2018 SALARY GUIDE

for Technology
Professionals

rh Robert Half®
Technology

About the Data in the 2018 Salary Guide

Robert Half has made it our mission for nearly 70 years to provide salary data to help companies benchmark their compensation levels with what other firms are offering. Those of you who are familiar with our guides will find even more comprehensive data this year than ever before.

WHY THE CHANGE?

Our clients have expressed interest in more detailed information on salaries. To help with this, we've presented salaries in percentiles versus the low and high ranges we have previously used. The information is based on our current salary data and analysis of the thousands of job placements we make every year.

WHAT HASN'T CHANGED

As always, we are committed to providing you with the most accurate information on hiring and compensation trends. This year's Robert Half Technology Salary Guide includes the following:

- Average starting salary ranges for more than 75 positions based on our job placements from the past year

- Regional variances that can help you adjust salaries to your local markets

- New data on benefits, incentives and perks

For more information and access to our Salary Calculator, please visit our Salary Center at **rht.com/salary-center**.

44% of CIOs say they miss out on top talent because candidates are seeking higher salaries than they're able to offer.

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Welcome to the 2018 Robert Half Technology Salary Guide

A key part of attracting the best people is paying them well — at least as much as your competitors are offering or more.

Hiring the best technology professionals requires more than just a job description. A key part of attracting the best people is paying them well — at least as much as your competitors are offering or more. That means, when hiring, you need access to the latest salary data available.

Our 2018 Robert Half Technology Salary Guide contains compensation ranges based on actual placements made by our U.S. and Canadian staffing and recruiting professionals. We present this data, along with the expertise of our staffing managers, to show where we believe compensation is headed and help you budget accordingly. It's also your tool for successfully negotiating salaries with the professionals you want to recruit and retain.

The salary tables are the core of the guide. This year, we've made some changes to how we present the salary data, as described in How to Use Our Salary Tables on . Elsewhere in the guide, we also include an analysis of hiring trends in the technology field.

We hope the Salary Guide helps you build a more engaged and productive team.

For help setting salary and compensation packages, go to **rht.com** or call **1.844.380.8636**.

Trends Powering IT Hiring

The persistent shortage of technology workers is no longer just an inconvenience for many employers — it's quickly becoming a significant business problem.

DIGITAL INITIATIVES DRIVING HIGHER DEMAND

The more companies look to digitize and automate business processes, the greater their need for technology professionals. But many IT workers are already employed full-time or have a steady stream of project work. Facing this shortage of talent, some companies have decided to hire professionals who have less experience but are motivated to learn new skills quickly.

For employers, the fit with workplace culture and the ability to collaborate with other teams can be just as important a consideration as technical skills when hiring. To evaluate workplace culture fit, many managers have prospective hires meet with multiple team members before extending a job offer.

INCREASED AUTOMATION: NOT NECESSARILY A JOB KILLER

The conversation around the effect of automation and artificial intelligence on jobs has grown louder. This is the case in the tech industry as much as it is in other sectors. While it is true these forces have the potential to disrupt some IT roles as we know them, the result will likely be a shift in the types of skills necessary to do specific jobs, rather than an elimination of those jobs altogether. As a result, many employers seek IT professionals who not only take the initiative to keep pace with technology but also do so on their own time. That commitment demonstrates a candidate's passion for IT.

Technology workers with knowledge of the latest developments in cloud, open source, mobile, big data, security and other technologies will only become more valuable to businesses in the years ahead.

THE NEED FOR SPEED

While it's understandable and prudent that IT departments want to properly vet job applicants, many are taking too long to make hiring decisions. And doing so puts them at risk of losing out on top candidates.

There are solid numbers that support the need for speed when hiring. Among the most compelling comes from one of our surveys: More than two-thirds of professionals said they would lose interest in a job if there was no follow-up within two weeks of an interview.

Making quick and efficient hires means being prepared to provide above-market compensation because today's top IT professionals know what they are worth. It also means considering an array of coveted incentives, such as signing bonuses, health insurance, generous vacation time and professional development opportunities, when creating compensation packages. And for many in-demand candidates, flexible hours and remote working arrangements are still attractive perks.

GET HELP HIRING

COMPANIES MORE RELIANT ON PROJECT CONSULTANTS

In recent years, the lack of available IT talent, combined with the project nature of many initiatives, has prompted employers to bring in consultants on an interim basis. Increasingly, IT departments find this is the best approach for handling short-term and specialized initiatives such as cloud migrations and cybersecurity projects.

This trend plays out among companies of all sizes, but small and midsize firms, in particular, often prefer to engage project IT talent because it is impractical for them to make full-time tech hires when their need may turn out not to be ongoing.

COMPANIES RETHINKING TECHNOLOGY TEAM STRUCTURES

As business and technology become increasingly intertwined, more employers are reorganizing their IT departments to capitalize on their teams' talents. At the same time, many are also expecting their staff to take on responsibilities that may not be outlined in their core job description. The need for professionals who can assume hybrid roles — positions that sit between IT and another department, such as marketing or finance — is growing. A skilled web developer with extensive experience working in marketing or advertising is a common example.

According to our research, 47 percent of CIOs said their teams collaborate more closely with marketing to support digital initiatives. (For a list of marketing professionals we place, visit **creativegroup.com**)

HOT INDUSTRIES FOR TECH IN 2018

Expect these sectors to lead IT hiring activity in the year ahead:

Healthcare — Healthcare businesses need professionals with IT expertise to help them modernize their operations and innovate in order to deliver better patient care.

Financial services — Big data and information security initiatives are driving the need for technology professionals in this sector.

Manufacturing — This sector has been somewhat slow to adopt when it comes to information technology, but that's changing, and quickly. IT talent is becoming increasingly valuable to the industry because of the trend toward automation.

THE SOFTER SIDE OF TECH

Soft skills and leadership abilities are also highly valued. In fact, many employers now view these skills as requirements for some IT roles.

Technology touches almost every aspect of modern business, so it's imperative that IT professionals collaborate effectively with others. That is especially true for those who work in DevOps, which emphasizes both communication and collaboration.

Good listening and critical-thinking skills, which are essential to understanding and resolving customers' issues and concerns, are important for almost any IT role today, but especially for help desk and desktop support professionals.

BROWSE JOBS

TRENDING SKILLS AND CERTIFICATIONS

Following are some of the technology skills and certifications in greatest demand by businesses throughout North America.* For more information on skills and certifications, please see Page 19.

- .NET
- Agile and Scrum certifications
- Angular
- C#
- CISSP (Certified Information Systems Security Professional)
- CCNA (Cisco Certified Network Associate)
- CCNP (Cisco Certified Network Professional)

- CompTIA A+
- Java
- Microsoft SQL Server
- PHP
- PMP (Project Management Professional)
- VMware

* Specific requirements for technology roles vary across industries and regions.

Building an Engaged, Productive Technology Team

In a study on workplace happiness by Robert Half and Happiness Works, technology professionals ranked sixth in terms of on-the-job happiness out of the 13 fields surveyed.

Here are some steps to help you increase job satisfaction among your team members:

HIRE FOR FIT
Employees who mesh well with the workplace culture are likely to feel a greater sense of engagement and loyalty.

EMPOWER STAFF
Let employees make decisions about their work on their own, or with minimal direction.

SHOW APPRECIATION
Be quick to thank technology team members for a job well done.

PROVIDE MEANINGFUL WORK
Be sure to share how your team's contributions support big-picture goals.

FOSTER A CULTURE OF COLLABORATION
Staff cohesion fuels job satisfaction — as well as innovation.

Levels of
Job Satisfaction

LEVEL OF ON-THE-JOB HAPPINESS

1 Education and Training
2 Marketing and Creative
3 Healthcare and Wellness
4 Human Resources
5 Legal
6 Technology
7 Accounting
8 Administrative
9 Insurance
10 Financial Services
11 Manufacturing
12 Finance
13 Hospitality and Food Services

LEVEL OF INTEREST IN THEIR WORK

1 Education and Training
2 Healthcare and Wellness
3 Marketing and Creative
4 Legal
5 Human Resources
6 Technology
7 Administrative
8 Manufacturing
9 Financial Services
10 Accounting
11 Finance
12 Insurance
13 Hospitality and Food Services

LOWEST ON-THE-JOB STRESS LEVELS

1 Technology
2 Finance
3 Marketing and Creative
4 Human Resources
5 Accounting
6 Manufacturing
7 Administrative
8 Education and Training
9 Financial Services
10 Hospitality and Food Services
11 Healthcare and Wellness
12 Insurance
13 Legal

Find out more about increasing happiness in your workplace.

Hiring and Management Insights From IT Leaders and Pros

67% of technology executives say digital marketing, big data, cloud or mobile initiatives are the greatest contributing factors to hiring.

41% of CIOs say their hiring process takes longer than they'd like, averaging 4.5 weeks to fill a staff-level role.

What would cause IT workers to leave their job?*

1. A lack of advancement potential
2. A desire for more challenging work
3. Feeling inadequately compensated

* Top three responses shown

52% of technology professionals begin conversations around career path and growth opportunities during the interview process.

In-Demand Technology Roles for 2018

Expect to see many employers across North America hiring technology professionals for these roles:*

- **Business intelligence (BI) analysts**

- **Data scientists**

- **Database developers**

- **Developers**

- **DevOps engineers**

- **Help desk and desktop support professionals**

- **Network administrators**

- **Security professionals**

- **Systems administrators**

* See the **glossary of job descriptions** for more information about these and other in demand positions.

How to Use
Our Salary Tables

To help hiring managers determine salary levels for new hires, we've provided starting compensation ranges by percentile, as defined in the chart below.

When a manager is establishing a starting salary, multiple factors come into play. A firm's compensation philosophy, the range of other benefits and incentives offered, and the level of competition for individuals within a particular market all may affect starting salaries. Following are additional elements to consider and how they correlate with the high and low ends of the compensation figures provided:

PERCENTILE	25TH	50TH (MIDPOINT)	75TH	95TH
Candidate Experience Level	Less experience than typical	Average experience	More experience than typical	Significant, highly relevant experience
Candidate Skills/ Expertise	Skills require development	Necessary skills to meet job requirements	Strong skill set; may include specialized certifications	High level of expertise, including specialized certifications
Job Complexity/ Duties	Role may be in an industry with low competition for talent or in a smaller, less complex organization or department	Role may be of average complexity or in an industry where competition for talent is moderate	Role may be fairly complex or in a fairly competitive industry for talent	Role may be highly complex and more strategic in nature than usual; may be in a highly competitive industry for talent

The salaries listed on the following pages are based on actual placements in our offices throughout North America, as well as an analysis of the demand for the role, the supply of talent and other market conditions. Salaries reflect starting pay only. Bonuses, incentives and other forms of compensation are not taken into account. In some situations, it's possible that compensation would fall above or below the percentiles provided. Our recruiters can help you establish appropriate compensation levels for new hires based on your company's goals and budget.

Salaries represent national averages and can be adjusted for your market using the local variance information on for the United States and for Canada.

Technology Salaries: United States

TITLE	PERCENTILES			
	25TH	50TH MIDPOINT	75TH	95TH
ADMINISTRATION				
Chief Information Officer (CIO)	$170,500	$202,500	$243,000	$287,000
Chief Technology Officer (CTO)	$145,000	$175,000	$210,000	$248,000
Chief Security Officer	$143,250	$170,000	$204,000	$241,000
Vice President of Information Technology	$137,000	$163,000	$195,500	$231,000
Director of Technology	$118,750	$141,000	$169,000	$199,750
APPLICATIONS DEVELOPMENT				
Manager	$105,250	$125,000	$150,000	$177,000
Project Manager	$92,750	$110,000	$132,000	$156,000
Systems Analyst	$76,750	$91,000	$109,000	$129,000
Applications Architect	$111,000	$132,000	$158,250	$187,000
Business Systems Analyst	$77,500	$92,000	$110,500	$130,500
Cloud Computing Analyst	$74,500	$92,500	$115,750	$156,250
CRM Business Analyst	$80,000	$95,000	$114,000	$134,750
CRM Technical Developer	$89,250	$106,000	$127,000	$150,250
Developer/Programmer Analyst	$86,750	$103,000	$123,500	$146,000
ERP Business Analyst	$83,500	$99,000	$118,750	$140,250
ERP Technical/Functional Analyst	$90,000	$107,000	$128,500	$152,000
ERP Technical Developer	$94,250	$112,000	$134,500	$158,750
Lead Applications Developer	$103,000	$122,250	$146,750	$173,250
Mobile Applications Developer	$118,750	$141,000	$169,000	$199,750
Technical Writer	$54,750	$65,000	$78,000	$92,000
CONSULTING & SYSTEMS INTEGRATION				
Director	$117,000	$139,000	$166,750	$197,000
Project Manager/Senior Consultant	$96,000	$114,000	$137,000	$162,000
Staff Consultant	$60,250	$75,000	$94,000	$126,750
Senior IT Auditor	$107,000	$127,000	$152,250	$180,000
IT Auditor	$92,250	$109,750	$131,500	$155,500

TITLE	25TH	50TH MIDPOINT	75TH	95TH
DATA/DATABASE ADMINISTRATION				
Big Data Engineer	$126,250	$150,000	$180,000	$212,500
Database Manager	$107,000	$127,000	$152,250	$180,000
Database Developer	$ 97,750	$116,000	$139,000	$164,500
Database Administrator	$ 75,750	$ 95,000	$114,500	$156,000
Data Analyst/Report Writer	$ 81,000	$ 96,000	$115,000	$136,000
Data Architect	$110,000	$130,000	$156,000	$184,000
Data Modeler	$ 77,750	$ 96,250	$120,500	$162,500
Data Scientist	$100,000	$119,000	$142,750	$168,000
Data Warehouse Analyst	$ 75,250	$ 93,500	$117,000	$158,000
Business Intelligence Analyst	$ 83,750	$104,000	$130,250	$175,750
Data Reporting Analyst	$ 58,000	$ 73,000	$ 90,000	$108,000
QUALITY ASSURANCE (QA) & TESTING				
QA Engineer – Manual	$ 58,000	$ 69,000	$ 82,750	$ 97,750
QA Engineer – Automated	$ 69,000	$ 82,000	$ 98,500	$116,000
QA/Testing Manager	$ 80,000	$ 95,000	$114,000	$134,750
QA Associate/Analyst	$ 61,500	$ 73,000	$ 87,500	$103,500
WEB DEVELOPMENT				
Senior Web Developer	$ 98,500	$117,000	$140,250	$165,750
Web Developer	$ 82,500	$ 98,000	$117,500	$139,000
Front-End Web Developer	$ 62,500	$ 72,750	$ 90,750	$122,500
Web Administrator	$ 67,250	$ 80,000	$ 96,000	$113,500
Web Designer	$ 72,500	$ 86,000	$103,250	$122,000
E-Commerce Analyst	$ 81,750	$ 97,000	$116,500	$137,500
NETWORKING/TELECOMMUNICATIONS				
Network Architect	$112,750	$134,000	$160,750	$190,000
Network Manager	$ 93,500	$111,000	$133,000	$157,250
Network Engineer	$ 90,000	$107,000	$128,500	$151,750
Wireless Network Engineer	$100,000	$119,000	$142,750	$168,750
Network Administrator	$ 73,250	$ 87,000	$104,500	$123,250
Telecommunications Manager	$ 79,000	$ 94,000	$112,750	$133,000
Telecommunications Specialist	$ 59,000	$ 70,000	$ 84,000	$ 99,250
NOC Technician	$ 51,750	$ 59,500	$ 76,000	$ 97,000

TITLE	25TH	50TH MIDPOINT	75TH	95TH
OPERATIONS				
Computer Operator	$ 33,750	$ 40,000	$ 48,000	$ 56,750
Mainframe Systems Programmer	$ 51,750	$ 65,000	$ 81,750	$ 92,250
SECURITY				
Data Security Analyst	$102,000	$121,000	$145,000	$171,500
Systems Security Administrator	$ 92,750	$110,000	$132,000	$156,000
Network Security Administrator	$ 92,000	$109,250	$131,000	$155,000
Network Security Engineer	$ 97,000	$115,000	$138,000	$163,000
Information Systems Security Manager	$115,250	$137,000	$164,250	$194,250
SOFTWARE DEVELOPMENT				
Product Manager	$100,250	$119,000	$142,750	$169,000
Software Engineer	$102,000	$121,000	$145,000	$171,500
Software Developer	$ 97,000	$115,000	$138,000	$163,000
TECHNICAL SERVICES, HELP DESK & TECHNICAL SUPPORT				
Manager	$ 80,750	$ 96,000	$115,250	$136,000
Desktop Support Analyst	$ 50,500	$ 60,000	$ 72,000	$ 85,000
Systems Administrator	$ 67,250	$ 80,000	$ 96,000	$113,500
Systems Engineer	$ 85,000	$101,000	$121,250	$143,250
Help Desk Tier 3	$ 48,500	$ 57,500	$ 69,000	$ 81,500
Help Desk Tier 2	$ 38,000	$ 45,000	$ 54,000	$ 63,750
Help Desk Tier 1	$ 32,000	$ 38,000	$ 45,500	$ 54,000
Instructor/Trainer	$ 57,250	$ 68,000	$ 81,500	$ 96,250
PC Technician	$ 32,000	$ 38,000	$ 45,500	$ 54,000
Business Continuity Analyst	$ 86,750	$103,000	$123,500	$146,000
Hardware Analyst	$ 60,750	$ 72,000	$ 86,500	$102,000
Cable Technician	$ 32,250	$ 40,500	$ 49,500	$ 54,500
Product Support Specialist	$ 45,750	$ 54,500	$ 65,250	$ 77,750
Mobile Device Support Analyst	$ 56,500	$ 67,000	$ 80,250	$ 95,000

WATCH THE VIDEO TO FIND OUT HOW TO USE THE SALARY PERCENTILES.

Technology Salaries: Canada

TITLE	PERCENTILES			
	25TH	50TH MIDPOINT	75TH	95TH
ADMINISTRATION				
Chief Information Officer (CIO)	$150,750	$165,000	$197,000	$245,500
Chief Technology Officer (CTO)	$142,500	$160,000	$182,750	$237,750
Chief Security Officer (CSO)	$140,000	$159,750	$180,500	$235,500
Vice President of Information Technology	$135,750	$147,500	$168,750	$198,750
Director of Technology	$110,000	$127,500	$156,250	$166,000
APPLICATIONS DEVELOPMENT				
Manager	$ 95,250	$120,000	$150,000	$204,000
Project Manager	$ 96,000	$121,000	$152,000	$205,750
Systems Analyst	$ 82,500	$ 89,500	$ 96,250	$113,750
Applications Architect	$ 90,500	$125,000	$155,750	$167,750
Business Systems Analyst	$ 65,000	$ 96,250	$114,500	$135,250
Cloud Computing Analyst	$ 73,500	$ 95,000	$116,500	$157,250
CRM Business Analyst	$ 82,000	$ 97,500	$116,750	$138,250
CRM Technical Developer	$ 84,250	$100,000	$119,750	$141,750
Developer/Programmer Analyst	$ 72,750	$ 84,250	$ 99,500	$147,250
ERP Business Analyst	$ 91,750	$115,500	$127,750	$139,750
ERP Technical/Functional Analyst	$ 99,250	$125,000	$143,500	$150,750
ERP Technical Developer	$ 94,500	$128,250	$135,000	$163,750
Lead Applications Developer	$101,750	$118,750	$143,750	$170,750
Mobile Applications Developer	$ 92,500	$110,000	$131,000	$155,750
Technical Writer	$ 78,000	$ 90,500	$ 96,250	$102,500
CONSULTING & SYSTEMS INTEGRATION				
Director	$ 96,750	$124,250	$153,500	$185,000
Project Manager/Senior Consultant	$ 70,000	$ 98,500	$125,000	$154,750
Staff Consultant	$ 66,000	$ 83,000	$104,250	$112,750
Senior IT Auditor	$101,250	$120,000	$143,750	$170,250
IT Auditor	$ 75,750	$ 90,000	$107,750	$127,500

All salaries listed on Pages 16-18 are in Canadian dollars.

TITLE	25TH	50TH MIDPOINT	75TH	95TH
DATA/DATABASE ADMINISTRATION				
Big Data Engineer	$ 105,250	$ 125,000	$ 149,750	$ 180,250
Database Manager	$ 95,250	$ 120,000	$ 143,500	$ 179,750
Database Developer	$ 93,500	$ 104,000	$ 130,000	$ 164,250
Database Administrator	$ 62,000	$ 80,000	$ 124,750	$ 160,250
Data Analyst/Report Writer	$ 55,250	$ 62,500	$ 83,250	$ 117,250
Data Architect	$ 95,750	$ 115,000	$ 137,750	$ 162,750
Data Modeler	$ 80,000	$ 98,250	$ 112,750	$ 151,750
Data Scientist	$ 88,500	$ 105,000	$ 125,750	$ 148,750
Data Warehouse Analyst	$ 71,500	$ 90,000	$ 113,250	$ 153,000
Business Intelligence Analyst	$ 73,250	$ 93,500	$ 107,250	$ 140,250
Data Reporting Analyst	$ 47,500	$ 60,000	$ 75,500	$ 102,000
QUALITY ASSURANCE (QA) & TESTING				
QA Engineer – Manual	$ 58,000	$ 70,000	$ 83,750	$ 100,000
QA Engineer – Automated	$ 71,500	$ 85,000	$ 101,000	$ 115,750
QA/Testing Manager	$ 75,000	$ 90,000	$ 107,500	$ 131,500
QA Associate/Analyst	$ 60,500	$ 80,000	$ 95,750	$ 115,000
WEB DEVELOPMENT				
Senior Web Developer	$ 84,500	$ 100,000	$ 119,750	$ 141,500
Web Developer	$ 67,750	$ 78,000	$ 93,500	$ 110,500
Front-End Web Developer	$ 63,250	$ 75,000	$ 89,750	$ 106,250
Web Administrator	$ 72,500	$ 84,500	$ 96,750	$ 102,750
Web Designer	$ 54,000	$ 61,250	$ 91,250	$ 127,000
E-Commerce Analyst	$ 80,250	$ 108,000	$ 128,750	$ 135,750
NETWORKING/TELECOMMUNICATIONS				
Network Architect	$ 129,000	$ 138,000	$ 147,000	$ 154,250
Network Manager	$ 93,500	$ 102,500	$ 125,750	$ 138,250
Network Engineer	$ 75,750	$ 90,000	$ 118,750	$ 133,500
Wireless Network Engineer	$ 106,500	$ 115,000	$ 127,500	$ 143,500
Network Administrator	$ 55,000	$ 62,500	$ 80,000	$ 104,750
Telecommunications Manager	$ 70,750	$ 80,000	$ 100,500	$ 132,500
Telecommunications Specialist	$ 63,500	$ 74,500	$ 83,500	$ 97,500
NOC Technician	$ 50,500	$ 56,250	$ 75,500	$ 94,500

TITLE	25TH	50TH MIDPOINT	75TH	95TH
OPERATIONS				
Computer Operator	$ 35,250	$ 37,500	$ 41,500	$ 51,250
Mainframe Systems Programmer	$ 56,250	$ 71,000	$ 89,250	$110,250
SECURITY				
Data Security Analyst	$100,000	$117,500	$135,750	$168,750
Systems Security Administrator	$ 89,750	$ 98,750	$123,750	$145,750
Network Security Administrator	$ 87,500	$100,000	$120,500	$153,000
Network Security Engineer	$ 96,250	$110,000	$125,750	$170,000
Information Systems Security Manager	$ 98,250	$115,000	$127,500	$187,250
SOFTWARE DEVELOPMENT				
Product Manager	$ 92,500	$110,000	$131,750	$155,750
Software Engineer	$ 96,750	$115,000	$137,750	$162,750
Software Developer	$ 88,500	$105,000	$125,750	$148,750
TECHNICAL SERVICES, HELP DESK & TECHNICAL SUPPORT				
Manager	$ 75,000	$108,250	$117,500	$131,500
Desktop Support Analyst	$ 54,750	$ 62,750	$ 70,000	$ 82,500
Systems Administrator	$ 64,500	$ 78,750	$ 95,750	$102,500
Systems Engineer	$ 86,750	$ 92,750	$108,500	$123,500
Help Desk Tier 3	$ 60,000	$ 70,000	$ 84,000	$ 99,000
Help Desk Tier 2	$ 51,750	$ 60,000	$ 72,250	$ 84,500
Help Desk Tier 1	$ 41,500	$ 50,000	$ 63,750	$ 71,500
Instructor/Trainer	$ 54,750	$ 65,000	$ 77,750	$ 94,250
PC Technician	$ 34,500	$ 40,000	$ 47,750	$ 59,250
Business Continuity Analyst	$ 82,750	$ 96,500	$105,750	$124,000
Hardware Analyst	$ 52,000	$ 65,000	$ 83,000	$102,000
Cable Technician	$ 37,750	$ 45,000	$ 53,750	$ 63,750
Product Support Specialist	$ 38,750	$ 46,750	$ 62,750	$ 80,750
Mobile Device Support Analyst	$ 42,500	$ 49,500	$ 65,500	$ 83,750

WATCH THE VIDEO TO FIND OUT HOW TO USE THE SALARY PERCENTILES.

Technology Skills and Certifications

The technology skills companies need are frequently changing. Certifications and an aptitude for the latest software signal to employers that IT professionals are committed to keeping their skill sets current.

Skills and certifications enhance the marketability of the professionals who hold them. In fact, employers may increase salaries 5 to 10 percent for professionals who have certain in-demand abilities. The certifications and skills listed below are among the most commonly sought by employers in the United States and Canada.

APPLICATIONS DEVELOPMENT
AJAX (Asynchronous JavaScript and XML) development
BusinessObjects
C# development
C++ development
Hyperion
Java development
Java EE/J2EE development
LAMP (Linux, Apache, MySQL and Perl/PHP/Python)
.NET development
PHP development
SAP development
SharePoint

DATA/DATABASE ADMINISTRATION
ETL
Microsoft SQL Server database
Oracle database

WEB DEVELOPMENT
AJAX (Asynchronous JavaScript and XML) development
ASP development
C# development
ColdFusion development
Content management system (CMS)
DCOM/COM/ActiveX development
Java development
Java EE/J2EE development
LAMP (Linux, Apache, MySQL and Perl/PHP/Python)
.NET development
PHP development
Python
Ruby on Rails
SharePoint
Virtualization
Web services development

QUALITY ASSURANCE (QA) & TESTING
Performance testing (e.g., Mercury Interactive Tools)

NETWORKING/TELECOMMUNICATIONS
Cisco network administration
LINUX/UNIX administration
Voice over Internet Protocol (VoIP) administration
Windows 7 and 10

SECURITY
Certified Information Systems Security Professional (CISSP)
Check Point Firewall administration
Cisco network administration
LINUX/UNIX administration

SOFTWARE DEVELOPMENT
ASP development
C# development
C++ development
DCOM/COM/ActiveX development
Hadoop
Java development
Java EE/J2EE development
.NET development
PHP development
Web services development

TECHNICAL SERVICES, HELP DESK & TECHNICAL SUPPORT
Basis administration
Cisco network administration
HDI certifications
LINUX/UNIX administration
Virtualization
Windows 7 and 10

Calculate Your Custom Salary

As you know, compensation for the same role can vary widely depending on where the job is. To find salaries for a given city, go to the **Salary Calculator** and select the job title and city. The online tool calculates a result for you.

The salaries listed in the guide can be customized for nearly 600 cities using the Salary Calculator.

Local Market Variances: United States

The starting salaries on the previous pages reflect the national averages for each position. For guidance on local compensation, increase or decrease the national salary by the percentage below for your city.

The following local market variances are based on data from the U.S. Bureau of Labor Statistics and Robert Half Technology and are general guidelines only. They are reflective of all industries and professions and may apply differently from staff to executive-level roles. For more information on average starting salaries in your area, contact the Robert Half Technology office nearest you.

ALABAMA
Birmingham . . . . −5%
Huntsville . . . . −6%
Mobile . . . . −14%

ARIZONA
Phoenix . . . . +13%
Tucson . . . . +5%

ARKANSAS
Fayetteville . . . . −5%
Little Rock . . . . −5%

CALIFORNIA
Fresno . . . . −10%
Irvine . . . . +30%
Los Angeles . . . . +31%
Oakland . . . . +29.5%
Ontario . . . . +20%
Sacramento . . . . +5%
San Diego . . . . +26%
San Francisco . . . . +40%
San Jose . . . . +37.5%
San Rafael . . . . +30%
Santa Barbara . . . . +27%
Santa Rosa . . . . +20%
Stockton . . . . −15%

COLORADO
Boulder . . . . +17.5%
Colorado Springs . . . . −3.5%
Denver . . . . +9%
Fort Collins . . . . −2%
Greeley . . . . −11%
Loveland . . . . −5%
Pueblo . . . . −17%

CONNECTICUT
Hartford . . . . +17%
New Haven . . . . +12%
Stamford . . . . +31%

DELAWARE
Wilmington . . . . +5%

DISTRICT OF COLUMBIA
Washington . . . . +33%

FLORIDA
Fort Myers . . . . −9%
Jacksonville . . . . −4.5%
Melbourne . . . . −9.5%
Miami/
  Fort Lauderdale . . . . +6.5%
Orlando . . . . +0.5%

St. Petersburg . . . . −3%
Tampa . . . . −1%
West Palm Beach . . . . +1%

GEORGIA
Atlanta . . . . +6%
Macon . . . . −18%
Savannah . . . . −15%

HAWAII
Honolulu . . . . +7%

IDAHO
Boise . . . . −13.9%

ILLINOIS
Chicago . . . . +23.5%
Naperville . . . . +12%
Rockford . . . . −15%

INDIANA
Fort Wayne . . . . −16%
Indianapolis . . . . −3%

IOWA
Cedar Rapids . . . . −6%
Davenport . . . . −5%
Des Moines . . . . +0%

Sioux City . . . .–16%
Waterloo/
  Cedar Falls . . . .–13%

KANSAS
Overland Park . . . . . . +0.5%

KENTUCKY
Lexington . . . .–8.5%
Louisville . . . .–8%

LOUISIANA
Baton Rouge . . . . –1%
New Orleans . . . . –1%

MAINE
Portland . . . .–5%

MARYLAND
Baltimore . . . . +3%

MASSACHUSETTS
Boston . . . . +34%
Springfield . . . .+1%

MICHIGAN
Ann Arbor . . . .+1.5%
Detroit . . . . +0%
Grand Rapids . . . .–14.5%
Kalamazoo . . . . –20%
Lansing . . . .–15%

MINNESOTA
Bloomington . . . . +6.5%
Duluth . . . . –20.4%
Minneapolis . . . .+7%
Rochester . . . .+2%
St. Cloud . . . . –16.5%
St. Paul . . . . +4%

MISSOURI
Kansas City . . . .–0.5%
St. Joseph . . . .–10%
St. Louis . . . .–0.5%

NEBRASKA
Omaha . . . .–3%

NEVADA
Las Vegas . . . . +0%
Reno . . . . +0%

NEW HAMPSHIRE
Manchester/
  Nashua . . . . +14%

NEW JERSEY
Mount Laurel . . . . +15%
Paramus . . . . +30%
Princeton . . . . +25%
Woodbridge . . . .+26.5%

NEW MEXICO
Albuquerque . . . .–8.5%

NEW YORK
Albany . . . .–4%
Buffalo . . . .–6.5%
Long Island . . . . +20%
New York . . . .+40.5%
Rochester . . . .–6.5%
Syracuse . . . . –9.7%

NORTH CAROLINA
Charlotte . . . .+2%
Greensboro . . . . +0%
Raleigh . . . . +4%

OHIO
Akron . . . .–11%
Canton . . . .–18%
Cincinnati . . . .–2.5%
Cleveland . . . .–4%
Columbus . . . .–2%
Dayton . . . .–13%
Toledo . . . .–14.5%
Youngstown . . . .–24%

OKLAHOMA
Oklahoma City . . . .–7%
Tulsa . . . .–7%

OREGON
Portland . . . .+7%

PENNSYLVANIA
Harrisburg . . . .–5%
Philadelphia . . . . +15%
Pittsburgh . . . .–2%

RHODE ISLAND
Providence . . . .+1.5%

SOUTH CAROLINA
Charleston . . . .–5.5%
Columbia . . . .–6.5%
Greenville . . . .–7%

SOUTH DAKOTA
Sioux Falls . . . .–16%

TENNESSEE
Chattanooga . . . .–11%
Cool Springs . . . . +0%
Knoxville . . . .–11%
Memphis . . . .–5%
Nashville . . . .+1.5%

TEXAS
Austin . . . . +8%
Dallas . . . . +10%
El Paso . . . . –28%
Fort Worth . . . .+9%
Houston . . . .+7%
Midland/Odessa . . . . . +10%
San Antonio . . . .+1%

UTAH
Salt Lake City . . . . +5%

VIRGINIA
Norfolk/
  Hampton Roads . . . . . .–2%
Richmond . . . .–1.5%
Tysons Corner . . . . +32%

WASHINGTON
Seattle . . . . +21%
Spokane . . . .–18%

WISCONSIN
Appleton . . . .–15%
Green Bay . . . . –13.5%
Madison . . . .–1.5%
Milwaukee . . . .+1%
Waukesha . . . .–1%

Get local starting salary data for specific
roles at **rht.com/salary-center**.

Hiring Outlook for Canada

Businesses in Canada face the same pressures as U.S. companies to ramp up digital initiatives and use technology to solve business challenges. As a result, their need for IT talent with specialized skills will grow. Look for industries such as healthcare, finance, manufacturing and retail to be especially active in recruiting technology talent in 2018.

Web, software and mobile developers; business intelligence analysts; and security professionals top the IT hiring wish lists for many businesses. DevOps specialists, data scientists, and full-stack developers with a balanced blend of front- and back-end technology skills are also likely to be in high demand in 2018. Candidates who have solid communication and interpersonal skills, and are bilingual in English and French, have an added advantage for many roles — help desk positions, in particular.

Competition for senior-level candidates is intense, and companies must be prepared to offer above-market compensation if they want to attract and retain in-demand professionals. Employers who don't have the budget flexibility, or simply need to hire quickly, may decide to consider candidates with midlevel experience and subsequently invest in training them. Many businesses may also find their best bet is engaging professionals on a project basis to secure the right talent for their IT initiatives.

Local Market Variances: Canada

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ALBERTA
Calgary . . . . +3%
Edmonton . . . .+1.8%

BRITISH COLUMBIA
Fraser Valley. . . . . +0.2%
Vancouver. . . . . +4.9%
Victoria. . . . . −3.2%

MANITOBA
Winnipeg. . . . .−9%

ONTARIO
Kitchener/
  Waterloo. . . . .−3.7%
Ottawa . . . . +0.2%
Toronto . . . . +4.9%

QUEBEC
Montreal . . . .+2.9%
Quebec City . . . .−10%

SASKATCHEWAN
Regina. . . . .−6.1%
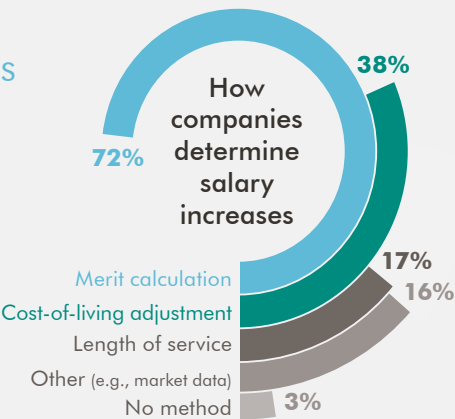Saskatoon . . . .−4.5%

PUT YOUR SALARY KNOWLEDGE TO WORK.
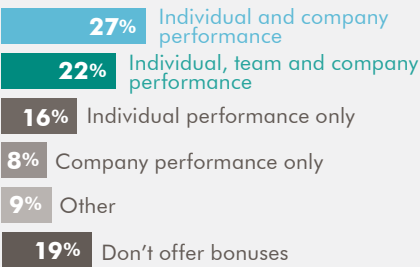
FIND TALENT   **FIND JOBS**

Pay to Perks: Trends in Compensation Packages

Highly skilled professionals expect not just a base salary that's in line with what other firms are offering but also a choice of benefits, incentives and perks that are just as competitive.
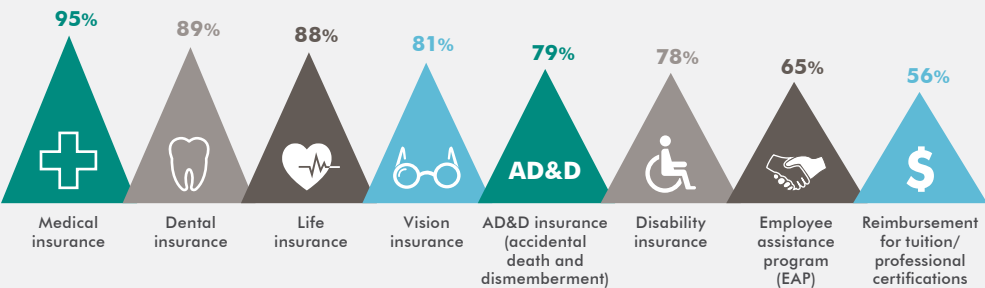
To find out more about the compensation strategies prevalent today, Robert Half surveyed more than 740 human resources, compensation and benefits professionals in businesses across a variety of industries in North America. The results are shown on this and the following pages.

How companies determine salary increases

- 72% Merit calculation
- 38% Cost-of-living adjustment
- 17% Length of service
- 16% Other (e.g., market data)
- 3% No method

How companies determine bonuses*

- 27% Individual and company performance
- 22% Individual, team and company performance
- 16% Individual performance only
- 8% Company performance only
- 9% Other
- 19% Don't offer bonuses

The most common benefits offered (1 of 2)**

- 95% Medical insurance
- 89% Dental insurance
- 88% Life insurance
- 81% Vision insurance
- 79% AD&D insurance (accidental death and dismemberment)
- 78% Disability insurance
- 65% Employee assistance program (EAP)
- 56% Reimbursement for tuition/professional certifications

Benefits, incentives and perks: What's the difference?

Benefits are any form of noncash compensation paid indirectly to an employee and not tied to job performance. Examples: medical insurance, retirement plans.
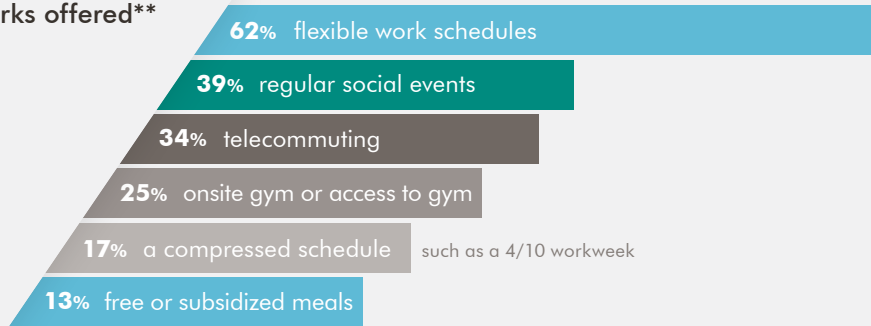
Incentives are cash or other awards made to reward or incent superior performance and boost retention. They are not guaranteed but tied to job performance. Examples: bonuses, spot awards.
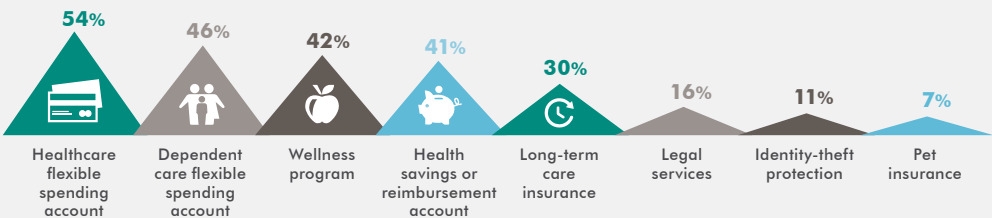
Perks (short for perquisites) are privileges granted to employees in addition to benefits and incentives. Examples: gym membership, free meals.

The most common perks offered**

62% flexible work schedules

39% regular social events

34% telecommuting

25% onsite gym or access to gym

17% a compressed schedule such as a 4/10 workweek

13% free or subsidized meals

The most common benefits offered (2 of 2)**

54% Healthcare flexible spending account

46% Dependent care flexible spending account

42% Wellness program

41% Health savings or reimbursement account

30% Long-term care insurance

16% Legal services

11% Identity-theft protection

7% Pet insurance

Pay for performance

65%

Nearly 2 out of 3 companies tie compensation to organizational or individual performance.

The most common incentives offered

37% spot awards for individual or team achievement

20% profit-sharing

18% retention bonuses

18% stock options, restricted stock or performance shares

16% deferred compensation

Helping employees save for retirement

On average, **employers match 3 to 4%** of employees' 401(k) or Registered Retirement Savings Plan (RRSP)*** contributions.
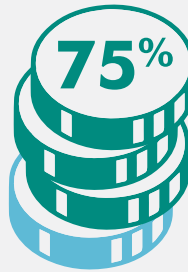
75% of companies offer a 401(k) or RRSP.

Time-off policies

On average, employers offer **14 days of paid vacation** for the first 5 years of employment, plus **9 paid holidays**, including floating holidays.

*Responses do not total 100 percent due to rounding.
**Only the top responses shown.
***401(k) in the United States and RRSP in Canada
Source: Robert Half survey of more than 740 human resources, compensation and benefits executives in North America

About
Robert Half Technology

Robert Half Technology specializes in matching organizations of all sizes with highly skilled technology professionals for project, contract-to-hire and full-time positions; managed IT services; and solutions consulting.

Robert Half Technology is a leader among IT staffing agencies because our placements are made personally by our recruiters and supported by the latest technology. In addition to experience, professionalism and industry knowledge delivered one-on-one in a consultative way, we also offer you online self-service options that let you browse candidates, submit job order requests and ask to meet a candidate.

You choose the way you want to work with us, but you're never on your own. Even if you opt for one of our self-service features, we can step back in to provide personal customer service at any point in the process.

Robert Half Technology staffing experts have access to top IT job candidates — as well as professionals who aren't actively looking for work but who might change jobs for the right opportunity. This gives your firm many more options than you'd have on your own. Our recruiters will interview promising candidates for you, assess their skill sets and fit for your workplace culture, advise you on competitive salary ranges, and help you hire your top choice before the competition does. We deliver turnkey results, quickly.

When it's time to staff a key position, turn to a respected adviser. Contact your local Robert Half Technology office at **1.844.380.8636** to learn how we can help you find the talent you need today.

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Louisiana
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New York – Midtown
New York – Wall Street
Uniondale

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Raleigh

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Blue Ash
Cincinnati
Cleveland
Dayton
Dublin

Oklahoma
Oklahoma City
Tulsa

Oregon
Portland

Pennsylvania
King of Prussia
Philadelphia
Pittsburgh

Rhode Island
Providence

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Charleston
Greenville

Tennessee
Memphis
Nashville

Texas
Austin
Dallas – Downtown
Dallas – Galleria
Fort Worth
Houston
Irving
San Antonio
The Woodlands

Utah
Salt Lake City
Thanksgiving Point

Virginia
Richmond
Tysons Corner

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Seattle

Wisconsin
Madison
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Essen
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Hamburg
Munich
Stuttgart

Japan
Osaka
Tokyo

New Zealand
Auckland

Singapore
Singapore

Switzerland
Zurich

United Arab Emirates
Abu Dhabi
Dubai

United Kingdom
Bristol
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