CompTIA®

European Tech Hiring Trends 2021

Tech Workforce Hiring Trends and Analysis

Belgium | Czech Republic | France | Germany | Italy | Netherlands | Poland | Portugal | Romania | Spain

ABOUT COMPTIA

The Computing Technology Industry Association (CompTIA) is a leading voice and advocate for the $5 trillion global information technology ecosystem; and the estimated 75 million industry and tech professionals who design, implement, manage, and safeguard the technology that powers the world's economy. Through education, training, certifications, advocacy, philanthropy, and market research, CompTIA is the hub for advancing the tech industry and its workforce.

CompTIA is the world's leading vendor-neutral IT-certifying body with more than 2.8 million certifications awarded based on the passage of rigorous, performance-based exams. CompTIA's base of certified information technology professionals spans 232 countries worldwide.

CompTIA sets the standard for preparing entry-level candidates through expert-level professionals to succeed at all stages of their career in technology. Through CompTIA's philanthropic arm, CompTIA develops innovative on-ramps and career pathways to expand opportunities to populations that traditionally have been under-represented in the information technology workforce.

> CompTIA Technology Career Pathway Roadmap
> CompTIA Certifications Job Match
> CompTIA Training and Learning
> CompTIA Tech Career Academy
> CompTIA IT Salary Calculator
> CompTIA Technology Interest Groups
> CompTIA Communities
> CompTIA Membership

ABOUT COMPTIA'S EUROPEAN TECH HIRING TRENDS

CompTIA's European Tech Hiring Trends provides an in-depth look at hiring trends across 10 markets. The report is designed as a resource for employers, job candidates, workforce and economic developers, policy-makers, media outlets and more. CompTIA developed the report from analysis of employer job posting data aggregated by Burning Glass Technologies Labour Insights. See Methodology page for more details. The Q2 2021 report release covers Q1 and prior period data series.

Belgium	Netherlands
Czech Republic	Poland
France	Portugal
Germany	Romania
Italy	Spain

Location data maps to the European Union's regional taxonomy. The Nomenclature of territorial units for statistics, abbreviated NUTS (from the French version Nomenclature des Unités territoriales statistiques) is a geographical nomenclature subdividing the economic territory of the European Union (EU) into regions at three different levels (NUTS 1, 2 and 3 respectively, moving from larger to smaller territorial units). Above NUTS 1, there is the 'national' level of the Member States. Most other formatting and labeling in this report aligns to Eurostat standards. See the European Union's Eurostat for more detail.

To make the data most accessible to readers, CompTIA lists the major city or metro area within the region first; and in some cases the accompanying surrounding region in parenthesis. The data is not always fully representative of the city or metro area, but generally, cities and metro areas have the highest concentration of workers in a region and therefore can reasonably serve as a proxy for the location's hiring trends.

KEY FINDINGS

ECONOMIC AND HIRING REVIEW

→| As the devastating effects of the global pandemic begin to subside, many economies are returning to a semblance of normalcy with renewed business investment and hiring. Across the 10 markets covered in this report, economic growth rate projections for the year range from higher-end growth in the 5.8% to 6.4% range for France, Romania and Spain, to those on the lower-end in the 3.5% to 3.6% range for Netherlands, Poland and Germany.

→| Unemployment rates in many European countries never reached the levels seen in other markets during the height of the pandemic, such as the United States. As of yearend 2020, several markets were in a very low unemployment rate range, notably Czech Republic, Poland, Netherlands and Germany. Conversely, the unemployment rate remained elevated in Spain.

→| Despite a degree of labour market stability across many European countries, the uncertainty of 2020 meant new hiring slowed or ceased altogether. Consequently, with pent-up demand to backfill open positions or to pursue new talent to support growth strategies, there was a significant pick-up in hiring activity during Q1 2021. Compared to Q4 2020, total hiring activity as measured by employer job postings for technology positions increased 9%. Compared to Q3, the increase was 40% - again, reflecting the transition from hiring freeze to hiring resurgence.

→| In total, employers across the 10 markets covered in this report posted nearly 900 000 job advertisements during Q1 2021 in their efforts to hire for a range of technology professions. Key categories for hiring include:

> →| Software Developers, Programmers and Web Developers
> →| Systems Analysts and Cybersecurity
> →| IT Support Specialists and Technicians
> →| Network and Systems Administrators and Technicians

→| Job postings invariably align with the job roles employers are seeking to fill. Digging below the job role, however, reveals a number of common skill threads that span just about every technology job role these days. Employers frequently expect some level of cybersecurity, data, cloud, project management, and related technical skills. And, because of the intersection of technology and business (aka the business of technology), technologists must possess a solid foundation of soft skills in areas such as communications, emotional intelligence, collaboration, problem resolution and more.

→| Job advertisements for technology positions represented approximately 13% of total hiring advertisements during Q1 2021, up from 11% during 2020. This stems from the ongoing trend of digital transformation and the growing presence of technology across industry sectors and businesses of all sizes. For Q1 2021, Poland experienced the highest proportion of job advertisements for technology roles at 36%. Germany, Portugal and Romania also had above average concentrations of tech hiring job advertisements. Top hiring industry sectors for technology professionals during Q1 2021:

> →| Information and Communication
> →| Manufacturing
> →| Administrative and Support Services
> →| Professional, Scientific and Technical Services
> →| Financial and Insurance

ECONOMIC SIZING AND GROWTH

	2021 Economic Base Proj. (billions)	2021 Economic Growth Proj.
Belgium	€475	4.0%
Czech Republic	€226	4.2%
France	€2 409	5.8%
Germany	€3 542	3.6%
Italy	€1 727	4.2%
Netherlands	€830	3.5%
Poland	€527	3.5%
Portugal	€211	3.9%
Romania	€237	6.0%
Spain	€1 198	6.4%

Source: IMF, constant currency

LABOUR FORCE AND UNEMPLOYMENT RATE

	Labour Force (millions)	2020 Unemployment Rate
Belgium	4.7	5.6%
Czech Republic	5.1	2.7%
France	26.7	8.2%
Germany	43.3	4.2%
Italy	22.3	9.1%
Netherlands	8.7	3.8%
Poland	16.1	3.2%
Portugal	4.6	6.8%
Romania	8.3	5.0%
Spain	19.1	15.5%

Source: Eurostat, IMF

EMPLOYER JOB POSTINGS FOR TECH HIRING
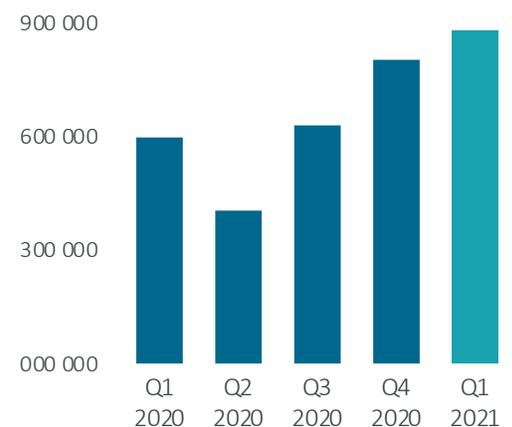
Source: Burning Glass Technologies Labour Insights

EMPLOYERS SEEK WELL-ROUNDED TECHNOLOGY PROFESSIONALS

→ Occupation-level and skills-level analysis of job postings confirms the depth and breadth of the tech workforce. As the macro trend of digital transformation continues to remake business operations across industry sectors, job roles and skills requirements will evolve accordingly.

→ Mirroring the pattern seen in most countries, the software developer occupation category accounts for the largest portion of job postings across the European countries covered in this report. Alternatively, during Q1 2021, there was more employer hiring activity around software positions relative to other categories. As a reminder, there is not a 1:1 relationship between hiring activity and actual hiring. For very competitive positions, such as an emerging field like an artificial intelligence (AI) architect, employers may have to deploy significant hiring resources to recruit a single candidate, resulting in a skewed hiring activity to hiring ratio.

→ Hiring activity during Q1 also confirms the interrelated nature of technology. Software applications require robust network infrastructure, data optimisation, systems integration, management and support, and of course, a strong cybersecurity posture. To achieve maximum return from technology investments, businesses require orchestration of not only the technologies, but also the personnel, processes and work flows.

→ At the skills level, summary analysis across all job postings for all tech job roles suggests employers tend to seek well-rounded candidates. This also reflects the ever-expanding nature of innovation, whereby new platforms, new coding languages, new hardware and devices, new data streams and new combinations of technology building blocks (think IoT) are a de facto part of the job for any technology professional. In the leading technical skills table, there is representation across these areas, including software, infrastructure, data and business applications. While cybersecurity is not specifically listed in these top 10 skills, it is becoming increasingly common for employers to expect baseline cybersecurity expertise for all IT professionals.

→ The intersection of business and technology (aka the business of technology) means business skills and soft skills can no longer be viewed as secondary, but rather, of equal importance with technical skills. The job posting data bears this out with employers specifically requiring team work, problem solving, creating thinking, project management and more.

→ While many employers now hire for skills, expertise and performance, certain criteria, such as years of experience, continue to play a role in hiring. During Q1 2021, employers focused much of their hiring efforts on entry-level positions with a desired years of experience of 0-2 years. It is difficult to determine, but presumably the 'not specified' segment is evenly distributed among job levels, with a portion allocated to entry-level, mid-level and advanced-level positions.

> → 39%   0-2 years of experience
> → 14%   3-10 years of experience
> → 11%   11+ years of experience
> → 36%   Not specified

→ Advertised tech salaries indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs. Specialised expertise, level of experience, location, non-advertised compensation in the form of bonuses and other factors account for the significant variance in tech salaries. See Methodology for additional factors affecting salary data.

LEADING TECH OCCUPATIONS FOR EMPLOYER HIRING ACTIVITY

Occupation Category	Job Postings Q1 2021
Software Developers	249 017
Systems Analysts and Cybersecurity	231 464
Systems Administrators	84 827
Web and Multimedia Developers	66 510
IT Support Specialists and Technicians	50 665
IT Installers and Servicers	48 077
IT Managers and CIOs	29 236
Network and Systems Technicians	19 589
Database and Network, Other	18 899
Applications Programmers	18 782

LEADING TECHNICAL SKILLS CITED IN TECH JOB POSTINGS

1. Office / Spreadsheets
2. Programming / Object-oriented programming
3. Business IT systems
4. SQL
5. IT system administration
6. Java
7. Database
8. Web programming / Front-end design
9. Unified Modelling Language
10. PHP

LEADING BUSINESS AND SOFT SKILLS CITED IN TECH JOB POSTINGS

1. Team work / Team focused
2. Problem solving
3. Creative thinking
4. Adaptability
5. Project management
6. Customer service
7. Proactive
8. Responsible
9. Time management
10. Work independently

REGIONAL SUMMARY

EMPLOYER JOB POSTINGS FOR TECH HIRING
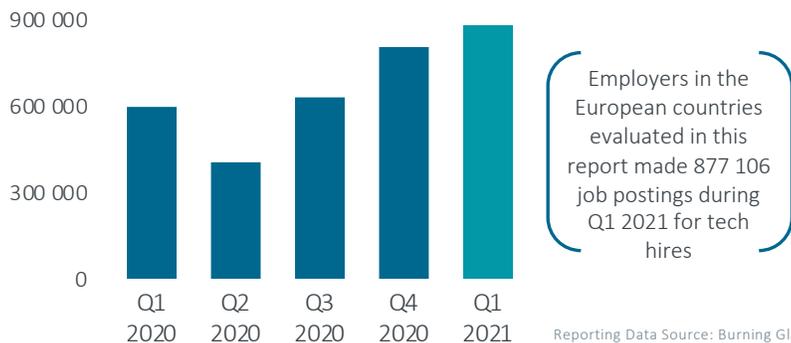
Employers in the European countries evaluated in this report made 877 106 job postings during Q1 2021 for tech hires

LEADING COUNTRIES FOR TECH HIRING

	Q1 2021	Change vs. Q4
Germany	421 109	-4%
France	121 863	+16%
Poland	105 921	+37%
Italy	60 082	+50%
Netherlands	53 313	+43%

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	351 787	+16%
Systems Analysts and Cybersecurity[1]	231 464	+4%
IT Support Specialists and Technicians	122 218	+5%
Network and Systems Admin. and Technicians	113 769	+4%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
39%	14%	11%	36%

LEADING EMPLOYERS FOR TECH HIRING (across region)

- Capgemini
- Sii Poland
- Billennium
- Brunel
- Grupo Digital
- Tecdata Engineering
- effiCity
- Aubay
- IEFP
- CGI
- LINKIT
- Smals
- FixedToday
- Axcent Company
- ICTP
- Johnson & Johnson
- Deloitte
- MassMutual Romania
- 2K Czech
- Avast

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Manufacturing
3. Administrative and Support Services
4. Professional, Scientific and Technical Services
5. Financial and Insurance

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Greater than €36.000	Up to €36.000
36%	64%
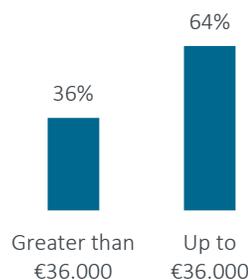
Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.

[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

BELGIUM

EMPLOYER JOB POSTINGS FOR TECH HIRING
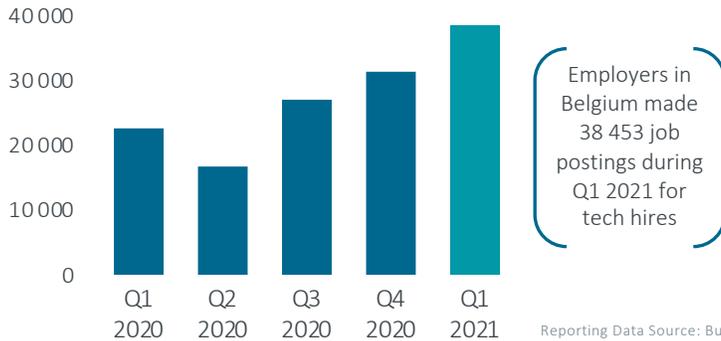
Employers in Belgium made 38 453 job postings during Q1 2021 for tech hires

Reporting Data Source: Burning Glass Technologies Labour Insights | CompTIA

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Brussels	5 527	+41%
Antwerp	5 389	+25%
Gent	3 150	+26%
Charleroi	2 172	+45%
Kortrijk	1 975	+15%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	19 139	+24%
Systems Analysts and Cybersecurity[1]	10 488	+29%
IT Support Specialists and Technicians	3 914	+18%
Network and Systems Admin. and Technicians	1 863	+13%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years — **40%**

3-10 years — **26%**

11+ years — **6%**

Not Specified — **28%**
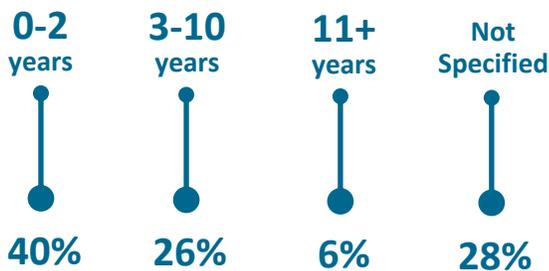
LEADING EMPLOYERS FOR TECH HIRING

1. Smals
2. Capgemini Belgium
3. Deloitte
4. Ernst & Young
5. UniPartners IT
6. Pauwels Consulting
7. BDO Belgium
8. Imalink
9. Colruyt Group
10. Federale Politie

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Administrative and Support Services
2. Information and Communication
3. Professional, Scientific and Technical Services
4. Manufacturing
5. Financial and Insurance

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Greater than €36.000 — 40%

Up to €36.000 — 60%

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.

[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.
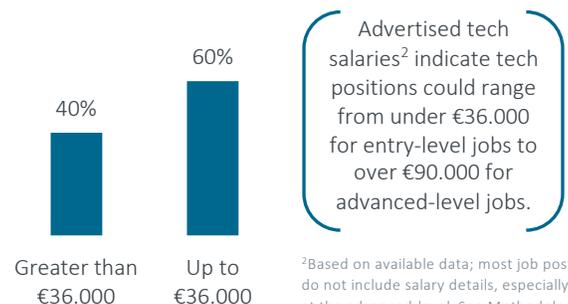
CZECH REPUBLIC

EMPLOYER JOB POSTINGS FOR TECH HIRING
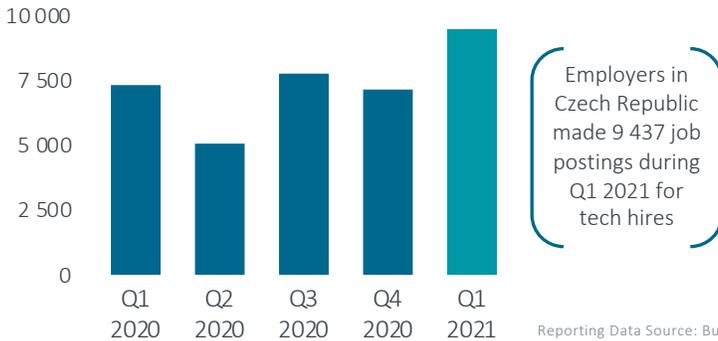
Employers in Czech Republic made 9 437 job postings during Q1 2021 for tech hires

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Prague (Hlavní město Praha)	2 525	+38%
Brno (Jihomoravský)	1 138	+6%
Ostrava (Moravskoslezský)	510	+19%
Pardubice (Pardubický)	228	+25%
Plzeň (Plzeň)	225	+64%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	4 064	+25%
Systems Analysts and Cybersecurity[1]	1 820	+59%
IT Support Specialists and Technicians	1 048	+54%
Network and Systems Admin. and Technicians	755	+18%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
51%	3%	8%	38%

LEADING EMPLOYERS FOR TECH HIRING

1. 2K Czech
2. Avast
3. NXP Semiconductors
4. FZU (Institute of Physics of the Czech Academy)
5. SVĚT OKEN
6. UBK
7. 24i Media CZ
8. TESCO
9. Vendavo
10. Škoda Auto

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Manufacturing
2. Financial and Insurance
3. Information and Communication
4. Professional, Scientific and Technical Services
5. Administrative and Support Services

[1] In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Greater than €36.000	Up to €36.000
51%	49%

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.

[2] Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

FRANCE

EMPLOYER JOB POSTINGS FOR TECH HIRING
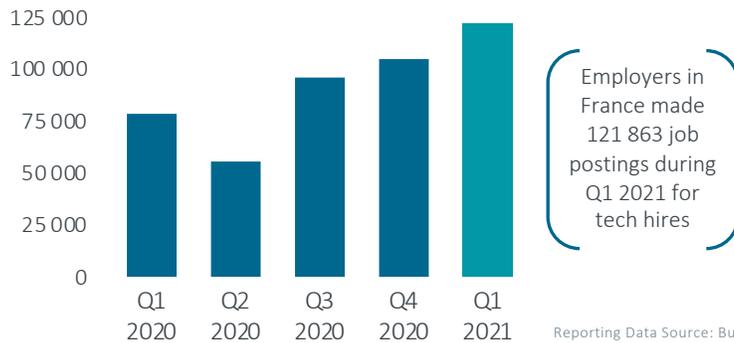
Employers in France made 121 863 job postings during Q1 2021 for tech hires

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Paris (Paris)	11 240	0%
Lyon (Rhone)	7 454	+19%
Toulouse (Haute-Garonne)	3 534	+31%
Bordeaux (Gironde)	2 969	+23%
Lille (Nord)	2 241	+9%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	43 704	+24%
Systems Analysts and Cybersecurity[1]	31 122	+15%
IT Support Specialists and Technicians	24 708	+12%
Network and Systems Admin. and Technicians	14 733	+14%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
33%	18%	12%	37%

LEADING EMPLOYERS FOR TECH HIRING

1. effiCity
2. CGI
3. Marine Nationale
4. Thales
5. Inetum
6. Optimhome
7. Capgemini
8. Armée de Terre
9. Devoteam
10. Le Bon Agent

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Financial and Insurance
2. Information and Communication
3. Administrative and Support Services
4. Professional, Scientific and Technical Services
5. Manufacturing

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Greater than €36.000 — 37%
Up to €36.000 — 63%

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.
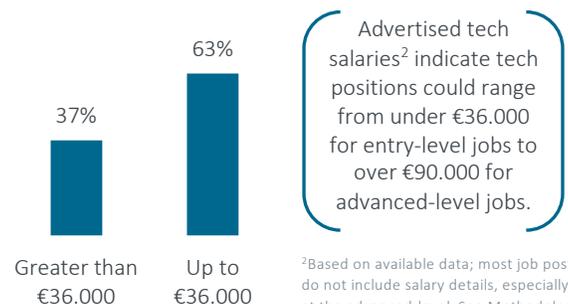
[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

GERMANY

EMPLOYER JOB POSTINGS FOR TECH HIRING
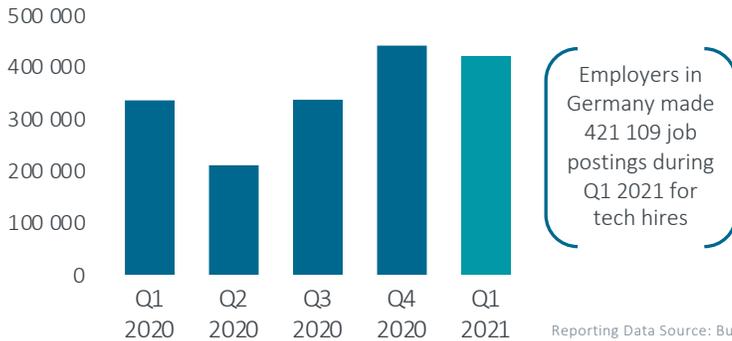
500 000
400 000
300 000
200 000
100 000
0

Q1 2020 | Q2 2020 | Q3 2020 | Q4 2020 | Q1 2021

Employers in Germany made 421 109 job postings during Q1 2021 for tech hires

Reporting Data Source: Burning Glass Technologies Labour Insights | CompTIA

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Munich	31 062	-3%
Berlin	30 960	+4%
Hamburg	22 788	-7%
Cologne	14 502	-10%
Düsseldorf	11 792	-9%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	136 859	0%
Systems Analysts and Cybersecurity[1]	128 873	-10%
Network and Systems Admin. and Technicians	73 927	-5%
IT Support Specialists and Technicians	62 583	-3%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years — 37%
3-10 years — 10%
11+ years — 11%
Not Specified — 41%

LEADING EMPLOYERS FOR TECH HIRING

1. Capgemini Deutschland
2. Brunel
3. Deutsche Bahn AG
4. dotSource
5. Modis
6. BWI
7. ANG
8. NConsult IT-Systemhaus
9. Magnus Consulting
10. itelligence Global Managed Services

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Manufacturing
2. Information and Communication
3. Administrative and Support Services
4. Professional, Scientific and Technical Services
5. Government, Public Administration and Defense

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

50% — Greater than €36.000
50% — Up to €36.000

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.

[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

ITALY

EMPLOYER JOB POSTINGS FOR TECH HIRING

Employers in Italy made 60 082 job postings during Q1 2021 for tech hires

Bars: Q1 2020, Q2 2020, Q3 2020, Q4 2020, Q1 2021
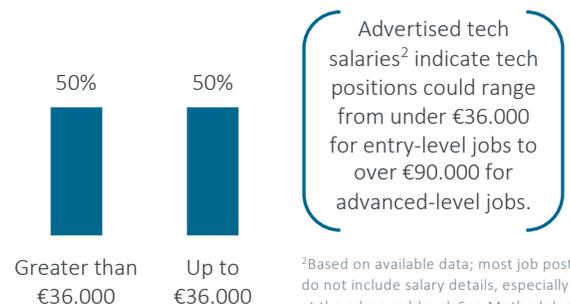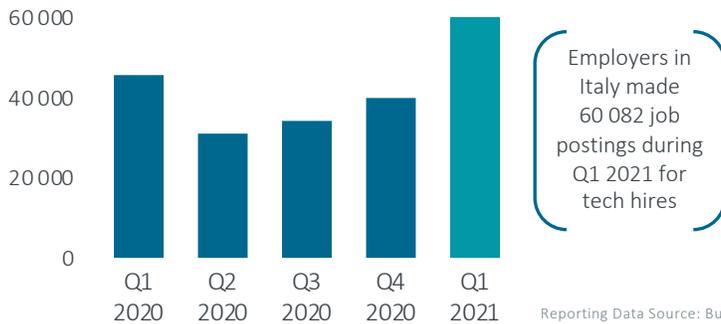
Reporting Data Source: Burning Glass Technologies Labour Insights | CompTIA

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Milan	8 428	+61%
Rome	4 724	+51%
Bologna	1 642	+47%
Torino	1 517	+15%
Naples	1 162	+32%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	28 616	+49%
Systems Analysts and Cybersecurity[1]	13 059	+54%
IT Support Specialists and Technicians	7 901	+55%
Network and Systems Admin. and Technicians	6 163	+39%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
31%	20%	12%	38%

LEADING EMPLOYERS FOR TECH HIRING

1. Axcent Company
2. ICTP
3. IT Consulting
4. Esprimo Milano
5. Philmark Group
6. RL Italia
7. Niuma
8. Ali Group
9. Carpe Diem Solutions
10. Omicron Consulting

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Professional, Scientific and Technical Services
3. Manufacturing
4. Accommodation and Food Services
5. Administrative and Support Services

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Greater than €36.000 — 31%
Up to €36.000 — 69%

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.

[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

NETHERLANDS

EMPLOYER JOB POSTINGS FOR TECH HIRING
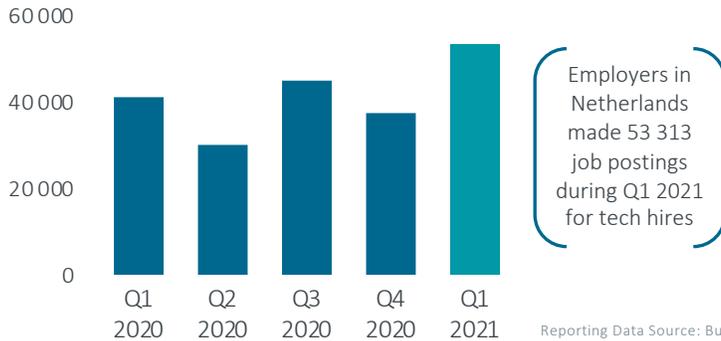
Employers in Netherlands made 53 313 job postings during Q1 2021 for tech hires

Reporting Data Source: Burning Glass Technologies Labour Insights | CompTIA

## LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Amsterdam (Groot-Amsterdam)	8 337	+43%
Utrecht (Utrecht)	7 678	+29%
Rotterdam (Groot-Rijnmond)	3 487	+49%
Antwerp (Zuidoost-Noord-Brabant)	2 862	+30%
Enschede (Noord-Overijssel)	2 590	+116%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	26 575	+44%
Systems Analysts and Cybersecurity[1]	13 779	+45%
Network and Systems Admin. and Technicians	4 611	+40%
IT Support Specialists and Technicians	4 284	+35%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
40%	12%	16%	32%

LEADING EMPLOYERS FOR TECH HIRING

1. LINKIT
2. FixedToday
3. Anjumo
4. Belastingdienst
5. CGI Inc
6. Brunel
7. Rabobank
8. Johnson & Johnson
9. Booking.com
10. Ernst & Young

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Transportation and Storage
3. Arts, Entertainment and Recreation
4. Manufacturing
5. Professional, Scientific and Technical Services

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Greater than €36.000 — 42%
Up to €36.000 — 58%

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.

[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.
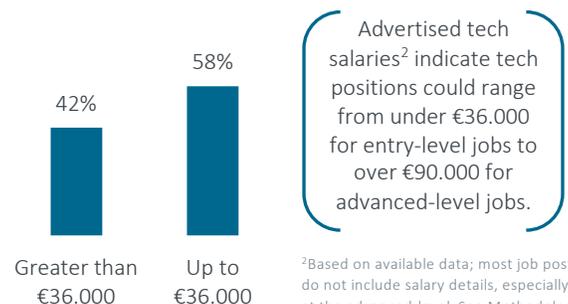
POLAND

EMPLOYER JOB POSTINGS FOR TECH HIRING
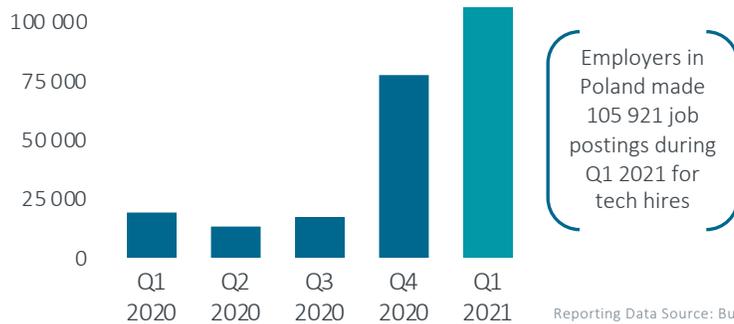
100 000	
75 000	
50 000	
25 000	
0	Q1 2020 · Q2 2020 · Q3 2020 · Q4 2020 · Q1 2021

Employers in Poland made 105 921 job postings during Q1 2021 for tech hires

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Warsaw	12 952	+36%
Kraków	10 666	+20%
Łódź	9 556	+14%
Wrocław	4 919	+4%
Radom	3 222	+44%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	58 219	+40%
Systems Analysts and Cybersecurity[1]	19 015	+38%
IT Support Specialists and Technicians	9 579	+20%
Network and Systems Admin. and Technicians	6 710	+43%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
58%	8%	10%	24%

LEADING EMPLOYERS FOR TECH HIRING

1. Sii Poland
2. Billennium
3. ING Bank Śląski
4. Capgemini Software Solutions Center
5. Sage
6. ING Tech Poland
7. Quad/Graphics Europe
8. Acxiom Global Service Center Polska
9. Ringier Axel Springer Polska
10. Asseco Poland S.A.

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Administrative and Support Services
3. Professional, Scientific and Technical Services
4. Financial and Insurance
5. Wholesale and Retail

[1] In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Greater than €36.000	Up to €36.000
21%	79%

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.
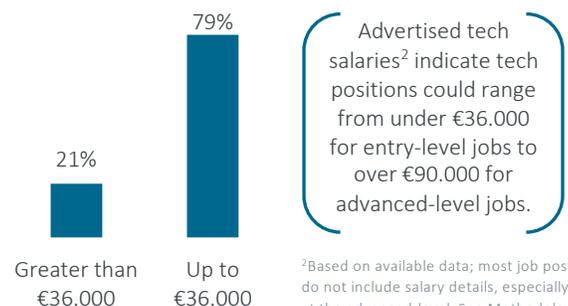
[2] Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

PORTUGAL

EMPLOYER JOB POSTINGS FOR TECH HIRING
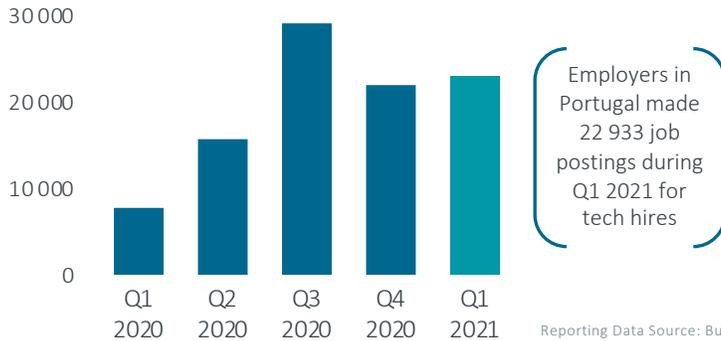
Employers in Portugal made 22 933 job postings during Q1 2021 for tech hires

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Lisbon	13 476	+14%
Porto	4 695	-7%
Tejo	437	+74%
Ave	424	+201%
Leiria	227	-32%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	11 969	+5%
Systems Analysts and Cybersecurity[1]	4 107	+5%
IT Support Specialists and Technicians	3 853	-1%
Network and Systems Admin. and Technicians	1 297	+7%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
46%	14%	10%	30%

LEADING EMPLOYERS FOR TECH HIRING

1. Aubay
2. IEFP
3. KCS IT
4. SYSMATCH
5. DECSKILL
6. agap2IT
7. BOLD by Devoteam
8. Noesis Portugal
9. Dellent Consulting
10. InnoWave

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Administrative and Support Services
3. Professional, Scientific and Technical Services
4. Manufacturing
5. Financial and Insurance

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.

- Greater than €36.000 — 31%
- Up to €36.000 — 69%

[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

ROMANIA

EMPLOYER JOB POSTINGS FOR TECH HIRING
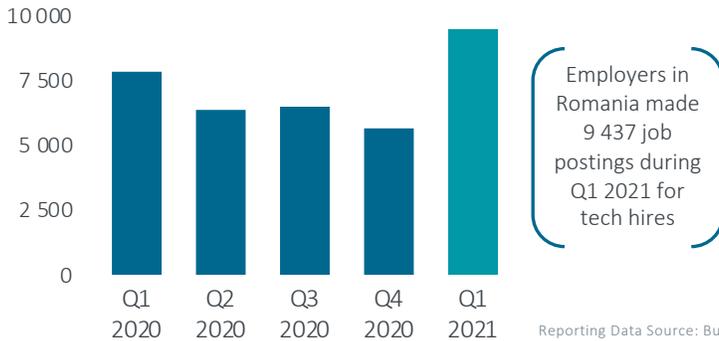
Employers in Romania made 9 437 job postings during Q1 2021 for tech hires

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Constanța (Sud-Est)	2 000	+54%
Brașov (Centru)	1 116	+41%
Cluj-Napoca (Nord-Vest)	691	+36%
Iași (Nord-Est)	341	+32%
Bucharest (București-Ilfov, Sud-Muntenia)	268	+42%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	3 390	+17%
Systems Analysts and Cybersecurity[1]	1 410	+12%
IT Support Specialists and Technicians	483	+10%
Network and Systems Admin. and Technicians	376	+26%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
54%	12%	8%	26%

LEADING EMPLOYERS FOR TECH HIRING

1. Johnson & Johnson
2. MassMutual Romania
3. Continental AG
4. Cognizant Softvision
5. Ubisoft
6. Inetum
7. Fortech
8. Accenture
9. Bosch Group
10. Qualitest Group

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Professional, Scientific and Technical Services
3. Administrative and Support Services
4. Financial and Insurance
5. Healthcare and Social Services

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

41% Greater than €36.000

59% Up to €36.000

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.
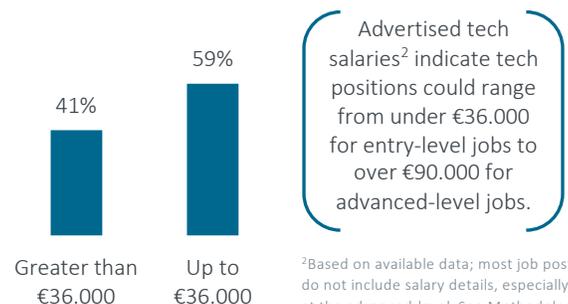
[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

SPAIN

EMPLOYER JOB POSTINGS FOR TECH HIRING
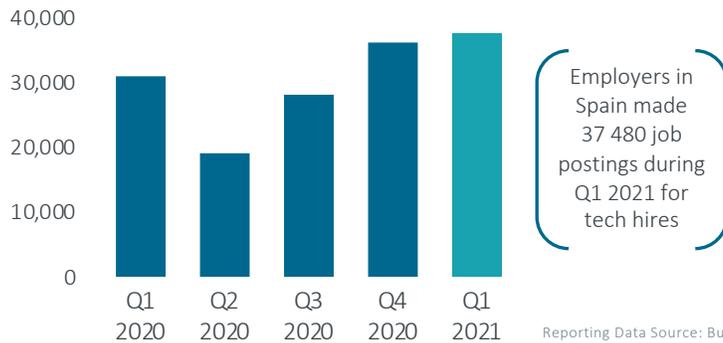
Employers in Spain made 37 480 job postings during Q1 2021 for tech hires

Reporting Data Source: Burning Glass Technologies Labour Insights | CompTIA

LEADING METRO AREAS (REGIONS) FOR TECH HIRING

	Q1 2021	Change vs. Q4
Madrid	14 002	+6%
Barcelona	6 941	+1%
Seville	1 140	+4%
Málaga	841	+23%
Bilbao	834	+5%

See Methodology for how regions and metropolitan areas are defined.

LEADING JOB ROLE CATEGORIES IN DEMAND

	Q1 2021	Change vs. Q4
Software Developers, Programmers and Web	19 252	+1%
Systems Analysts and Cybersecurity[1]	7 791	+13%
IT Support Specialists and Technicians	3 865	+7%
Network and Systems Admin. and Technicians	3 334	-4%

TECH HIRING BY REQUESTED YEARS OF EXPERIENCE

0-2 years	3-10 years	11+ years	Not Specified
30%	48%	15%	16%
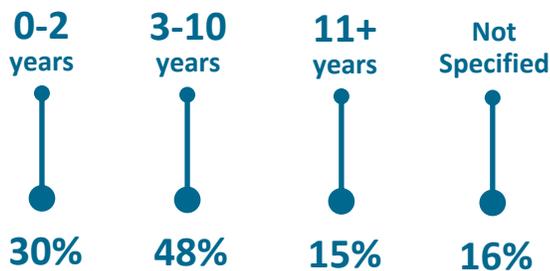
LEADING EMPLOYERS FOR TECH HIRING

1. Grupo Digital
2. Tecdata Engineering
3. CMV Consultores
4. Rawson
5. Krashlando
6. BETWEEN Technology
7. PSS Tecnologías de la Información
8. Krell Consulting & Training
9. Soltel
10. Inetum

LEADING INDUSTRY SECTORS FOR TECH HIRING

1. Information and Communication
2. Professional, Scientific and Technical Services
3. Administrative and Support Services
4. Manufacturing
5. Government, Public Administration and Defense

[1]In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with Systems Analysts.

TECH OCCUPATION SALARIES

Advertised tech salaries[2] indicate tech positions could range from under €36.000 for entry-level jobs to over €90.000 for advanced-level jobs.
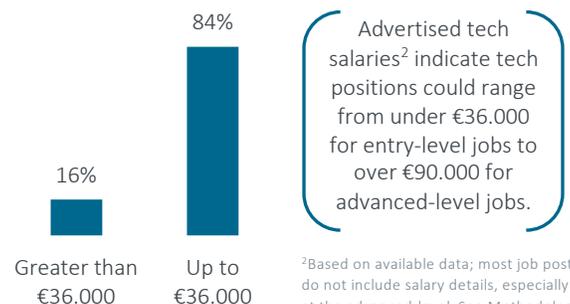
[2]Based on available data; most job postings do not include salary details, especially those at the advanced-level. See Methodology.

APPENDIX

APPENDIX I

ID	Occupation Category	Total
1330	IT Managers and CIOs	29 236
2153	Telecommunications Engineers	2 471
2511	Systems Analysts and Cybersecurity	231 464
2512	Software Developers	249 017
2513	Web and Multimedia Developers	66 510
2514	Applications Programmers	18 782
2519	Software and Applications Developers Other	10 919
2521	Database Designers and Administrators	7 262
2522	Systems Administrators	84 827
2523	Network Administrators and Engineers	9 353
2529	Database and Network Professionals Other	18 899
3511	IT Operations Technicians	9 390
3512	IT Support Specialists and Technicians	50 665
3513	Network and Systems Technicians	19 589
3514	Web Technicians	6 559
3521	A/V technicians	14 086
7422	IT Installers and Servicers	48 077
	Q1 2021 TOTAL	877 106

APPENDIX II

ID	Occupation Category	Belgium	Czech Republic	France	Germany	Italy
1330	IT Managers and CIOs	1 368	1 569	5 635	6 830	1 596
2153	Telecommunications Engineers	89	4	256	1 057	554
2511	Systems Analysts and Cybersecurity	10 488	1 820	31 122	128 873	13 059
2512	Software Developers	12 901	3 143	33 182	101 366	21 387
2513	Web and Multimedia Developers	5 034	460	5 890	16 156	3 690
2514	Applications Programmers	678	242	1 168	11 545	1 707
2519	Software and Applications Developers Other	392	170	845	5 676	550
2521	Database Designers and Administrators	338	78	749	3 134	324
2522	Systems Administrators	1 003	641	10 773	57 943	4 322
2523	Network Administrators and Engineers	343	55	2 357	1 932	1 256
2529	Database and Network Professionals Other	1 254	99	956	7 846	1 869
3511	IT Operations Technicians	507	187	3 186	1 336	1 637
3512	IT Support Specialists and Technicians	2 583	784	13 962	14 582	5 108
3513	Network and Systems Technicians	517	59	1 603	14 052	585
3514	Web Technicians	134	49	2 619	2 116	1 282
3521	A/V technicians	586	17	6 208	1 860	394
7422	IT Installers and Servicers	238	60	1 352	44 805	762
	Q1 2021 TOTAL	38 453	9 437	121 863	421 109	60 082

ID	Occupation Category	Netherlands	Poland	Portugal	Romania	Spain
1330	IT Managers and CIOs	1 474	8 466	454	454	1 390
2153	Telecommunications Engineers	87	73	62	15	274
2511	Systems Analysts and Cybersecurity	13 779	19 015	4 107	1 410	7 791
2512	Software Developers	15 531	34 345	8 555	2 489	16 118
2513	Web and Multimedia Developers	8 819	21 046	2 554	586	2 275
2514	Applications Programmers	1 342	720	561	187	632
2519	Software and Applications Developers Other	796	1 970	241	113	166
2521	Database Designers and Administrators	342	1 496	201	58	542
2522	Systems Administrators	2 631	4 950	806	184	1 574
2523	Network Administrators and Engineers	1 598	1 267	167	66	312
2529	Database and Network Professionals Other	2 161	2 363	990	329	1 032
3511	IT Operations Technicians	357	1 798	144	71	167
3512	IT Support Specialists and Technicians	3 499	3 101	3 432	316	3 298
3513	Network and Systems Technicians	382	493	324	126	1 448
3514	Web Technicians	87	138	58	15	61
3521	A/V technicians	142	4 510	147	92	130
7422	IT Installers and Servicers	286	170	130	4	270
	Q1 2021 TOTAL	53 313	105 921	22 933	6 515	37 480

METHODOLOGY

This report was developed by CompTIA using employer job posting data aggregated by Burning Glass Technologies Labour Insights (https://www.burning-glass.com).

Burning Glass aggregates employer job posting data across a range of sources to produce the best possible depiction of hiring activity. As with any data source, however, there are limitations. Employer job posting data is a useful, but an imperfect proxy for job demand. Not every posting translates to a new job; hiring employers may change their plans, post multiple times for the same job, hire internally, try different approaches to find the right candidate and so forth. Also, one ad may be posted for multiple openings. Burning Glass data methodologies address many of these potential issues, but there will inevitably some margin of error.

Additionally, within a time period, there may be situations where a worker is hired, the person is not the right fit and is let go, and a firm starts the process over again. In the aggregate there is single position, but using job posting data, it may appear there are 2 positions.

CompTIA recommends using job posting data in conjunction with government labour market statistics and other data sources where available to get a more complete picture of workforce dynamics for a given occupation category.

Occupation categories are standardised for consistency and to enable comparisons across markets. The tradeoff is slightly less granularity, especially in certain newer job roles. For example, this data set does not have dedicated categories for cybersecurity, cloud, data scientist, or artificial intelligence. Rather, these positions are combined under broader occupation categories.

Location data maps to the European Union's regional taxonomy. The Nomenclature of territorial units for statistics, abbreviated NUTS (from the French version Nomenclature des Unités territoriales statistiques) is a geographical nomenclature subdividing the economic territory of the European Union (EU) into regions at three different levels (NUTS 1, 2 and 3 respectively, moving from larger to smaller territorial units). Above NUTS 1, there is the 'national' level of the Member States. See the European Union's Eurostat site for more detail.

To make the data most accessible to readers, CompTIA lists the major city or metro area within the region; and in some cases the accompanying region in parenthesis as noted above. The data does not fully represent the city or metro area, but generally, cities and metro areas have the highest concentration of workers in a region and therefore can reasonably serve as a proxy for the location's hiring trends.

As noted in the footnote associated with the salary data, the information presented in this report should be used for directional guidance only. Most job postings do not include salary details. The data presented is a relatively small subset of overall hiring activity. The final negotiated salary may differ from the advertised salary and the addition of bonuses or other forms of compensation may increase annual earnings. Advanced-level positions are more likely to omit salary details, resulting in a skewing of the data downward.

Please contact the CompTIA Research and Market Intelligence Department at research@comptia.org with any questions.

CompTIA.org