COUNTRY: **GERMANY**

SCORE: 79.06 | RANK: 4/24

Germany has comprehensive cybercrime legislation and up-to-date intellectual property protection in place. The combination of these laws provides reasonable protection for cloud computing services in Germany. However, there is some continuing uncertainty about whether Web-hosting businesses and access providers are liable under the Civil Code for copyright breaches that occur on their systems.

Germany also has modern electronic commerce and electronic signature laws in place. Like most European countries, Germany has comprehensive privacy legislation, but it includes onerous registration requirements that may act as a cost barrier for the use of cloud computing.

In addition, Germany has 17 data protection authorities, which leads to uncertainty in the application of the law.

Germany has a strong commitment to international standards and interoperability.

Germany is making good progress on extending broadband access to the population.

Germany's score improved by one-tenth of a point in the 2013 Scorecard, and the country slipped one spot in the rankings, from 3rd to 4th.

Q GERMANY	RESPONSE	EXPLANATORY TEXT
DATA PRIVACY		
1. Are there laws or regulations governing the collection, use, or other processing of personal information?	✔	The main legislation is the Federal Personal Data Protection Act 2001 (Bundesdatenschutzgesetz) (BDSG). However, a number of additional Data Protection Acts apply at the state level in Germany.
2. What is the scope and coverage of privacy law?	Comprehensive	Germany has comprehensive privacy laws for both the public and private sectors.
3. Is the privacy law compatible with the Privacy Principles in the EU Data Protection Directive?	✔	BDSG implements the EU Directive in German law.
4. Is the privacy law compatible with the Privacy Principles in the APEC Privacy Framework?	✔	The German legislation is equivalent to, or more far-reaching than, the APEC Privacy Principles.
5. Is an independent private right of action available for breaches of data privacy?	Available	The German Constitution provides "personality rights," which are broadly equivalent to privacy rights. These rights were upheld by the European Court of Human Rights in the high-profile case Von Hannover v. Germany [2004] ECHR 294 <www.bailii.org/eu/cases/ECHR/2004/294.html>
6. Is there an effective agency (or regulator) tasked with the enforcement of privacy laws?	Sectoral regulator	In Germany, privacy authorities for the private sector exist at the state level, each with a commissioner responsible for one state. A federal commissioner has a role in relation to government agencies.
7. What is the nature of the privacy regulator?	Sole commissioner	The 16 data protection authorities are listed at <www.bundesdatenschutz.de>.
8. Are data controllers free from registration requirements?	✘	Notification requirements are in place for most data processing. However, some limited exemptions apply where the organization has an "internal data controller" in place and the processing is low risk.
9. Are cross-border transfers free from registration requirements?	✔	Organizations can transfer data to a non-EU country only if that country ensures an adequate level of protection. However, a long list of exceptions is in place, including reliance on consent and contractual arrangements.
10. Is there a breach notification law?	◑	Organizations must notify the data protection authority and data subjects if a breach occurs that threatens serious harm to the data subjects' rights or legitimate interests. However, this rule applies only for certain limited categories of data, including data subject to professional secrecy, data relating to criminal or administrative offenses, and bank or credit card accounts data.

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SECURITY		
1. Is there a law or regulation that gives electronic signatures clear legal weight?	✔	The Digital Signature Act 2001 sets out the rules for using electronic signatures that will receive the same legal status as handwritten signatures. The law is complemented by the Ordinance on Electronic Signatures 2001, which sets out the rules for establishing certification authorities and minimum technical requirements for digital signatures.
2. Are ISPs and content service providers free from mandatory filtering or censoring?	◑	Germany has strict censorship laws in place relating to specific online content, principally Holocaust denial and related content. These laws are regularly enforced by the state courts. Plans to introduce mandatory Internet filtering (aimed principally at online child pornography) were abandoned in 2011.
3. Are there laws or enforceable codes containing general security requirements for digital data hosting and cloud service providers?	Limited coverage in legislation	The data protection legislation states that organizations must implement technical and organizational measures to ensure the security of information. Measures must be "reasonable in relation to the desired level of protection."
4. Are there laws or enforceable codes containing specific security audit requirements for digital data hosting and cloud service providers?	None	There are no specific security audit requirements in Germany. However, security audit requirements have been proposed on several occasions in the federal Parliament, and the government currently recommends voluntary compliance with national information security audit guidelines.
5. Are there security laws and regulations requiring specific certifications for technology products?	Comprehensive requirements (including common criteria)	Germany is a Certificate Authorizing Member (the highest level) of the Common Criteria Recognition Agreement (CCRA) <www.commoncriteriaportal.org>, and certification requirements in Germany are common.
CYBERCRIME		
1. Are cybercrime laws in place?	✔	The German Criminal Code contains comprehensive provisions on computer crime and cybercrime.
2. Are cybercrime laws consistent with the Budapest Convention on Cybercrime?	✔	Germany ratified the Convention on Cybercrime in 2009.
3. What access do law enforcement authorities have to encrypted data held or transmitted by data hosting providers, carriers, or other service providers?	Access with a warrant	Certain government entities are authorized to request passwords and encryption keys under Section 113 of the Telecommunications Act. However, the inquiries may be used only to identify the person who generated a certain communication or connection at a certain point in time.
4. How does the law deal with extraterritorial offenses?	Comprehensive coverage	German law, backed by the courts, has very broad coverage of extraterritoriality for cybercrimes. This is largely the result of specific court cases relating to Holocaust denial sites (illegal in German law) but is likely to have wider application to other cybercrimes. Generally any cybercrime that has an impact in Germany will be held to be within jurisdiction, even in the absence of other physical links with the jurisdiction.
INTELLECTUAL PROPERTY RIGHTS		
1. Is the country a member of the TRIPS Agreement?	✔	Germany became a member of the TRIPS Agreement in 1995.
2. Have IP laws been enacted to implement TRIPS?	✔	Germany has implemented the TRIPS Agreement in local laws.
3. Is the country party to the WIPO Copyright Treaty?	✔	Germany signed the WIPO Copyright Treaty in 1996 and ratified it in 2009. It entered into force in Germany in March 2010.
4. Have laws implementing the WIPO Copyright Treaty been enacted?	✔	The Urhebergesetz (Copyright Act) has been updated several times to incorporate the provisions of the WIPO Copyright Treaty.
5. Are civil sanctions available for unauthorized making available (posting) of copyright holders' works on the Internet?	✔	Section 19(A) of the German Copyright Act was introduced in 2003. It includes specific provisions where an individual makes available works in a file-sharing network without holding the rights to them.
6. Are criminal sanctions available for unauthorized making available (posting) of copyright holders' works on the Internet?	◑	In some limited circumstances, criminal sanctions may be available for making available copyright works. However, criminal sanctions will usually be restricted to serious cases, such as a criminal conspiracy to interfere in the property rights of others.
7. Are there laws governing ISP liability for content that infringes copyright?	✔	This is governed in the European Union by the EU E-Commerce Directive (2000/31/EC) <ec.europa.eu/internal_market/e-commerce> and in Germany by the Telemedia Act 2007.

Q GERMANY	RESPONSE	EXPLANATORY TEXT
8. Is there a basis for ISPs to be held liable for content that infringes copyright found on their sites or systems?	◑	Article 8 of the Telemedia Act expressly states that access providers are not legally responsible for their customers' content unless they collaborate with users in breaking the law. However, courts have continued to disagree on whether Web-hosting businesses and access providers can be made liable under the concept of Störerhaftung (liability of the interferer), defined in the Civil Code (for example, in Sections 862 and 1004) as interference with the property of others.
9. What sanctions are available for ISP liability for copyright infringing content found on their site or system?	Civil	Civil sanctions are clearly available, although liability will depend on the level of involvement by the ISP. Criminal sanctions are unlikely, although they may be used in a serious case involving a criminal conspiracy to deliberately interfere with the property rights of others.

10. Must ISPs take down content that infringes copyright, upon notification by the right holder?	✔	Under Article 10 of the Telemedia Act:
		    Service providers shall not be responsible for the information of third parties which they store for a recipient of a service, as long as:
		        1. They have no knowledge of the illegal activity or the information and, as regards claims for damages, are not aware of any facts or circumstances from which the illegal activity or the information is apparent, or
		        2. Upon obtaining such knowledge, have acted expeditiously to remove the information or to disable access to it.
		    Article 10(1) shall not apply when the recipient of the service is acting under the authority or control of the service provider.

11. Are ISPs required to inform subscribers upon receiving a notification that the subscriber is using the ISP's service to distribute content that infringes copyright?	✘	There are no particular obligations on ISPs. Notification obligations fall on rights holders, who may send several warning letters to alleged infringers.
12. Is there clear legal protection against misappropriation of cloud computing services, including effective enforcement?	Comprehensive protection	Germany has effective privacy legislation, comprehensive cybercrime legislation, and reasonable IP protection. The combination of these laws provides clear protection for cloud computing services in Germany.
SUPPORT FOR INDUSTRY-LED STANDARDS & INTERNATIONAL HARMONIZATION OF RULES		
1. Are there laws, regulations or policies that establish a standards-setting framework for interoperability and portability of data?	✔	Standards setting in Germany is subject to government sectoral policy rather than legislation. Most tasks have been delegated to the German Institute for Standardization (Deutsches Institut für Normung [DIN]) <www.din.de> by contract.
2. Is there a regulatory body responsible for standards development for the country?	✔	The German Institute for Standardization is contracted by the German government to manage standards development, certification, and accreditation.
3. Are e-commerce laws in place?	✔	The Act on Framework Conditions for Electronic Commerce was passed in 2001.
4. What international instruments are the e-commerce laws based on?	UNCITRAL Model Law on E-Commerce	The Act on Framework Conditions for Electronic Commerce 2001 implements the EU E-Commerce Directive into German law. The EU Directive is largely based on the UNCITRAL Model Law on E-Commerce.
5. Is the downloading of applications or digital data from foreign cloud service providers free from tariff or other trade barriers?	✔	There are no relevant tariffs or other barriers in Germany.
6. Are international standards favored over domestic standards?	✔	Germany favors and implements EU standards and international standards in most sectors.
7. Does the government participate in international standards-setting process?	✔	The German Institute for Standardization represents Germany on the International Standards Organization, and Germany is an active participant in the international standards process.
PROMOTING FREE TRADE		
1. Are any laws or policies in place that implement technology neutrality in government?	✔	The German Regulation on the Award of Public Contracts (updated in 2009) promotes a technology-neutral approach to all procurement, subject to some limited exceptions.

Q GERMANY	RESPONSE	EXPLANATORY TEXT
2. Are cloud computing services able to operate free from laws or policies that mandate the use of certain products (including, but not limited to, types of software), services, standards, or technologies?	✔	There are no mandatory requirements in place in Germany.
3. Are cloud computing services able to operate free from laws or policies that establish preferences for certain products (including, but not limited to, types of software), services, standards, or technologies?	◑	The Federal Bureau for Information Technology (BIT) <www.bva.bund.de> has made some formal recommendations that provide a preference for certain open source products for government agencies (2009) — refer to the Competence Center Open Source Software in the Federal Office for Information Technology (BIT) of the Federal Administrative Office promotion of Open Source Software (OSS) in the federal administration <www.oss.bund.de>. The likely impact on cloud computing is limited.
4. Are cloud computing services able to operate free from laws that discriminate based on the nationality of the vendor, developer, or service provider?	✔	There are no laws in Germany that discriminate based on the nationality of vendors. Germany is a member of the WTO plurilateral Agreement on Government Procurement.
ICT READINESS, BROADBAND DEPLOYMENT		
1. Is there a national broadband plan?	• By 2014, 75% of households to have download speeds of 50 Mbps	In February 2009 the German Federal Ministry of Economics and Technology released the Breitbandstrategie der Bundesregierung (Broadband Strategy of the Federal Government) < www.zukunft-breitband.de/DE/breitbandstrategie.html>, with targets including: • By 2014, 75% of households will have download speeds of 50 Mbps. Germany's stated method in realizing its national broadband targets is through competition, technology, and supplier diversity and requiring participating federal, state, local, and industry involvement with implementation. Germany's strategy has been the subject of criticism, stating the medium-term target of 50Mbs for 75% of households by 2015 can be achieved only through the rollout of fiber, which is so far available in only about 1% of German households. Germany has set up a Federal Bureau of Broadband to support the broadband strategy of the federal government <www.breitbandbuero.de>. Note: The European Commission has set targets for all European households to have download speeds of at least 30 megabits per second (Mbps) by 2020, and by 2025 50% of households at 100 Mbps.
2. Are there laws or policies that regulate the establishment of different service levels for data transmission based on the nature of data transmitted?	Regulation under consideration by government and extensive public debate	Germany appears to be more reticent than its European neighbors in considering and adopting policies to promote network neutrality. There has been extensive debate on the issues (and the overturned blocking of Skype traffic in 2009), but there have been no firm proposals to include or exclude principles of net neutrality at this stage. The EU is actively considering options to manage net neutrality issues, including the 2012 public consultation on 'Specific aspects of transparency, traffic management and switching in an Open Internet' <ec.europa.eu/digital-agenda/en/line-public-consultation-specific-aspects-transparency-traffic-management-and-switching-open>. This may have an impact on the implementation of net neutrality principles in member countries.
3. Base Indicators		
3.1. Population (2011)	82,162,512	In 2011, the population of Germany decreased by -0.1%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>]
3.2. Urban Population (%) (2011)	74%	[United Nations, Department of Economic and Social Affairs, Population Division (2012). World Urbanization Prospects: The 2011 Revision, <esa.un.org/unup/CD-ROM/Urban-Rural-Population.htm>]
3.3. Number of Households (2011)	39,135,000	In 2011, the number of households in Germany increased by 1.1%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>]
3.4. Population Density (people per square km) (2010)	234	[World Bank, Data Catalog, Indicators, Population Density (2012) <data.worldbank.org/indicator/EN.POP.DNST>]

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3.5. Per Capita GDP (US$ 2011)	$43,689	In 2011, the per capita GDP for Germany increased by 3% to US$43,689. [World Bank, Data Catalog, Indicators: GDP per capita, current US$ (2012) <data.worldbank.org/indicator/NY.GDP.PCAP.CD> and GDP growth, annual % (2012) <data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>]
3.6. Public Cloud Services Market Value (2011) (Billions of US$)	4.28	Gartner has calculated the value of the public cloud services market in Germany in 2011 to be US$4.28 billion. This is a 22% increase from 2010 and ranks Germany 4 (out of 20 countries) in the forecast. Gartner has projected the five-year compound annual growth rate (CAGR) to 2016 to be 12.9%, and this ranks Germany 15 (out of 20 countries) for growth in the value of the market for public cloud services to 2016. [Gartner, Forecast Overview: Public Cloud Services, Worldwide, 2011-2016 (August 2012 Update) <www.gartner.com/id=2126916>]
3.7. Personal Computers (% of households) (2011)	90%	In 2011, 89.6% of households in Germany had personal computers. This is a 4.5% increase since 2010 and ranks Germany 10 out of 182 countries surveyed. The growth from 2010 is above the five-year CAGR from 2006 to 2011 of 3.1%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx>] Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may update this indicator for prior years.
4. ICT and Network Readiness Indicators		
4.1. ITU ICT Development Index (IDI) (2011) (Score is out of 10)	7.39	Germany's ITU ICT Development Index (IDI) for 2011 is 7.39 (out of 10), resulting in a rank of 16 (out of 161 economies). The 2011 IDI for Germany has increased by 2.9%, and the IDI ranking has declined by one place from a rank of 15 since 2010. [International Telecommunication Union (ITU), Measuring the Information Society (2012) <www.itu.int/ITU-D/ict/publications/idi/2012>] Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and prior years.
4.2. World Economic Forum Networked Readiness Index (NRI) (2012) (Score is out of 7)	5.41	Germany has a Networked Readiness Index (NRI) score of 5.41 (out of 7), resulting in a rank of 6 (out of 142 economies) and a rank of 6 (out of 47) in the high-income grouping of economies. The 2012 NRI for Germany has increased by 5.3% and improved from a rank of 13 since 2011. [World Economic Forum, Global Information Technology Report (2012) <www.networkedreadiness.com/gitr>]
4.3. International Connectivity Score (2011) (Score is out of 10)	6.27	Germany has a Connectivity Score of 6.27 (out of 10), resulting in a rank of 13 (out of 25) in the innovation-driven grouping of countries/economies. [Nokia Siemens, Connectivity Scorecard (2011) <www.connectivityscorecard.org>]
4.4. IT Industry Competitiveness Index (2011) (Score is out of 100)	64.10	Germany has an IT Industry Competitiveness Index Score of 64.1 (out of 100), resulting in a rank of 15 (out of 66 countries/economies included in the index). The 2011 index score is a 8.5% increase on the 2009 score. Germany has moved up the ranking by five places since 2009. [Business Software Alliance (BSA) / Economist Intelligence Unit (EIU), IT Industry Competitiveness Index (2011) <globalindex11.bsa.org>]
5. Internet Users and International Bandwidth		
5.1. Internet Users (2011)	68,194,885	[calculated from 8.3.1. and 8.5.2.]
5.2. Internet Users as % of Population (2011)	83%	In 2011, 83% of the population in Germany used the Internet, resulting in a ranking of 16 out of 199 countries surveyed. This is a 1.2% increase since 2010. The growth from 2010 is below the five-year CAGR from 2006 to 2011 of 2.8%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (December 2012) <www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx>] Note: There may be some variations as to how countries calculate this. Some countries base this upon all or part of the population, such as between 16 and 72 years of age. Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and for prior years.
5.3. International Internet Bandwidth (bits per second per Internet user) (2011)	74,786	Germany's International Internet Bandwidth (per Internet user) has increased by 1% since 2010. [International Telecommunication Union (ITU), Measuring the Information Society (2012) <www.itu.int/ITU-D/ict/publications/idi/2012>]

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5.4. International Internet Bandwidth (2011) (total gigabits per second [Gbps] per country)	5,100	Germany has increased its International Internet Bandwidth by 2% since 2010 to 5,100 Gbps and is ranked 4 out of 188 countries surveyed. The growth from 2010 is below the five-year CAGR from 2006 to 2011 of 32.3%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>]
6. Fixed Broadband		
6.1. Fixed Broadband Subscriptions (2011)	27,185,816	Germany has increased the number of fixed broadband subscribers by 4% since 2010, to 27,185,816, and is ranked 4 out of 182 countries surveyed. The growth from 2010 is below the five-year CAGR from 2006 to 2011 of 12.7%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>] Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and prior years.
6.2. Fixed Broadband Subscriptions as % of Households (2011)	69%	[calculated from 8.3.3. and 8.6.1.] Note: This may be skewed by business usage in some countries (refer to OECD comments about this).
6.3. Fixed Broadband Subscriptions as % of Population (2011)	33%	Germany has increased its fixed broadband subscriptions (as a share of the population) by 4% since 2010, which is below the five-year CAGR from 2006 to 2011 of 12.8%. This ranks Germany 4 out of 187 countries surveyed. The OECD figures below present a breakdown on the type of fixed broadband connections in Germany in 2011. In the OECD, Germany has improved one place and was ranked 9 (out of 34) for fixed (wired) broadband subscribers as a percentage of population [OECD Broadband Subscribers (Dec 2011) <www.oecd.org/sti/ict/broadband>] – DSL: 28.7% – Cable: 4.3% – Fiber/LAN: 0.1% – Other: 0.2% Total: 33.3% (27,185,816 subscriptions). The OECD average total for 2011 was 25.6%. Germany's fixed broadband growth for 2011 was 4.2% (ranked 21 out of 34 for growth), marginally above the OECD average growth of 4.1%. Note: There may be minor variations in the ITU and OECD subscriber totals due to definition, timing or population baseline differences. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (July 2011) <www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx>]
6.4. Fixed Broadband Subscriptions as % of Internet Users (2011)	40%	[calculated from 8.5.1 and 8.6.1]
7. Mobile Broadband		
7.1. Mobile Cellular Subscriptions (2011)	108,700,000	In 2011, Germany increased the number of mobile cellular subscriptions by 4% and is ranked 10 out of 195 countries surveyed. The number of subscriptions account for 132% of the population. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>] Note: This figure may be inflated due to multiple subscriptions per head of population but excludes dedicated mobile broadband devices (such as 3G data cards and tablets).

Q GERMANY	RESPONSE	EXPLANATORY TEXT
7.2. Active Mobile Broadband Subscriptions per 100 inhabitants (2011)	35%	Germany has increased the number of active mobile broadband subscriptions (as a share of the population) by 35% since 2010. This ranks Germany 38 out of 144 countries surveyed. The OECD figures below present a breakdown on the type of mobile broadband connections in Germany. For 2011, Germany's OECD rank has declined two places and is 27 (out of 34) for mobile wireless broadband subscribers as a percentage of population [OECD Broadband Subscribers (Dec 2011) <www.oecd.org/sti/ict/broadband>] – Satellite: 0% – Terrestrial fixed wireless: 0% – Standard mobile broadband subscription: 22.2% (up from 16.5% in 2010) – Dedicated mobile data subscriptions: 12.8% (up from 9.4% in 2010) Total: 35.1% (28,671,289 subscriptions). The OECD average total for 2011 was 54.3%. Germany's wireless broadband growth for 2011 was 35% (ranked 15 out of 34 for growth), above the OECD average growth of 30.5%. Note: The mobile broadband subscription types were first reported by OECD in 2010, and ITU data are beginning to have this granularity. Note: The OECD figures include mobile data subscriptions, which are not as consistently reported in the ITU indicators. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>] Note: This refers to the sum of standard mobile-broadband and dedicated mobile-broadband subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets. Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and prior years.
7.3. Number of Active Mobile Broadband Subscriptions (2011)	28,600,000	In 2011, Germany has increased the number of active mobile broadband subscriptions by 35% and is ranked 38 out of 145 countries surveyed. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>]