solutions to increase first call resolution rates, and/or developing a defined methodology surrounding departmental policies, processes and procedures. **To add Selective Certification for Workforce Management, enter "807" in Section D of the Education and Experience Test.**
51. **Service Desk Management:** At least five (5) years of satisfactory, full-time experience in IT supervising staff in a technical support or Helpdesk environment. The experience must include running a 24 x7 x365 operation supporting multiple technologies and in-house applications, mentoring and leading a diversified team while motivating the team to focus on customer service. Must have experience with Microsoft Office Suite, Microsoft Operating Systems, Browser based applications (Siebel, .NET Framework, Java), Adobe Suite, McAfee, Active Directory, Microsoft Deployment Tool Kit, Microsoft GoToASSIST, Remedy, ServiceNow, and Bladelogic Client Management. Must have least one of these certifications : CompTIA A+ Certification, Windows 7, Configuring (MCSA), Windows 7, Enterprise Desktop Support Technician (MCSA), Windows 7, Enterprise Desktop Administrator (MCSA), Configuring Windows 8.1 (MCSA), Supporting Windows 8.1 (MCSA), Microsoft Office Specialist (MOS), MCSA: Office 365 Solutions Associate, Microsoft Certified IT Professional MCITP or one or more ITIL professional certifications (ITIL Foundation v2 or v3, ITIL Practitioner, and ITIL Intermediate). **To add Selective Certification for Service Desk Management, enter "61O" in Section D of the Education and Experience Test.**

52. **Quality Assurance Management:** At least two (2) years of satisfactory, full-time experience as a Quality Assurance Manager supervising Quality Assurance Auditors or Analysts, creating and maintaining Quality Assurance forms and checkpoints, creating monthly reports on department and individual performance, performing data collection and analysis of performance, analyzing and reducing perennial issues and errors, providing performance feedback and developing corrective action process. Must have experience in advanced use of MS Excel, Word, and PowerPoint. **To add Selective Certification for Quality Assurance Management, enter "60H" in Section D of the Education and Experience Test.**
53. **Municipal Information Technology Experience Selective Certification:** At least one (1) year of satisfactory, full-time Information Technology experience working for a municipal government in a similar position, which provides services for a city with over 1 million in population. **To add Selective Certification for Municipal Information Technology, enter "ITM" in Section D of the Education and Experience Test.**
54. **Municipal Call Center Experience Selective Certification:** At least one (1) year of satisfactory, full-time Call Center experience working within a municipal government in a similar position, which provides services for a city with over 1 million in population. **To add Selective Certification for Municipal Call Center, enter "MCC" in Section D of the Education and Experience Test.**
55. **Specialized Computer Operations Experience (Department of Information Technology and Telecommunications Only):** At least one (1) year of full-time satisfactory experience in managing and protecting the City's technology operations, telecommunications and information assets and maintaining service operations. **To add Selective Certification for Specialized Computer Operations Experience, enter "66X" in Section D of the Education and Experience Test.**
56. **Information Security Compliance and Audit Administration:** At least 5 years of satisfactory, full-time experience documenting and drafting security artifacts such as policies, standards, processes and procedures; analyzing and implementing risk and compliance management frameworks, policies, standards and best practices in support of the Information Security Governance, Risk Management and Compliance Programs; reviewing operating procedures, system security, programming controls, communication controls, backup and disaster recovery, and system maintenance. **To add Selective Certification for Information Security Compliance and Audit Administration, enter "39A" in Section D of the Education and Experience Test.**
57. **Information Security Service Delivery Management:** At least 5 years of satisfactory, full-time experience managing overall security service portfolio including ensuring that it is in compliance with contracted service definitions, account planning, priorities, quality and financial performance; must have experience in aligning security service delivery requirements with managing dependencies and priorities across all required internal service delivery teams. **To add Selective Certification for Information Security Service Delivery Management, enter "388" in Section D of the Education and Experience Test.**
58. **Infrastructure Security Design Architecture:** At least five (5) years of satisfactory, full-time experience in security architecture design and in leading security efforts including developing and managing a security architecture process that enables the development and implementation of security solutions and capabilities that are clearly aligned with business, technology and threat drivers. **To add Selective Certification for Infrastructure Security Design Architecture, enter "39J" in Section D of the Education and Experience Test.**
59. **Infrastructure Security Engineering:** At least five (5) years of satisfactory, full-time experience in systems security analysis and implementation, security engineering, design assurance, testing, software security engineering, program design, configuration management, integration and testing of Information security products and techniques. Working knowledge of testing and validating security measures active on security infrastructure devices for the protection of computer systems, networks and information systems. **To add Selective Certification for Infrastructure Security Engineering, enter "39K" in Section D of the Education and Experience Test.**
60. **Intrusion Prevention System Operations:** At least five (5) years of satisfactory, full-time experience monitoring an enterprise network for malicious activities such as security threats and policy violations, using Intrusion Prevention System(IPS) Technologies, including identifying suspicious activity, logging the information, attempting to block the activity, and then applying mitigation. **To add Selective Certification for Intrusion Prevention System Operations, enter "39P" in Section D of the Education and Experience Test.**
61. **Perimeter Security System Management:** At least five (5) years of satisfactory, full-time experience maintaining and administering perimeter security systems such as firewalls and intrusion detection systems. Experience must include using network security concepts and designing solutions with enterprise level security devices. Must have hands-on experience with firewalls, firewall change requests, firewall configurations, network services, and network security device configurations. **To add Selective Certification for Perimeter Security System Management, enter "595" in Section D of the Education and Experience Test.**
62. **Cloud Architecture:** Minimum of two (2) years of satisfactory, full-time experience in the design, development and support of highly scalable, flexible, and resilient cloud architectures. Must have experience with Cloud methodologies (IaaS, PaaS, SaaS), automation, orchestration, cost frameworks, and public/private/hybrid cloud architecture. **To add Selective Certification for Cloud Architecture, enter "CAH" in Section D of the Education and Experience Test.**
63. **Incident Response Management:** At least five (5) years of satisfactory, full-time supervisory experience in the management of cybersecurity incidents as part of a 24x7 operation. Experience must include: identifying, capturing, containing, and reporting malware; categorizing types of vulnerabilities and associated attacks; establishing mitigation, preparedness, and response and recovery approaches; maximizing preservation of property, and information security. **To add Selective Certification for Incident Response Management, enter "382" in Section D of the Education and Experience Test.**
64. **Vulnerability Management:** At least five (5) years of satisfactory, full-time experience managing system and network performance within the network environment or enclave, identifying system deviations from acceptable configurations, enclave policy, or local policy; and measuring the effectiveness of defense-in-depth architecture against known vulnerabilities. **To add Selective Certification for Vulnerability Management, enter "VMG" in Section D of the Education and Experience Test.**
65. **Enterprise Windows Domain:** At least two (2) years of satisfactory, full-time experience in performance monitoring, troubleshooting, diagnosis, and problem resolution of an Enterprise Windows Domain with greater than 1k nodes. **To add Selective Certification for Enterprise Windows Domain, enter "23M" in Section D of the Education and Experience Test.**
66. **Enterprise Identity Access Management:** At least two (2) years of satisfactory, full-time experience in provisioning, monitoring, and auditing all types of system access. **To add Selective Certification**

for Enterprise Identity Access Management, enter "23L" in Section D of the Education and Experience Test.

67. **Print and Document:** At least two (2) years of satisfactory, full-time experience in using print and document related software such as Adobe, Nearstar, and IPPD. **To add Selective Certification for Print and Document, enter "59F" in Section D of the Education and Experience Test.**
68. **Cut Sheet:** At least two (2) years of satisfactory, full-time experience in handling and/or managing any cut sheet (e.g. Xerox) specific software and/or hardware upgrades/modifications/migrations in a high volume production print environment. **To add Selective Certification for Cut Sheet, enter "214" in Section D of the Education and Experience Test.**

The above Selective Certification requirements may be met at anytime during the duration of the list. If you meet this requirement at some future date, please submit a request by mail to: DCAS Bureau of Examinations - Exam Development Group, 1 Centre Street, 14th Floor, New York, NY 10007. Please include the examination title and number, your social security number, and the Selective Certification you are requesting on your correspondence.

Application Receipt:

You will be emailed a receipt immediately after you have applied for the examination. If you do not receive this receipt, check "Junk", "Trash", or "Spam" folder for the primary email linked to your Online Application System (OASys) account. If you are unable to locate the email, you can view a summary of the notification email to you on your OASys Dashboard, then Notifications. If you are still unable to find the email, please email DCAS via the Contact feature available in OASys with a description of the issue and include the Exam # and your Profile # located on your Profile page. While on your Profile page, check that the email addresses you provided are correct and/or updated.

Promotion Test:

A promotion examination for this title is being held for eligible employees. The names appearing on the promotion list will be considered first in filling vacancies.

Concurrent Examination:

This examination is for New York City agencies and **not** for the City University of New York (CUNY). If you would like to apply for Computer Operations Manager in CUNY you **must** submit a separate application and fee for Exam No. 9047 from April 3, 2019 through April 23, 2019.

PENALTY FOR MISREPRESENTATION:

Any intentional misrepresentation on the application or examination may result in disqualification, even after appointment, and may result in criminal prosecution.

The General Examination Regulations of the Department of Citywide Administrative Services (DCAS) apply to this examination and are part of this Notice of Examination. They are posted at nyc.gov/dcas and copies are available at the DCAS Computer-based Testing & Applications Centers.

The City of New York is an Equal Opportunity Employer.
Title Code No. 10074; Managerial Service.

For information about other exams, and your exam or list status, call 212-669-1357.
Internet: nyc.gov/dcas