

New York State Cronin Submission – Hourly Based IT Services

Submission by: New York State Procurement, Office of General Services

Project: Hourly Based IT Services

Contact:

Executive Summary

New York State Procurement (NYSPro), a division of the Office of General Services (OGS) and the central procurement organization for State and local government purchasers, recognizes that as advancements in technology grow at a rapid pace, the need to hire hourly based information technology staff is essential to an agency's success. Hiring hourly IT staff quickly and affordably has been an increasing challenge for NYSPro's customers.

NYSPro created an original way to address the need for Hourly Based Information Technology Services (HBITS) by becoming an internal managed service provider for information technology services. The managed service model created a pool of qualified IT vendors, whose performance is annually evaluated, for use by Authorized contract users to alleviate challenges in hiring hourly staff.

To fully understand the State's purchasing history, NYSPro conducted a detailed spend analysis and data request to high-spend vendors. New York State Executive agencies spent approximately \$140 million on HBITS during the 2010-2011 State Fiscal Year. This spend has historically been dispersed across several contracting vehicles across multiple agencies with widely varied pricing and skill definitions for staff. Through its analysis NYSPro discovered that customers were paying vastly different hourly rates for similar skill sets, sometimes differing by more than 40% across executive agencies, indicating excessive pricing markups. Further, historical reporting models frequently limited the State's visibility into the hourly bill rates being paid to Contractor, and into the layers of sub-contracting occurring with each placement.

New York's historical contracts for IT services were structured to allow for continuous recruitment of qualified vendors. Under this structure, each contractor established not-to-exceed hourly rates for various IT services titles. This model resulted in a very large supply base; customers could solicit the over 600 vendors under this contract to engage in a secondary competition for either hourly or deliverable-based IT services engagements.

The HBITS procurement is one of the first outputs from New York's strategic sourcing effort. This managed service model significantly improves purchasing efficiency and produces an estimated \$37 million in annual savings to state agencies and millions more for local government customers. Using a total cost of ownership (TCO) procurement methodology and leveraging the State's substantial collective buying power, HBITS achieved these cost savings while creating administrative efficiencies for state agency purchasers as well as suppliers. With HBITS, the State developed a procurement strategy that establishes standardized, competitive pricing for hourly based technology services.

The contracts resulting from the HBITS procurement demonstrate the alignment of Governor Cuomo's objectives to save taxpayers money while encouraging meaningful business opportunities for Minority and Women-Owned Business Enterprises (MWBE). Going forward, the State will drive most, if not all, hourly IT spending through the HBITS Contracts.

Initiative/Innovation — *unusual or unique approach, scale, or magnitude of effort; conceptual originality*

NYSPPro maintained over 600 individual contracts resulting in a significant administrative burden, although the data analysis revealed that only a small subset of these vendors accounted for most of the hourly IT services awards. The secondary procurement process associated with existing contracts proved to be costly and time consuming for both the State and for suppliers. Additionally, several of NYSPPro's customers had created independent contracts for IT Services, creating confusion, and adding to the burden on the supplier community and those select agencies. Candidate placement times under this model averaged four to six months. Enterprise oversight of vendor performance was also limited due to the varying contracting methods.

In developing a strategy for a new procurement model to address some of these issues, NYSPPro identified varying IT Services contracting approaches in other states. These include a single vendor managed system, backdrop contracts with vendor-direct purchasing, and a hybrid of backdrop contract and mini-bid RFPs. NYSPPro worked to incorporate the best aspects of these varying contracting models to create an improved mechanism for IT Services delivery.

To encourage competition, NYSPPro developed requirements which were specific to the needs of its customers and did not expressly or implicitly favor larger vendors. Vendors who could demonstrate suitable subcontractor networks, effective candidate recruitment strategies, streamlined on-boarding procedures, and MWBE participation were scored more favorably.

Additionally, NYSPPro required vendors to bid actual bill rates that were calculated by multiplying the vendor's markup times the consultant's wage rate, providing important visibility into the profit margin of its suppliers as NYSPPro found not-to-exceed rates often included excessive markup percentages. Finally, NYSPPro also utilized a 40/60 technical/financial Evaluation formula as part of the RFP evaluation. Many states use a 70/30, or similar splits that always lean toward heavy Technical weighting. This often favors larger vendors and removes the incentive to provide truly market-based pricing.

HBITS implemented a three-dimensional job title structure (refer to attachment) that incorporated four skill levels, a pricing premium for hard to find skill sets (entitled "skill demand"), and three geographic regions to account for cost of living and competition with the private sector. Each job title combination has a fixed hourly bill rate that is calculated by multiplying a wage rate that must be paid to the consultant times the vendor's fixed markup percentage.

Due to the vast differences in cost of living throughout New York, the HBITS model requested vendors provide hourly bill rates for three specific geographical regions. States containing both large metropolitan areas and rural areas can replicate this model to right size the pricing for the area. This created competitive pricing schedules for customers in both New York City as well as less densely populated areas to ensure customers paid true market rates for their geographic area. These bill rates were established during the competitive RFP process.

The HBITS contracts also demonstrate the alignment of the Governor’s objectives to save taxpayers money while encouraging meaningful business opportunities for MWBE firms. NYSPRO developed competitive RFP evaluation criteria that did not favor large-scale vendors. As a result, 17 of the 25 HBITS vendors are certified MWBE firms. It is expected that over the five-year term of these contracts, direct payments to MWBE vendors and indirect payments to MWBE subcontractors will constitute a significant portion of anticipated spending for hourly IT services.

Transferability — *practical ability by other states to replicate or use as a benchmark, considering expected resources required and generality of the legal or structural environment in which the entry was implemented*

A thorough review of New York’s procurement of IT Services identified a number of opportunities for savings and administrative efficiency. Data gathering and analysis were performed to identify current practices in New York, as well as leading practices in peer states. NYSPRO created a detailed profile of IT Services spending to make broad improvements across the purchasing category. To replicate this effort, a procurement organization must obtain a clear, factual picture of their current IT services environments to help them apply some of the techniques utilized by NYSPRO.

While the HBITS model was implemented by New York State, it can be easily replicated by other states, local governments or in the private sector. Areas of this model that show the most promise for replication are primarily within contract development, regionalization, and vendor management. Additionally, NYSPRO was able to demonstrate that governmental entities can require vendors, via competitive RFPs, to bid the actual markup applied to HBITS consultants and subsequently contract for fixed hourly bill rates as opposed to “not-to-exceed” rates.

Service Improvement — *extent to which transactions or service delivery is made more effective; involvement of agencies/users in development and implementation of program or project*

The resulting contracts now include only 25 total vendors to meet the same demand. To ensure continuous quality, 20 vendors are active during any year and five waitlisted. This “short list” of HBITS vendors are annually evaluated using measurable criteria specifically developed to meet the State’s needs. These include standard government sector needs such as customer satisfaction with placed candidates, MWBE utilization and reporting, and submittal of statutorily required reports. NYSPRO uses these factors to determine “active” and “waitlisted” vendors. Five of the 25 vendors are then “Waitlisted” and prohibited for one calendar year from receiving new executive agency business under the contract. This process will be repeated in each of the five contract years.

Vendors also compete during the candidate selection process that is overseen by NYSPRO staff. Executive agency customers submit task order requests to NYSPRO, vendors propose candidates, NYSPRO performs the initial evaluation, and customers evaluate candidates on predefined technical requirements. Specifically, the cost evaluation allows a second filter to ensure NYSPRO is not paying for the most expensive candidates for each job title/skill level/skill demand combination. Local and school purchases are not managed centrally, but these customers may purchase directly from these contracts, still benefiting from the competitive pricing.

Since implementing HBITS, NYSPRO has seen tangible results in improved processing times, placement of candidates, fair candidate compensation, overall savings and MWBE utilization. NYSPRO has successfully placed over 515 candidates over the last eight months since the start of this contract. Previously, there was a nine month process to place 700 candidates annually. By reducing control agency delays, centralizing the administrative responsibilities, and streamlining the evaluation process, candidate placement times have now been reduced to approximately 30 days. Thus, the simplified supplier experience created pass-through savings to NYSPRO with vendor rates and a reduced administrative burden for customers.

Cost Reduction — *validated or potential for cost reduction, including considerations of efficiency*

The HBITS model allowed NYS to leverage its significant bargaining power by consolidating its spending. All customers will be charged the same bill rates by the same vendor for similar skill sets (refer to attachment). By establishing both a “wage rate” and a fixed markup percentage, NYSPRO was able to develop truly market-based pricing.

NYSPRO also sought to retain and recruit highly skilled candidates. Candidate turnover with former contracting models was attributed primarily to compensation. By instituting this “wage rate,” NYSPRO has reduced attrition by ensuring the consultants receive a guaranteed portion of the hourly bill rate. Insight into vendor markup also resulted in lower hourly bill rates across the board. Overall, HBITS is estimated to produce \$37 million in annual savings to executive agencies.

**Agreement between the
New York State Office of General Services and
HBITS Vendor
for Hourly Based IT Services (HBITS)**

**Contract Number: XXXXXX
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-----REGION 1-----

Service Group 1. STANDARD TITLES

Standard Title Markup 35.00%

*Note: Please enter the markup as a percentage (i.e.: if the Markup is 20%, please enter 20 into the cell)

	Skill Demand	Normal			High		
		5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate	5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate
Job Title	Level						
Project Manager	Junior	\$30.40	\$32.00	\$43.20	\$33.25	\$35.00	\$47.25
Project Manager	Mid Level	\$38.00	\$40.00	\$54.00	\$38.00	\$40.00	\$54.00
Project Manager	Senior	\$52.25	\$55.00	\$74.25	\$57.00	\$60.00	\$81.00
Project Manager	Expert	\$61.75	\$65.00	\$87.75	\$71.25	\$75.00	\$101.25
Business Analyst	Junior	\$28.50	\$30.00	\$40.50	\$28.50	\$30.00	\$40.50
Business Analyst	Mid Level	\$33.25	\$35.00	\$47.25	\$37.05	\$39.00	\$52.65
Business Analyst	Senior	\$49.40	\$52.00	\$70.20	\$57.00	\$60.00	\$81.00
Business Analyst	Expert	\$58.90	\$62.00	\$83.70	\$66.50	\$70.00	\$94.50
Technical Writer	Junior	\$20.90	\$22.00	\$29.70	\$28.50	\$30.00	\$40.50
Technical Writer	Mid Level	\$26.60	\$28.00	\$37.80	\$32.30	\$34.00	\$45.90
Technical Writer	Senior	\$31.64	\$33.30	\$44.96	\$36.10	\$38.00	\$51.30
Technical Writer	Expert	\$38.76	\$40.80	\$55.08	\$45.60	\$48.00	\$64.80
Tester	Junior	\$22.80	\$24.00	\$32.40	\$26.60	\$28.00	\$37.80
Tester	Mid Level	\$29.97	\$31.55	\$42.59	\$35.15	\$37.00	\$49.95
Tester	Senior	\$36.10	\$38.00	\$51.30	\$41.80	\$44.00	\$59.40
Tester	Expert	\$45.60	\$48.00	\$64.80	\$52.25	\$55.00	\$74.25
Programmer	Junior	\$33.25	\$35.00	\$47.25	\$38.00	\$40.00	\$54.00
Programmer	Mid Level	\$42.75	\$45.00	\$60.75	\$47.50	\$50.00	\$67.50
Programmer	Senior	\$49.40	\$52.00	\$70.20	\$57.00	\$60.00	\$81.00
Programmer	Expert	\$57.00	\$60.00	\$81.00	\$63.65	\$67.00	\$90.45
Specialist	Junior	\$33.25	\$35.00	\$47.25	\$38.00	\$40.00	\$54.00
Specialist	Mid Level	\$38.67	\$40.70	\$54.95	\$42.75	\$45.00	\$60.75
Specialist	Senior	\$52.25	\$55.00	\$74.25	\$57.00	\$60.00	\$81.00
Specialist	Expert	\$57.42	\$60.44	\$81.59	\$60.80	\$64.00	\$86.40
Database Administrator	Junior	\$30.40	\$32.00	\$43.20	\$36.10	\$38.00	\$51.30
Database Administrator	Mid Level	\$39.05	\$41.11	\$55.50	\$42.09	\$44.30	\$59.81
Database Administrator	Senior	\$45.60	\$48.00	\$64.80	\$52.25	\$55.00	\$74.25
Database Administrator	Expert	\$57.00	\$60.00	\$81.00	\$60.80	\$64.00	\$86.40
System Administrator	Junior	\$30.40	\$32.00	\$43.20	\$31.35	\$33.00	\$44.55
System Administrator	Mid Level	\$39.90	\$42.00	\$56.70	\$42.75	\$45.00	\$60.75
System Administrator	Senior	\$47.50	\$50.00	\$67.50	\$57.00	\$60.00	\$81.00
System Administrator	Expert	\$55.10	\$58.00	\$78.30	\$60.80	\$64.00	\$86.40
Technical Architect	Junior	\$42.75	\$45.00	\$60.75	\$52.25	\$55.00	\$74.25
Technical Architect	Mid Level	\$49.40	\$52.00	\$70.20	\$61.75	\$65.00	\$87.75
Technical Architect	Senior	\$58.90	\$62.00	\$83.70	\$64.60	\$68.00	\$91.80
Technical Architect	Expert	\$64.60	\$68.00	\$91.80	\$74.10	\$78.00	\$105.30

Service Group 2. SOFTWARE/HARDWARE SPECIFIC TITLES

Software/Hardware Specific Markup 35.00%

*Note: Please enter the markup as a percentage (i.e.: if the Markup is 20%, please enter 20 into the cell)

Job Title	5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate
Microsoft Specialty			
Technician V	\$57.00	\$60.00	\$81.00
Principal Consultant	\$52.44	\$55.20	\$74.52
IBM Specialty			
Technical Specialist 3	\$26.60	\$28.00	\$37.80
Technical Specialist 4	\$32.30	\$34.00	\$45.90
Technical Specialist 5	\$42.75	\$45.00	\$60.75
Software Architect #1	\$57.00	\$60.00	\$81.00
Software Architect #2	\$61.75	\$65.00	\$87.75
Unisys Specialty			
Architectural Specialist I	\$55.10	\$58.00	\$78.30
Architectural Specialist II	\$55.10	\$58.00	\$78.30
Sr. Production Control Operator	\$30.40	\$32.00	\$43.20
Production Control Operator	\$24.46	\$25.75	\$34.76
Sr. Equipment Operator	\$25.05	\$26.37	\$35.60
Equipment Operator	\$20.42	\$21.49	\$29.01
Service Delivery Specialist I	\$32.47	\$34.18	\$46.14
Service Delivery Specialist II	\$31.65	\$33.32	\$44.98

-----REGION 2-----

Service Group 1. STANDARD TITLES

Standard Title Markup 35.00%

*Note: Please enter the markup as a percentage (i.e.: if the Markup is 20%, please enter 20 into the cell)

	Skill Demand	Normal			High		
		5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate	5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate
Job Title	Level						
Project Manager	Junior	\$28.50	\$30.00	\$40.50	\$33.25	\$35.00	\$47.25
Project Manager	Mid Level	\$38.00	\$40.00	\$54.00	\$42.75	\$45.00	\$60.75
Project Manager	Senior	\$52.25	\$55.00	\$74.25	\$55.10	\$58.00	\$78.30
Project Manager	Expert	\$61.75	\$65.00	\$87.75	\$68.40	\$72.00	\$97.20
Business Analyst	Junior	\$26.60	\$28.00	\$37.80	\$30.40	\$32.00	\$43.20
Business Analyst	Mid Level	\$33.25	\$35.00	\$47.25	\$38.69	\$40.73	\$54.99
Business Analyst	Senior	\$45.60	\$48.00	\$64.80	\$57.00	\$60.00	\$81.00
Business Analyst	Expert	\$57.00	\$60.00	\$81.00	\$64.60	\$68.00	\$91.80
Technical Writer	Junior	\$20.90	\$22.00	\$29.70	\$22.37	\$23.55	\$31.79
Technical Writer	Mid Level	\$23.75	\$25.00	\$33.75	\$32.30	\$34.00	\$45.90
Technical Writer	Senior	\$32.30	\$34.00	\$45.90	\$36.10	\$38.00	\$51.30
Technical Writer	Expert	\$45.60	\$48.00	\$64.80	\$49.40	\$52.00	\$70.20
Tester	Junior	\$22.80	\$24.00	\$32.40	\$29.45	\$31.00	\$41.85
Tester	Mid Level	\$30.40	\$32.00	\$43.20	\$35.15	\$37.00	\$49.95
Tester	Senior	\$36.10	\$38.00	\$51.30	\$43.70	\$46.00	\$62.10
Tester	Expert	\$45.60	\$48.00	\$64.80	\$52.25	\$55.00	\$74.25
Programmer	Junior	\$33.25	\$35.00	\$47.25	\$38.00	\$40.00	\$54.00
Programmer	Mid Level	\$42.75	\$45.00	\$60.75	\$47.50	\$50.00	\$67.50
Programmer	Senior	\$47.88	\$50.40	\$68.04	\$57.00	\$60.00	\$81.00
Programmer	Expert	\$57.00	\$60.00	\$81.00	\$60.80	\$64.00	\$86.40
Specialist	Junior	\$33.25	\$35.00	\$47.25	\$38.00	\$40.00	\$54.00
Specialist	Mid Level	\$39.49	\$41.57	\$56.12	\$42.75	\$45.00	\$60.75
Specialist	Senior	\$47.50	\$50.00	\$67.50	\$57.00	\$60.00	\$81.00
Specialist	Expert	\$57.00	\$60.00	\$81.00	\$59.99	\$63.15	\$85.25
Database Administrator	Junior	\$30.40	\$32.00	\$43.20	\$38.00	\$40.00	\$54.00
Database Administrator	Mid Level	\$39.37	\$41.44	\$55.94	\$43.70	\$46.00	\$62.10
Database Administrator	Senior	\$45.60	\$48.00	\$64.80	\$58.90	\$62.00	\$83.70
Database Administrator	Expert	\$57.00	\$60.00	\$81.00	\$64.60	\$68.00	\$91.80
System Administrator	Junior	\$30.40	\$32.00	\$43.20	\$31.35	\$33.00	\$44.55
System Administrator	Mid Level	\$41.80	\$44.00	\$59.40	\$45.60	\$48.00	\$64.80
System Administrator	Senior	\$49.40	\$52.00	\$70.20	\$55.10	\$58.00	\$78.30
System Administrator	Expert	\$57.95	\$61.00	\$82.35	\$62.70	\$66.00	\$89.10
Technical Architect	Junior	\$45.60	\$48.00	\$64.80	\$52.25	\$55.00	\$74.25
Technical Architect	Mid Level	\$55.10	\$58.00	\$78.30	\$61.75	\$65.00	\$87.75
Technical Architect	Senior	\$58.90	\$62.00	\$83.70	\$64.60	\$68.00	\$91.80
Technical Architect	Expert	\$60.21	\$63.38	\$85.56	\$74.10	\$78.00	\$105.30

Service Group 2. SOFTWARE/HARDWARE SPECIFIC TITLES

Software/Hardware Specific Markup 35.00%

*Note: Please enter the markup as a percentage (i.e.: if the Markup is 20%, please enter 20 into the cell)

	5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate
Job Title			
Microsoft Specialty			
Technician V	\$55.94	\$58.88	\$79.49
Principal Consultant	\$52.92	\$55.70	\$75.20
IBM Specialty			
Technical Specialist 3	\$26.60	\$28.00	\$37.80
Technical Specialist 4	\$32.30	\$34.00	\$45.90
Technical Specialist 5	\$41.76	\$43.96	\$59.35
Software Architect #1	\$52.25	\$55.00	\$74.25
Software Architect #2	\$57.00	\$60.00	\$81.00
Unisys Specialty			
Architectural Specialist I	\$52.25	\$55.00	\$74.25
Architectural Specialist II	\$50.35	\$53.00	\$71.55
Sr. Production Control Operator	\$28.67	\$30.18	\$40.74
Production Control Operator	\$23.88	\$25.14	\$33.94
Sr. Equipment Operator	\$25.43	\$26.77	\$36.14
Equipment Operator	\$20.33	\$21.40	\$28.89
Service Delivery Specialist I	\$30.13	\$31.72	\$42.82
Service Delivery Specialist II	\$30.65	\$32.26	\$43.55

-----REGION 3-----

Service Group 1. STANDARD TITLES

Standard Title Markup 35.00%

*Note: Please enter the markup as a percentage (i.e.: if the Markup is 20%, please enter 20 into the cell)

	Skill Demand	Normal			High		
		5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate	5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate
Job Title	Level						
Project Manager	Junior	\$35.09	\$36.94	\$49.87	\$39.90	\$42.00	\$56.70
Project Manager	Mid Level	\$39.90	\$42.00	\$56.70	\$45.60	\$48.00	\$64.80
Project Manager	Senior	\$56.68	\$59.66	\$80.54	\$66.50	\$70.00	\$94.50
Project Manager	Expert	\$70.02	\$73.70	\$99.50	\$76.00	\$80.00	\$108.00
Business Analyst	Junior	\$33.25	\$35.00	\$47.25	\$36.10	\$38.00	\$51.30
Business Analyst	Mid Level	\$38.00	\$40.00	\$54.00	\$45.60	\$48.00	\$64.80
Business Analyst	Senior	\$50.70	\$53.37	\$72.05	\$61.75	\$65.00	\$87.75
Business Analyst	Expert	\$66.50	\$70.00	\$94.50	\$76.00	\$80.00	\$108.00
Technical Writer	Junior	\$20.90	\$22.00	\$29.70	\$22.80	\$24.00	\$32.40
Technical Writer	Mid Level	\$23.75	\$25.00	\$33.75	\$33.25	\$35.00	\$47.25
Technical Writer	Senior	\$38.00	\$40.00	\$54.00	\$47.50	\$50.00	\$67.50
Technical Writer	Expert	\$51.30	\$54.00	\$72.90	\$61.75	\$65.00	\$87.75
Tester	Junior	\$22.80	\$24.00	\$32.40	\$26.60	\$28.00	\$37.80
Tester	Mid Level	\$30.40	\$32.00	\$43.20	\$33.25	\$35.00	\$47.25
Tester	Senior	\$39.90	\$42.00	\$56.70	\$47.50	\$50.00	\$67.50
Tester	Expert	\$52.25	\$55.00	\$74.25	\$57.00	\$60.00	\$81.00
Programmer	Junior	\$33.25	\$35.00	\$47.25	\$38.00	\$40.00	\$54.00
Programmer	Mid Level	\$38.00	\$40.00	\$54.00	\$45.60	\$48.00	\$64.80
Programmer	Senior	\$47.50	\$50.00	\$67.50	\$55.10	\$58.00	\$78.30
Programmer	Expert	\$58.90	\$62.00	\$83.70	\$66.50	\$70.00	\$94.50
Specialist	Junior	\$32.30	\$34.00	\$45.90	\$35.44	\$37.30	\$50.36
Specialist	Mid Level	\$38.00	\$40.00	\$54.00	\$45.60	\$48.00	\$64.80
Specialist	Senior	\$47.50	\$50.00	\$67.50	\$55.10	\$58.00	\$78.30
Specialist	Expert	\$57.00	\$60.00	\$81.00	\$66.50	\$70.00	\$94.50
Database Administrator	Junior	\$32.30	\$34.00	\$45.90	\$38.00	\$40.00	\$54.00
Database Administrator	Mid Level	\$39.90	\$42.00	\$56.70	\$43.70	\$46.00	\$62.10
Database Administrator	Senior	\$51.33	\$54.03	\$72.94	\$57.00	\$60.00	\$81.00
Database Administrator	Expert	\$58.84	\$61.94	\$83.62	\$66.50	\$70.00	\$94.50
System Administrator	Junior	\$30.40	\$32.00	\$43.20	\$31.35	\$33.00	\$44.55
System Administrator	Mid Level	\$41.80	\$44.00	\$59.40	\$45.60	\$48.00	\$64.80
System Administrator	Senior	\$48.55	\$51.11	\$69.00	\$54.01	\$56.85	\$76.75
System Administrator	Expert	\$58.66	\$61.75	\$83.36	\$60.80	\$64.00	\$86.40
Technical Architect	Junior	\$49.40	\$52.00	\$70.20	\$57.00	\$60.00	\$81.00
Technical Architect	Mid Level	\$45.60	\$48.00	\$64.80	\$61.75	\$65.00	\$87.75
Technical Architect	Senior	\$54.15	\$57.00	\$76.95	\$66.50	\$70.00	\$94.50
Technical Architect	Expert	\$69.35	\$73.00	\$98.55	\$76.00	\$80.00	\$108.00

Service Group 2. SOFTWARE/HARDWARE SPECIFIC TITLES

Software/Hardware Specific Markup 35.00%

*Note: Please enter the markup as a percentage (i.e.: if the Markup is 20%, please enter 20 into the cell)

	5% Slight Deviation: Hourly Wage Rate	Hourly Wage Rate	Hourly Bill Rate
Job Title			
Microsoft Specialty			
Technician V	\$63.75	\$67.11	\$90.60
Principal Consultant	\$61.09	\$64.30	\$86.81
IBM Specialty			
Technical Specialist 3	\$30.40	\$32.00	\$43.20
Technical Specialist 4	\$36.10	\$38.00	\$51.30
Technical Specialist 5	\$45.60	\$48.00	\$64.80
Software Architect #1	\$55.17	\$58.07	\$78.39
Software Architect #2	\$63.37	\$66.70	\$90.05
Unisys Specialty			
Architectural Specialist I	\$59.10	\$62.21	\$83.98
Architectural Specialist II	\$54.45	\$57.32	\$77.38
Sr. Production Control Operator	\$31.94	\$33.62	\$45.39
Production Control Operator	\$26.67	\$28.07	\$37.89
Sr. Equipment Operator	\$27.56	\$29.01	\$39.16
Equipment Operator	\$22.76	\$23.96	\$32.35
Service Delivery Specialist I	\$35.77	\$37.65	\$50.83
Service Delivery Specialist II	\$37.15	\$39.10	\$52.79

Region	Counties Included:
Region 1	All counties that are not included in Regions 2 or Region 3
Region 2 - Mid-Hudson	Dutchess, Orange and Putnam Counties
Region 3 - NYC Metro	Nassau, Rockland, Suffolk, Westchester, Bronx, Kings, New York, Queens, and Richmond Counties

Job Title	Definition
Service Group 1. STANDARD TITLES	
Business Analyst	- Manages small to medium-scale business analysis work or projects with distinct deliverables to a solution
Project Manager	- Overseeing projects comprised of multiple deliverables - Delegating and coordinating of tasks - Project status, meetings, scope changes, issues
Tester	- Develops and maintains user and technical documentation and project process documentation for Application Teams - Understand the user's view of applications and /or technology and are able to put procedures in a logical sequence
Programmer	- Analysis, design, coding, component and assembly testing of all application code owned by the Application Team - Maintenance (including production support), enhancement and development work - Write application software, data analysis, data access, data structures, data manipulation, databases, design, programming, testing and implementation, technical and user documentation, software conversions
Technical Architect	- Technical expert centered around a technology, technologies or a portfolio of applications - Designing and implementing Information Technology solutions
Technical Writer	- Translates technical information into clear, readable documents to be used by technical and non-technical personnel - Develop and/or maintain the following types of documentation: system documentation; user manuals; installation guides; computer operations and program maintenance manuals; plans for training, testing, quality assurance, and contingency operations; and backup, recovery and restart procedures; technical writing for proposals, presentations, standard operating procedures (SOP), policies and procedures as well as reports - Edits functional descriptions, system specifications, user manuals, special reports, or any other customer deliverables and documents
Specialist	- Experience in the usage and support of a collection of development platforms, technical architectures, or business applications and products that run on those platforms, beyond that of a Programmer - The Authorized User may seek Specialists in the following areas (list is not exhaustive): • Backup and Recovery • Security
System Administrator	- Server back up and security - Performance tuning and capacity planning - Operations and troubleshooting - Understanding of network and distributed computing concepts
Database Administrator	- Responsible for data analysis and database management - Maintenance, enhancement, designing of data dictionaries, physical and logical database models, and performance tuning
Service Group 2. SOFTWARE/HARDWARE SPECIFIC TITLES	
Microsoft Specialty	
Technician V	Eight or more years demonstrated performance in related technology. Experienced in topics such as complex networks, messaging, cross-platform integration and large-scale, complex systems design and implementation. This individual will have been trained in one or more of the following areas: Microsoft Solutions Framework, product futures, and relevant Certified Training associated with Microsoft's products. • Participate in strategic planning sessions with Technical Project Manager and customer staff • Participate in delivering technical presentations to customer staff • Serve as Technical Project Manager • Analyze technical requirements and develop effective technical solutions • Lead role in conceiving architectural designs • Lead role in current environment assessment
Principal Consultant	Five or more years demonstrated performance in related technology. Experienced in topics such as complex networks, messaging, cross-platform integration and large-scale, complex systems and applications design and implementation. This individual will have been formally trained by Microsoft in one or more of the following areas: Microsoft Solutions Framework, product futures, and relevant Certified Training in infrastructure and/or development areas associated with Microsoft's products. • Contribute to review of customer tasks and development of MCS strategic approaches • Direct the activities of other Senior Consultants, Consultants and Associate Consultants • Lead role in delivering technical presentations to customer • Meet/interview customer to capture specific requirements in concise format • Participate in delivering technical presentations to customer staff • Participate in design of information systems • Participate in project staffing decisions • Participate in strategic planning sessions with MCS Technical Project Manager and customer staff • Perform Rapid Economic Justification (REJ) and Total Cost of Ownership (TCO) Analysis • Provide key personal link to Microsoft technology groups • Provide quality assurance review of engagement process and deliverables
IBM Specialty	
Technical Specialist 3	Assists with technical support of existing solutions and/or products. May install new products and assist in the migration to new releases or versions of products and provide related education. Area of expertise is usually related to a particular technology platform. In addition, a Technical Specialist may have programming skills and would be part of a project team. Minimum of 12 months experience.
Technical Specialist 4	Assists with technical support of existing solutions and/or products. May install new products and assist in the migration to new releases or versions of products and provide related education. Area of expertise is usually related to a particular technology platform. In addition, a Technical Specialist may have programming skills and would be part of a project team. Minimum of 24 months experience.
Technical Specialist 5	Assists with technical support of existing solutions and/or products. May install new products and assist in the migration to new releases or versions of products and provide related education. Area of expertise is usually related to a particular technology platform. In addition, a Technical Specialist may have programming skills and would be part of a project team. Minimum of 36 months experience.
Software Architect #1	A software architect is an individual that works closely with the IBM Software Group to plan, design, implement and integrate IBM software solutions. Possess in-depth skill in one or multiple IBM software products.
Software Architect #2	A software architect is an individual that works closely with the IBM Software Group to plan, design, implement and integrate IBM software solutions. Possess in-depth skill in multiple IBM software products. Minimum of 36 months experience.

Job Title	Definition
Unisys Specialty	
Architectural Specialist I	Architectural Specialist services provide expert knowledge on Unisys and/or third party architectures, platforms, applications, databases, networks, etc. An Architectural Specialist guides and advises the client in identification, administration, and implementation of specific solutions. Develops, administers, implements and supports specific technical or business application solutions from design specifications; may perform software upgrades and\or conversions, program coding, testing and/or debugging. Typically possess greater than 36 months experience.
Architectural Specialist II	Architectural Specialist services provide expert knowledge on Unisys and/or third party architectures, platforms, applications, databases, networks, etc. An Architectural Specialist guides and advises the client in identification, administration, and implementation of specific solutions. Develops, administers, implements and supports specific technical or business application solutions from design specifications; may perform software upgrades and/or conversions, program coding, testing and/or debugging. Typically possess greater than 18 months of experience.
Sr. Production Control Operator	Successful experience in the production control of large scale computer systems, including job scheduling, job fixing and automated job control languages. Typically possess a minimum of 24 months of experience.
Production Control Operator	Successful experience in the production control of large scale computer systems, including job scheduling, job fixing and automated job control languages. Typically possess a minimum of 12 months of experience.
Sr. Equipment Operator	Successful experience in the operation of automated equipment such as mail insertion machinery; tape libraries, large scale printers and other such automated equipment. Typically possess a minimum of 18 months of experience.
Equipment Operator	Successful experience in the operation of automated equipment such as mail insertion machinery; tape libraries, large scale printers and other such automated equipment. Typically possess a minimum of 12 months of experience.
Service Delivery Specialist I	Responsible for on-site installing, maintaining, repairing and supporting Unisys and multi-vendor systems that include hardware, software, and networking products as well as operating systems. Typically possess a minimum of 36 months of experience.
Service Delivery Specialist II	Responsible for on-site installing, maintaining, repairing and supporting Unisys and multi-vendor systems that include hardware and software and does basic networking server installations. Typically possess a minimum of 24 months of experience.

Level	Typical Experience	Preferred Skills
Junior	12 - 36 Months	
Mid Level	36 - 60 Months	Candidate is able to work without assistance
Senior	60 - 84 Months	Candidate is able to work without assistance and can provide leadership for others; may have advanced education
Expert	84+ Months	Candidate is able to provide leadership of large teams and/or extensive industry experience and is considered at the top of his/her field

Normal	High
Technologies and skills of a low to normal technical level, and/or there is a high supply and low demand for resources with the technology or skill. Sample technologies listed below.	Technologies or skills of a high technical level, and/or the technology is new, and/or there is a low supply and a high demand for resources with the technology or skill. Sample technologies listed below.
.NET, ASP	Adobe Forms Developer
802.1p	AIX
802.1x	Apache
Access	Apple Mac OS X Server
Accessibility Standards (MacroMedia)	ARC GIS
Active Directory Administration for large enterprise	Aruba Certified Mobility Expert (ACMX)
ActiveX	Assembler
AD authentication using Radius, VP, secure remote access, 2-factor	Audit and event logging
Administering AD delegated permissions, object types, GPO, local, universal and global	Backup capacity planning
Administering W2K3 DC, GCs, schema, trusts, replication	Backup/recovery capacity planning
Administering Windows 2008 DC, GCs, schema, trusts, replication	Backup/recovery infrastructure design
ADO .Net end to end solution development	Business Object Enterprise Architect
Adobe Acrobat	Capacity Planning
Advanced SQL	CCDA (Cisco Certified Design Associate)
AJAX	CCIE (Cisco Certified Internetwork Expert)
Anti-malware report scripting	CCSE - Check Point Certified Security Expert
Anti-Virus (AV)	CCSE Plus - Check Point Certified Security Expert Plus
Apple Mac OS X Client	Certified Information Systems Security Professional (CISSP)
Application Access and Authentication	CIM
ASP.Net	Cisco IOS
AWK Scripting	Cisco VSS
Basic SQL	CITRIX Configuration, Administration
BGP	Data Warehouse
BGP	Design, planning & implementation for large-scale Active Directory
BIND (Berkeley Internet Name Domain)	DRUPAL
Brocade SAN Switch installation, configuration, administration, EFCM	EMC – Avamar administration, configuration
Business Objects	Endpoint Security Design & Implementation
C	Esri ArcGIS Desktop Developer
C# .Net end to end solution development	Esri ArcGIS Desktop Specialist
C++	Esri ArcGIS Server Oracle Database Architect
CA Clarity	Esri ArcGIS Server Web Application Developer - Flex API
CA Endevor	Esri ArcGIS Server Web Application Developer - Javascript API
CA SiteMinder	Esri ArcGIS Server Web Application Developer - Silverlight API
CA\Concord Network Health	Exchange
CA1	Finjan Appliances
CAD	GPS/Field Data Collection Specialist
CCDP (Cisco Certified Design Professional)	Hitachi Data Systems Diligent ProtecTier
CCIP (Cisco Certified Internetwork Professional)	HPUX
CCMA - Check Point Certified Master Architect	Hyperion
CCMSE -Check Point Certified Managed Security Expert	IBM AIC Network Installation Manager
CCMSE Plus VSX - Check Point Certified Managed Security Expert Plus VSX	IBM AIX Cluster Manager (clstrmgr)
CCNA (Cisco Certified Network Associate)	IBM AIX Cluster Resource Manager
CCNA Security (Involves Implementing Cisco IOS Network Security)	IBM AIX Cluster Systems Management (CSM)
CCNA Voice (Involves Implementing Cisco IOS Unified Communications)	IBM AIX Extreme Cluster Administration Toolkit version 2
CCNA Wireless (Implementing Cisco Unified Wireless Networking Essentials)	IBM AIX File system management tasks
CCNP (Cisco Certified Network Professional)	IBM AIX Geographic Logical Volume Manager (GLVM)
CCSA - Check Point Certified Security Administrator	IBM AIX High Availability Cluster Multi-Processing (HACMP)
CCSP (Cisco Certified Security Professional)	IBM AIX HMC - Hardware Management Console
CCSPA -Check Point Certified Security Principles Associate	IBM AIX Integrated Virtualization Manager (IVM)
CCVP (Cisco Certified Voice Professional)	IBM AIX Object Data Manager (ODM)
Check Point Appliances	IBM AIX Partition Mobility
Check Point Firewall and VPN	IBM AIX Performance and System Tuning
Check Point Intrusion Detection & Prevention	IBM AIX PowerVM Enterprise Edition
Check Point Remote Access	IBM AIX Resource Monitoring and Control (RMC)
Check Point Security Virtualization	IBM AIX Security Expert (aixpert)
Check Point Unified Threat Management	IBM AIX Software Vital Product Data (SWVPD) database
CICS	IBM AIX System Management Interface Tool (SMIT)
CIFS	IBM AIX System Planning Tool (SPT)
Cisco ACS	IBM AIX System Resource Controller (SRC)
Cisco Firewalls	IBM AIX Systems Director
Cisco Routers and Switches	IBM AIX The Logical Volume Manager (LVM)
Cisco Tidal	IBM AIX The Virtual Memory Manager (VMM)
Cisco VPN	IBM AIX Web-based System Manager
Citrix Support	IBM AIX Workload Manager (WLM)
CLI Scripting	IBM AIX Workload Partitions Manager
Client Certificates/SSL/TLS Architecture	IBM SAN management utilities
Client VPN	IBM SVC (SAN volume controller)
Clientless VPN	IBM tape library administration
COBOL	IHS
ColdFusion	Interwoven
Com/COM +/- DCOM	Interwoven Teamsite
CompTIA A+ Certification	Interwoven Technical Design & Implementation
CompTIA Network+ Certification	Intrusion Detection (IDS)/Intrusion Prevention (IPS) systems
CompTIA Security+ Certification	IPV6
Concord Network Health	iSCSI
CPCS - Connectra - Check Point Certified Specialist - Connectra	iSCSI, NFS, CIFS
CPCS - Integrity - Check Point Certified Specialist - Integrity	JAWS Screen Reader Tester

Normal	High
CPCS - InterSpect - Check Point Certified Specialist - InterSpect	JBOSS
CPCS - IPS-1 - Check Point Certified Specialist - IPS-1	JNCIA-AC (Juniper Networks Certified Internet Associate)
CPCS - Pointsec - Check Point Certified Specialist - Pointsec	JNCIA-DX (Juniper Networks Certified Internet Associate)
CPCS - Pointsec PC - Check Point Certified Specialist - Pointsec PC	JNCIA-ER (Juniper Networks Certified Internet Associate)
Crystal Reports	JNCIA-EX (Juniper Networks Certified Internet Associate)
Crystal Reports Designer	JNCIA-FWV (Juniper Networks Certified Internet Associate)
CSS	JNCIA-IDP (Juniper Networks Certified Internet Associate)
CSSA - Certified SonicWALL Security Administrator	JNCIA-M (Juniper Networks Certified Internet Associate)
Data Confidentiality	JNCIA-SSL (Juniper Networks Certified Internet Associate)
Data Integrity and Authentication	JNCIE-ER (Juniper Networks Certified Internet Expert)
Data Modeling	JNCIE-M (Juniper Networks Certified Internet Expert)
Data replication, migration techniques	JNCIP-M (Juniper Networks Certified Internet Professional)
Database - Mainframe	JNCIS-ER (Juniper Networks Certified Internet Specialist)
database concepts and SQL commands	JNCIS-ES (Juniper Networks Certified Internet Specialist)
DB2	JNCIS-FWV (Juniper Networks Certified Internet Specialist)
dBase	JNCIS-M (Juniper Networks Certified Internet Specialist)
DC/DB2	JNCIS-SSL (Juniper Networks Certified Internet Specialist)
DreamWeaver	Juniper IOS
EMC – ECC (EMC Control Center)	Juniper Network Security Manager
EMC Centera, Celerra disk configuration and administration	Juniper Networks Certified Internet Associate (JNCIA-FWV)
Encryption	Juniper SSL VPN Devices
Encryption methods (SSL, PKI)	LDAP
Endpoint patch management	MapInfo products
Etherchannel	Master CSSA - Master Certified SonicWALL Security Administrator
Experience automating tasks to schedule tasks, auditing, monitoring and logon/logoff.	McAfee Network Security Manager Administration
Experience with Data Center N-Tier network designs and server communication	McAfee Network Security Platform
Experience with DFS	Message Broker
Experience with network routing, TCP/IP, subnets, network security and AD related ports and protocols	Microsoft Silverlight Developer
Experience with SIDHistory using ADMT or an equivalent migration tool	Microsoft SQL Reporting Services
Extreme Networks Management Tools	Microsoft SQL Server 2008 - Expert Level
Extreme Networks Operating Systems	Microsoft System Center Configuration Manager 2007
Extreme Networks Security Products	Microsoft TMG D & I
Extreme Networks Switching Products	Microsoft Vista Certification
Extreme Networks Wireless Products	MQ
Financial Documentation	MS Clustering
Finjan Administration	MS Hyper-V
Firewalls	MS SQL Development /Architecture
Forensic Analysis	MSI Editing
Foundstone	Multicast - IGMP
Frontpage	NAC - 802.1x
FTP	NCDE - CallPilot Rls. 5.0 Unified Messaging (Nortel)
Google Search Appliance Architect	NCDE - Communication Server 1000 Rls. 5.0 Applications Engineering (Nortel)
Graphics Design (Firefox, Photoshop, Paint Shop Pro	NCDE - Ethernet Switching (Nortel)
GRE	NCDE - Nortel Unified Communications - Converged Office for CS 1000 Rls. 5.x Planning & Engineering
Hardware Installation/Implementation	NetScaler
Host server security and configurations	Network and Perimeter security
HP Asset Center	NFS
HP Openview	NIS
HP PPM	Nortel Intrusion Prevention
HP Quality Center Specialist	Nortel Network Access Control
HP Service Manager	NYS Accessibility Tester
HP Switches	Oracle
HTML	Oracle Business Intelligence Suite Enterprise Edition Plus (OBIEE)
HTTP & HTTPS	Oracle Database Administration
HVAC, Environmental Controls	Oracle Integrator
IBM – TPC (TotalStorage Productivity Center)	Oracle Middleware
IBM 4000, 8000, 800 disk series –configuration, administration and utilities	Oracle PeopleSoft
IBM Rational	Oracle Portal
IBM TSM – backup and recovery installation, configuration, administration	Oracle Real Application Cluster (RAC) configuration, administration
IGMP	Oracle Spatial Database Architect
IIS	Patch Management for Win, AIX, Solaris, HPUX, Linux
Imaging Systems (including Onbase, Docuware, FileNet)	PeopleTools Upgrades and Patches
Incident Response Analyst	Performance Monitoring AIX
Informix	Performance Monitoring Windows Server
Integrating authentication methods such as Linus, Unix with Microsoft Windows Active Directory using LDAPS, Kerberos	Performance Analysis
Intermediate SQL Query Development	Performance Monitoring HPUX
Internet Access Troubleshooting	Performance Monitoring LINUX
Internet Proxy Administration	Performance Monitoring Solaris
Internet Proxy Design and Implementation	Ping Federate
IP Address Management	Pointsec Administration
IPS	Product Specialist Business Intelligence and Reporting Tools (BIRT) implementation and report writing.
ISPF/PDF	Product Specialist IBM Tivoli Application Dependency Discovery Manager
ITIL	Product Specialist IBM Tivoli Composite Application Manager for Response Time Tracking (RTT)

Normal	High
Java	Product Specialist IBM Tivoli Composite Application Manager for Service Oriented Architecture (SOA)
Java Script	Product Specialist IBM Tivoli Composite Application Manager for Websphere Application Server (WAS)
Java Server Pages	Product Specialist IBM Tivoli Configuration Manager
JCL Scripting	Product Specialist IBM Tivoli Enterprise Console version 3.8 or higher
JES2 Commands	Product Specialist IBM Tivoli Monitoring version 5.x
Juniper Firewall/IPSec VPN Devices	Product Specialist IBM Tivoli Monitoring version 6.x
Juniper Network Management System	Product Specialist IBM Tivoli NetCool (Network Management)
Juniper Networks Intrusion Prevention	Product Specialist IBM Tivoli Netcool/Impact
Juniper Screen OS	Product Specialist IBM Tivoli Netcool/Omnibus
JUNOS and JUNOSE	Product Specialist IBM Tivoli Netview
LAN-Level Network Troubleshooting	Product Specialist IBM Tivoli Omegamon XE for Messaging
Linux Administration	Product Specialist IBM Tivoli Provisioning Manager for Software
Linux Administration	Product Specialist: IBM Tivoli Framework version 4.1 or higher
Linux Scripting	Product Specialist: Precise I2
ListServe	Product Specialist: Precise I3
Load Balancing	Proxy Services including ISA
Load Runner	QOS - 802.1p
Lotus Notes or Groupwise to Exchange migration experience	Redhat Linux
Master CSSA - Master Certified SonicWALL Security Administrator	RSA
McAfee Epolicy Orchestrator Administration	RSA SecurID
McAfee Epolicy Orchestrator Administration	SAMBA
McAfee Epolicy Orchestrator Design & Implementation	SAN Administration
Microsoft Access	sendmail
Microsoft Certified IT Professional or equivalent	Server Imaging
Microsoft Certified Technology Specialist or equivalent (Any Area)	SharePoint Administration
Microsoft DHCP	SharePoint Design & Implementation
Microsoft DHCP	Siebel Tools
Microsoft DNS	Solaris
Microsoft DNS	SPSS
Microsoft Excel	Storage capacity planning
Microsoft Exchange messaging systems	Subversion Source Control Architect
Microsoft Office & Project	Sun Identity Manager
Microsoft Outlook Client	Support and Maintenance of 10,000 and Above Network Endpoints
Microsoft PowerPoint	Sygate Administration
Microsoft Project	Tuxego
Microsoft Server technologies	Veritas
Microsoft Sonic Wall Content Security	VMWare
Microsoft Sonic Wall SSL-VPN Secure	VMWare ESX and ESXi
Microsoft SQL Server 2008 or equivalent	VOIP
Microsoft TMG Administration	VTL (Virtual Tape Library) configuration, administration
Microsoft Visio	Watchguard Firebox® X Core e-Series
Microsoft WINS	Watchguard Firebox® X Edge e-Series
Microsoft Word	Watchguard Firebox® X Peak e-Series
MPLS	Watchguard WatchGuard SSL 500 & SSL 999
MS .Net Framework	Watchguard XTM 10 Series
MS Exchange (2007, 2003)	WebFocus
MS Project	WebLogic/Oracle Application Server
MS Project Server	Websphere
MS SQL Server - stored procedure, function, package, trigger and view development	WebSphere Java Development
MS SQL Server Database Administration	WebSphere Technical Design & Implementation
Multi Link Trunking - LACP	Window-Eyes Screen Reader Tester
MySQL	Windows Servers
NCDS - BCM50 RIs. 3.0 & BCM200/400 RIs. 4.0 Sales Engineering (Nortel)	Wireless computing
NCDS - BCM50 RIs. 3.0, BCM200/400 RIs. 4.0 & BCM450 RIs. 1.0 Sales Engineering (Nortel)	WMI Scripting
NCDS - CallPilot RIs. 5.0 Engineering (Nortel)	Xen (Citrix)
NCDS - Carrier VoIP Solution Engineering & Performance (Nortel)	XEN App (Citrix)
NCDS - Communication Server 1000 RIs. 5.0 Networking Design (Nortel)	XEN Server (Citrix)
NCDS - Contact Center RIs. 6.0 (Nortel)	
NCDS - Nortel Converged Campus ERS Solution	
NCDS - Nortel VPN Router RIs. 7.0 Solutions	
NCDS - Nortel WLAN 2300 RIs. 6.0 Planning & Engineering	
NCSE - CallPilot RIs. 5.0 Networking, Upgrades, & Troubleshooting	
NCSE - Communication Server 1000 RIs. 5.0 - BCM RIs. 4.0 Multi-site Integration (Nortel)	
NCSE - Communication Server 1000 RIs. 5.0 Installation & Troubleshooting (Nortel)	
NCSE - Ethernet Switching (Nortel)	
NCSE - Nortel Converged Campus ERS RIs. 4.x/5.x Advanced Configuration & Maintenance	
NCSE - Nortel Unified Communications - Converged Office for CS 1000 RIs. 5.x Configuration	
NCSE - Nortel VPN Router RIs. 7.0 Advanced Configuration & Management	
NCSS - BCM50 RIs. 3.0 & BCM200/400 RIs. 4.0 Installation, Configuration & Maintenance (Nortel)	

Normal	High
NCSS - BCM50 Rls. 3.0 Installation & Initial Configuration (Nortel)	
NCSS - BCM50 Rls. 3.0, BCM200/400 Rls. 4.0 & BCM450 Rls. 1.0 Installation, Configuration & Maintenance (Nortel)	
NCSS - CallPilot Rls. 5.0 Installation and Configuration (Nortel)	
NCSS - CallPilot Rls. 5.0 System Administration (Nortel)	
NCSS - Carrier Ethernet Operations (Nortel)	
NCSS - Carrier VoIP Border Control Point Overview, Configuration and Datafill (Nortel)	
NCSS - Carrier VoIP Communication Server 2000 Compact (Nortel)	
NCSS - Carrier VoIP Communication Server 2000 XA-Core (Nortel)	
NCSS - Carrier VoIP Integrated Element Management System (IEMS) Operations	
NCSS - Carrier VoIP Media Gateway 15000 Operations, Maintenance & Configuration (Nortel)	
NCSS - Communication Server 1000 Rls. 5.0 Database Administrator (Nortel)	
NCSS - Communication Server 1000 Rls. 5.0 Installation & Commissioning (Nortel)	
NCSS - Communication Server 2100 SE08/SE09 (Nortel)	
NCSS - Contact Center Manager Rls. 6.0 Installation & Maintenance (Nortel)	
NCSS - Contact Center Manager Rls. 6.0 Technical Support (Nortel)	
NCSS - Contact Center Multimedia Rls. 6.0 (Nortel)	
NCSS - Contact Center Rls. 6.0 Application Developer (Nortel)	
NCSS - Enterprise Network Management System Rls. 10.4 (Nortel)	
NCSS - MCS 5100 Rls. 4.0 Commissioning & Administration (Nortel)	
NCSS - Meridian SL-100 Maintenance (Nortel)	
NCSS - MPS 500 Rls. 3.0 Application Developer (Nortel)	
NCSS - MPS 500 Rls. 3.0 Operations & Maintenance (Nortel)	
NCSS - MPS 500 Rls. 3.0 Technical Support (Nortel)	
NCSS - Multiservice Switch 7000/15000/20000 Operations and Maintenance (Nortel)	
NCSS - Nortel Application Switch Rls. 24.x Configuration & Administration	
NCSS - Nortel Communication Control Toolkit Rls. 6.0	
NCSS - Nortel Converged Campus ERS Installation & Configuration	
NCSS - Nortel Secure Router Rls. 10.1 Configuration & Management	
NCSS - Nortel Software Communication System 500 Rls. 2.0 Configuration	
NCSS - Nortel VPN Gateway Rls. 7.0 Configuration & Management	
NCSS - Nortel VPN Router Rls. 7.0 Configuration & Management	
NCSS - Nortel Wireless Mesh Network Rls. 3.0 Implementation & Management	
NCSS - Nortel WLAN 2300 Rls. 6.0 Implementation & Management	
NCSS - Optical Metro 3500 Operations and Maintenance (Nortel)	
NCSS - Optical Multiservice Edge 6500 Operations and Maintenance (Nortel)	
NCSS - Symposium Express Call Center (Nortel)	
NCSS - Symposium Express Call Center Installation and Maintenance (Nortel)	
NCTE - Converged IP Networks (Nortel)	
NCTE - Nortel Advanced Data Networking Technology	
NCTS - Converged IP Telephony Solutions (Nortel)	
NCTS - Nortel Data Networking Technology	
NCTS - Nortel Unified Communications Solutions: Business & Technology Fundamentals	
NCTS - Real-Time Networking (Nortel)	
Netscout Performance Manager	
Netscout Sniffer & InfiniStream	
Netview	
Netview AOC	
Network General Sniffer Enterprise Visualizer	
Network General Sniffer InfiniStream	
Network load balancing/distribution methods	
Networking skills (IP addressing and protocols)	
Nortel Application Switching & Optimization	
Nortel Ethernet & Metro Routing Switches	
Nortel Firewalls	
Nortel Multiservice Switches	
Nortel Network Management	
Nortel Optical Ethernet	
Nortel Optical Switches	
Nortel Secure Routers and Switches	
Nortel Site Manager Operation & Administration	
Nortel Switches	
Nortel VPN	
NSRP	
Omegamon/Omegaview	
Open Distributed Transaction Integration, Data Transformation Services	
Oracle application express	
Oracle Data Integrator	
Oracle Forms and Reports	
Oracle Warehouse Builder	
OSPF	
PAGP	
Paradox	
Performance Analysis	

Normal	High
PERL	
PHP	
PIM	
Planview	
POE	
POE	
Pointsec Admin	
PowerBuilder	
PowerShell	
Primavera	
Print Server - IPM	
Print Server - Qdirect	
Product Specialist: Microsoft Operations Manager	
Product Specialist: Microsoft System Center Operations Manager	
Protocol Analysis	
Proxy Report Scripting	
QOS	
Quick Test Professional	
Radius	
Reporting tools	
RIP	
RIP	
Routers and Switches	
SCCM Administration	
Script writing (perl)	
SDSF	
Security Product Evaluator	
SED Scripting	
Servergraph – installation, configuration, reporting	
Servlets	
SharePoint Designer	
Shell Scripting	
Site Assessment/Survey Activity	
SNMP	
SNMP	
SOA (Service Oriented Architecture)	
SOAP	
Software Integrity	
Software Package Development	
Sonic Wall Content Security Management	
Sonic Wall E-Class Solutions	
Sonic Wall Endpoint Security	
Sonic Wall SSL-VPN Secure Remote Access	
Sonic Wall UTM / Firewall / VPN	
Spanning Tree	
SQL	
SQL Query Development	
SQL Server	
SSH	
SSL VPN	
SSLVPN	
Sun Directory Proxy Server	
Sun Directory Server	
Support and Maintenance of 1 - 5,000 Network Endpoints	
Support and Maintenance of 5,001 - 10,000 Network Endpoints	
SurfControl Administration	
SurfControl Report Scripting	
SurveyGizmo	
Sybase	
Sygate Admin	
Syslog	
Sysprep	
System Center (SMS)	
System/Middleware security	
TCP/IP	
Team Developer	
Technical Documentation	
Technical Writing	
Telnet	
Terminal Networking	
TFTP	
Trusted credentials	
TSO	
TWS	
Unisys - ECL/WFL	
Unix Administration	
Unix command line	
Unix Scripting	
VB/batch scripting	
VB6	
Version Control	
Video Conferencing	

Normal	High
Viewpoint	
Virtual Private Network (VPN)	
VISIO, CADD	
Visual Basic	
Visual Basic Scripting	
Visual FoxPro	
Visual SourceSafe	
Visual Studio .Net	
VLAN	
Vlan Tagging - 802.1q	
VMware Network Support	
VOIP	
VPN Devices	
VRRP	
WAN-Level Network Troubleshooting	
Web development tools (Dream Weaver, Frontpage)	
Web Services	
Websense Administration	
Websense Report Scripting	
Windows Scripting	
Windows Services end to end solution development	
Windows Vista/7 Imaging and Advanced Administration	
Windows XP Imaging and Advanced Administration	
WLAN - 802.11a/b/g	
WLAN - 802.11a/b/g/n	
WLAN - 802.11n	
XML	
XML website development	
XSLT website development	
X-Windows	
z/OS Console Commands	