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OVERVIEW
INFORMATION TECHNOLOGY
INDUSTRY

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Tech Collective-

• Technology Industry Association of Rhode Island
  Bioscience & Information Technology

• Core Functions- Community Development
                   Workforce Development

• Unite industry, education, and government

• Events and Forums

• Incumbent and Unemployed/Transitioning Workers

• Youth Activities

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AGENDA

- Welcome and Introductions

- Definition of Information Technology- Main and Specialty Areas

- RI's IT Industry- Overview of Labor Market and Career Info

- Skill Needs and Requirements

- Local Companies/Employers

- Education, Training, Certifications

- Continuous Learning and Networking

- Resources

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DEFINITION OF INFORMATION TECHNOLOGY:

Information Technology (IT) is the field of work dealing with computers and technology. The primary goal of IT is to provide fast, easy, and efficient means of internal and external communication through numerous technology products.

*From Tech America and Education Development Center, Inc.- "IT Career Cluster Brochure" www.tech-collective.org

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Information Support and Services:
Implementation, support, and management of computer systems and software

Interactive Media:
Design multimedia and website products and services

Network Systems:
Design, installation, and management of network systems, network analysis, planning and implementation

Programming and Software Development:
Knowledge of computer operating systems and programming languages to design, deploy, and maintain computer systems and software.

Programming / Software Engineering

Network Systems

Information Support & Services

Interactive Media

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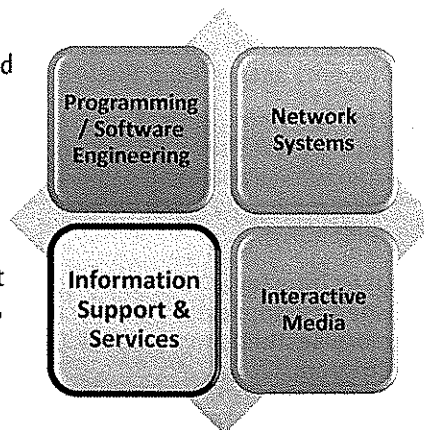
tech collective   SPECIALTY AREAS

- **Data Storage**- Working with computer components and devices that store data/information. Data storage devices vary from flash drives to large storage centers.

- **Hardware and Software Development**- Creating hardware (physical components) or software (programs or information in the computer) that run the system.

- **Managed Services**- Managing a network to ensure it is running at optimum capacity and specified conditions. Networks are monitored for disruption, change, and/or compliance to laws. Detected incidents are usually corrected by the managed service provider.

- **Network Integration**- Connecting several different technologies and or processes together into one functioning system. Allows technologies to interact together, which reduces repetition and increases productivity and ease of use.

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SPECIALTY AREAS

- **Security**- Utilizing processes/technologies (i.e. passwords and authentication certificates) to protect designated data and systems. Prevents access from unauthorized users and harmful viruses.

- **Unified Communications**- Interconnecting all forms of communication into one platform. All are united into a single more efficient communication environment. (i.e. land and mobile telephone, voicemail, email, fax, video, web conferencing, and VoIP (internet telephony).

- **User Interface**- Working with what a user sees on a monitor screen when an application or web page is open. It is usually easier to use and more aesthetic than the backside programming and coding of a program.

- **Wireless Internet (Wi-Fi)**- Connecting to the internet without a cable. Wi-Fi provides easy, almost anywhere/anytime internet access and has the ability to host several devices simultaneously.

*From Tech America and Education Development Center, Inc.- "IT Career Cluster Brochure

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RI'S INFORMATION TECHNOLOGY INDUSTRY

- One of the fastest growing industries nationally and in RI

- Computer and math occupations are projected to be the highest growth occupations in RI at 19.8% by 2018

- RI's IT industry employees over 16,000 people

- 98% of all RI businesses hire/employ IT workers

- Average IT wage in RI is significantly higher than private sector
    - RI IT Average Wage (2011)- $ 79,736*
    - RI Private Sector Average Wage (2011)- $ 43,528*

*Data from RIDLT LMI 2011

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CAREERS IN INFORMATION TECHNOLOGY

• Foundation Skills- Math, Science, Critical thinking and Analysis, Basic Computer Skills, and Oral and Written Communication

• Education Levels-
  • Some jobs/careers with High School Diploma or GED
  • Some jobs/careers with short term training and/or On-the-Job training
  • Most- Associate's, Bachelor's, Advanced Degrees (Master's, PhD)
  • The more education/training, the greater the potential for advancement and high wages

• Average Entry Level Wages- Vary depending upon the occupation (RI Labor Market Data- 2011)
  • Computer Support Specialist- $ 18.79/Hour...... $ 39,083/Year
  • Computer Systems Analyst- $ 32.12/Hour...... $ 66,810/Year
  • Computer & Information Systems Manager-
                                  $ 46.98/Hour...... $ 97,718/Year

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RI IT EMPLOYERS- CRITICAL SKILLS

SOFT SKILLS
Communication (written, verbal, listening), teamwork, customer service, critical thinking, problem solving, personal presentation, eagerness to learn

TECHNICAL SKILLS
Security, networking, help desk/desktop support, database management, web development/services, convergence (voice), system analyst, application development

WORK READINESS SKILLS
Personal appearance, positive attitude, professionalism, time management, self organization, acceptance of guidance and direction

BUSINESS SKILLS
Project management, business analysis, leadership

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CAREER PATHWAY

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INFORMATION SUPPORT AND SERVICES:
CAREERS...JOBS....

Careers in these type of jobs involve what is called IT *deployment-*

- Providing technical assistance to users
- Hands on problem solving of hardware and software application issues
- Managing information systems

Why this is a high-growth job:
- Every business small to large uses IT to run their business

Information Support & Services

- 90% of Americans own a computerized item- computer, tablet, or smart phone

- 79% of US households have a computer

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CAREER PATHWAY

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INFORMATION SUPPORT AND SERVICES:

Jobs:
- Help Desk Specialist
- IT Call Center Representative
- Customer Support Specialist

- Database Administrator
- Technical Support Engineer
- Applications Manager/Integrator

Information Support & Services

Sampling of Credentials:
- Associates/Bachelor Degree in Information Technology or Computer Science
- **CompTIA Certifications**
- **Microsoft Certifications**
- **Cisco Certifications**

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CAREER PATHWAY

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Information Support & Services Jobs

THE *FACTS:*

National Level Stats:	
2011 Average Pay	$22.91 per hour
Entry-Level Education	Some College, GED/HSD, **Certifications**
Expected Growth:	18% 2010-2020
Number of Jobs in US	607,100
Rhode Island Stats:	
2011 Average Pay	$22.98/hour or $18.79 to start
Expected Growth	+591 job openings 2010-2020
Number of Jobs in RI	2,567

Check it Out:
www.bls.gov/ooh/computer -and-information-technology/computer-support-specialists

Or
www.onetcodeconnector.org/ccreport/15-1151.00

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CAREER PATHWAY
Computer Support Specialist

← Career Direction

← Entry Level

← Competencies
Skills
Aptitudes
Education
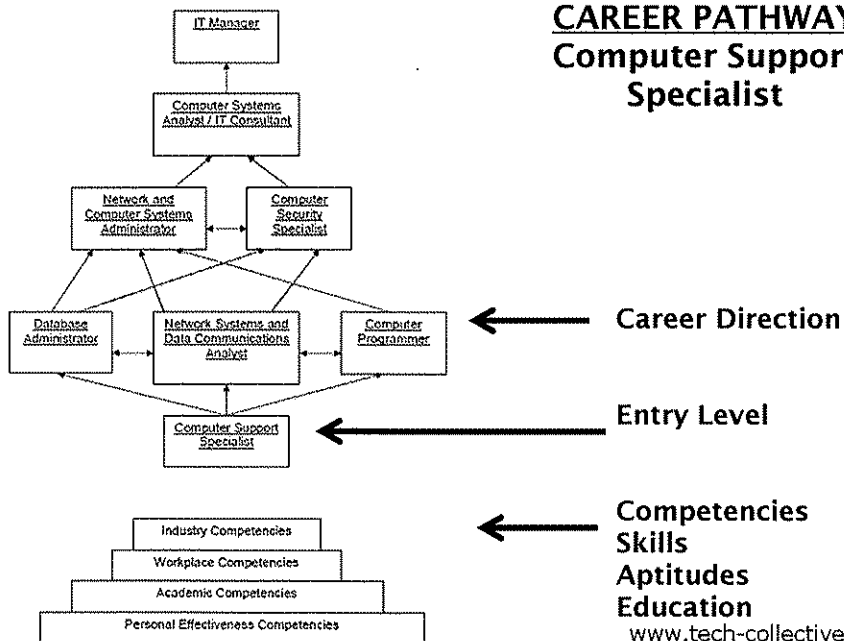
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Types of Companies that Employ Computer Support Specialists and Other IT Jobs:

Service Delivery Companies:

- Are IT companies that develop and provide IT services to their customers

- Examples in Rhode Island:
    - GTECH
    - Atrion Networking
    - Cox Communications
    - Custom Computer Specialists
    - PC Troubleshooters
    - Net Cenergy
    - Verizon

Business Users:

- Are companies that do all kinds of other business and utilize IT to run their business

- They typically will have an IT department with in their company to support their own employees

- Examples in Rhode Island:
    - CVS
    - FM Global
    - Bank of America

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tech collective   **EMPLOYERS**

Jobs for Computer Support Specialist @ These Employers

Sample Job Titles:

- Help Desk Technician
- IT Call Center Technician
- Technical Support Rep
- Network Technician
- Support Specialist

Staffing Firms:

A staffing firm assist both employers and job seekers in filling a position and being hired. They can help with temporary work or permanent jobs.

Many large IT business user employers utilize staffing firms to fill jobs for their computer support specialists

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RHODE ISLAND EMPLOYERS

Service Delivery Companies:

- **Internet Telecom/Voip/Telephony**
  - Cox Communications
  - Verizon Communications
  - Towerstream
  - One Communications
  - Carousel Industries
- **Web Developers**
  - Computer Associates
  - Brave River Solutions
  - Envision Technology Advisors
- **IT Services**
  - Atrion Networking
  - CBE Technologies
  - Lighthouse Computers
  - Custom Computer Specialists
  - NetCenergy
  - PC Troubleshooters

Business User Companies:
-largest employers

- CVS Caremark
- Lifespan
- Citizens Bank
- Bank of America
- Fidelity Investments
- Amica Insurance
- Amgen
- FM Global
- Hasbro
- APC

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EDUCATION AND TRAINING OPTIONS

- Degree Programs-
  - 2-4 year degree programs- could be longer
  - Offered by colleges and universities

- Short Term Training Programs-
  - Intensive training which can take place from 1 day to several months. Some can take up to 1-2 years.
  - Learn skills for a particular occupation in a shorter amount of time
  - Customized to changing needs of industry and in demand jobs
  - Offered by colleges, universities, and private training providers
  - Certificate Programs- Certificate given upon successful completion of the training

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EDUCATION AND TRAINING OPTIONS

- Certifications:
    - Verify through an exam process that a person has the knowledge and skills required to perform a specific function, task, or occupation.
    - Usually issued by a national/international organization that focuses in a certain area/industry. (CompTIA, HDI, Microsoft, CISCO)
    - Some occupations/employers require certification in certain areas, some do not
    - IT industry has a major focus on certifications- mainly in specific technologies.
    - IT Examples- CompTIA A+, HDI Custom Service, Project Management Professional, Microsoft Certified Professional.   www.tech-collective.org

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COLLEGES AND UNIVERSITIES

Community College of Rhode Island- www.ccri.edu

Rhode Island College- www.ric.edu

University of Rhode Island- www.uri.edu

Brown University- www.brown.edu

Bryant University- www.bryant.edu

Johnson & Wales University- www.jwu.edu

New England Institute of Technology- www.neit.edu

Roger Williams University- www.rwu.edu

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PRIVATE TRAINING PROVIDERS

Homekey, Inc.- www.homekeyinc.com

Lincoln Technical Institute- www.lincolnedu.com

MotoRing Technical Institute- www.mtti.edu

New Horizons- www.nhrhodeisland.com

Systemetrics- www.systemetricsinc.com

TCP Learning- www.techcomm-partners.com

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CONTINUOUS LEARNING AND NETWORKING

- Industry and technology changes constantly- important to take additional training, attend industry knowledge forums/events, and network with other industry professionals.

- Tech Collective- www.tech-collective.org

- Providence Geeks- www.providencegeeks.org

- RI Chapter of HDI- www.hdiri.com

- SNENUG- (Southern New England Network User Group)
  www.snenug.org

- User Groups
  Oracle, Microsoft, Database, etc. www.tech-collective.org

RESOURCES-LEARN MORE

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National/International:

HDI- Professional association and certification body for the technical service and support industry. (Formerly the Help Desk Institute) There is a Rhode Island chapter. www.thinkhdi.com

AITP– Association of Information Technology Professionals– Society of professionals in information technology www.aitp.org

CompTIA– Computing Technology Industry Association that focuses primarily on education and certification. www.comptia.org

Career One Stop– www.careeronestop.org

Bureau of Labor Statistics– www.bls.gov

State:

Tech Collective- www.tech-collective.org
(RI/local industry, events, reports and publications)

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JOB POSTING WEBSITES

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- Dice- www.dice.com
  (Career site for Technology Professionals)

- EmployRI- www.employri.org

- Indeed- www.indeed.com

- JobsInRI- www.jobsinri.com

- Monster- www.monster.com

- Tech Collective- www.tech-collective.org
  (Job Postings- Click on "Any Category" for best/largest listing)

- Company Websites- Check job postings or career pages of specific company websites. If large national/international company, check for positions located in offices/sites that are desired.

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