

# Annual Report 2014

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# 1 Association Profile

CZ.NIC is an Association of legal persons, open and independent entity whose main activity is the management and operation of registry of the national top-level domain .CZ. At the end of 2014, the Association had 113 members mainly from ICT companies, both national and international operating in the Czech Republic.

In addition to these activities, the Association focuses on research and development in the field of Internet, Internet protocols and network traffic. Other activities include education in both the Internet and new technologies. All of these additional activities are designed to help the Internet community, not only in the Czech Republic but also abroad. CZ.NIC is also dedicated to other activities and projects related to the functioning of the Internet and its further development, whose aim is to improve security and stability, which are factors that are becoming increasingly important with the ever-increasing number of users.

The CZ.NIC Association was founded in May 1998 and the main reason for its establishment was the growing importance of the Internet as well as the increasing number of users and people interested in registering domain names in the .CZ ccTLD.

Currently, the Association is a stable and reliable entity that is able to ensure steady operation of the Czech national domain .CZ. Since 2013, CZ.NIC holds the ISO 27001 certificate confirming the safe handling of information, including the framework of relevant rules and procedures.

For domain holders, registrars, and other entities using the Internet for work and leisure, our Association is a reliable partner who not only provides the administration of domain names, but also struggles to ensure the security of the Internet and participates in socially beneficial activities - in

the form of laboratory projects or education. For its long-term contribution to the information community, in 2014 the CZ.NIC Association was awarded with the prestigious Czech At Prize.

# **2 Foreword from the Chairman of the Board of Directors**

## Ladies and Gentlemen,

the past year was successful for our Association not only economically, but also in the field of services and the development of new technologies. After-tax profit of the Association was higher than planned; it reached 13.8 mil. CZK (i.e. 0.2 mil. CZK higher than in the previous year), which means return on sales of 8.9%. Profits from previous years allowed us to invest in the Association's headquarters: a building at Milešovská 5, Prague, was purchased and renovated so that the Association could move into its own property at the end of 2014, which also contributed to its greater stability.

The Association not only carries out perfectly its core business of managing the .CZ national domain, but it has enough energy for other services for the Czech Internet community. Here I would like to mention at least the national CSIRT team, which has dealt with nearly a thousand security incidents during the past year, organization of professional courses at our academy, where the number of participants has increased by half, broadcast of the educational program "How to Use the Internet", about a hundred episodes of which has attracted more than 100 million viewers, and operation of the mojID service, which is being used, among others, by more than one hundred Czech towns and villages to authenticate their population, for example, during elections.

The strategy adopted by the Association also includes developing new Internet technologies. Of the roughly fifteen exciting projects that CZ.NIC Labs are currently working on, the most excellent is the BIRD routing daemon designed primarily for Linux and BSD. According to EU-

RO-IX that brings together the world's largest interconnecting nodes, its share among the route server software has already reached 62% last year. It is followed by Quagga and CISCO. Another project is Turrís - the project with an international outreach, whose aim is protection of end-users and research in cyber security. A thousand of adaptive firewalls has been successfully placed on end networks; the analysis of collected data now contributes to reduction of security threats. The success encouraged us to develop a new, "lighter" (i.e. cheaper) version of the firewall, which we would like to make available at production cost to all interested parties. A fine self-managed firewall is certainly a positive step towards the anticipated Internet of Things, where safety is a priority requirement to be addressed.

I would like to express my thanks for the management and staff of the Association for a job well done, thanks to which our Association has a legitimate good reputation both at home and abroad.

Karel Taft, Chairman of the Board

# **3 Foreword from the Executive Director**



Ladies and Gentleman,

the biggest challenge for 2014 was, undoubtedly, the reconstruction of the building at Milešovská 5, Prague 3 purchased by the Association and the subsequent relocation of all Prague employees to this location.

The purchase of the building brought three advantages:

1. Considerable positive effect on the stability of the Association
2. Lowered office running costs
3. Increased area of Prague offices, which simplifies future staffing growth

Although this project was very demanding, we cannot say that the Association focused solely on it and set aside other projects. Quite the contrary. The year 2014 was full of activities realized in accordance with the approved concept.

The Turris project has stepped into its second phase. In 2013, we worked primarily on the development of Turris routers and preparation of infrastructure. At the beginning of 2014, distribution of routers has started and the project entered its operational phase. Immediately after the launch, the system began to provide security information that allowed us to discover many security issues the existing domestic users had, and we also started to publish a so-called "gray list" of problematic IP addresses. The project evoked quite a good response from both domestic and international communities. Users of Turris were joined by two of the fathers of the Internet, Steve Crocker and Vint Cerf. Project also received attention from one of the largest ISPs in the world, the Comcast Corporation that donated a significant sum to the project development. Hardware deve-

lopment of the project progressed as well. We introduced a new version (1.1) of the Turris router, which has brought some further improvements to the already fine hardware. Routers of this version will be distributed throughout 2015.

Other projects of the laboratories, such as Tablexia, Knot DNS and BIRD continued to develop with an equal success. For our efforts in support of eGovernment in the Czech Republic, we even received a prestigious award for the best eGovernment project covering the whole country, the Czech At Prize.

Our activities related to cyber security have not slowed down either. The Parliament of the Czech Republic has adopted a regulation, which was crucial for us - the Act on Cyber Security - and CZ.NIC, as the operator of the National Security Team CSIRT.CZ, had to prepare for the new role arising from this act. Apart from this, however, other security activities, such as Web Scanner, DoS attack simulator, Honeynet and others continued on.

The mojID project also brought some good news. Not only that the number of users exceeded 400,000, but also, according to the independent survey by Markent, awareness of the service among the Internet users in the Czech Republic was 30%. That is why we have continued to expand the number of services supporting mojID, as well as the number of validation spots.

In conclusion, I would like to mention our most important activity, which is the management of the .CZ national domain. Although there was a slight slowdown in the number of registered domains, in international comparison, the .CZ domain zone is one of the most dynamic ones. This

is the reason why we are catching up with similarly populated states of Western Europe, which is certainly pleasing news.

So I'm not afraid to say that the year 2014 was another very successful year for the Association and I would like to thank all my colleagues for their excellent work.

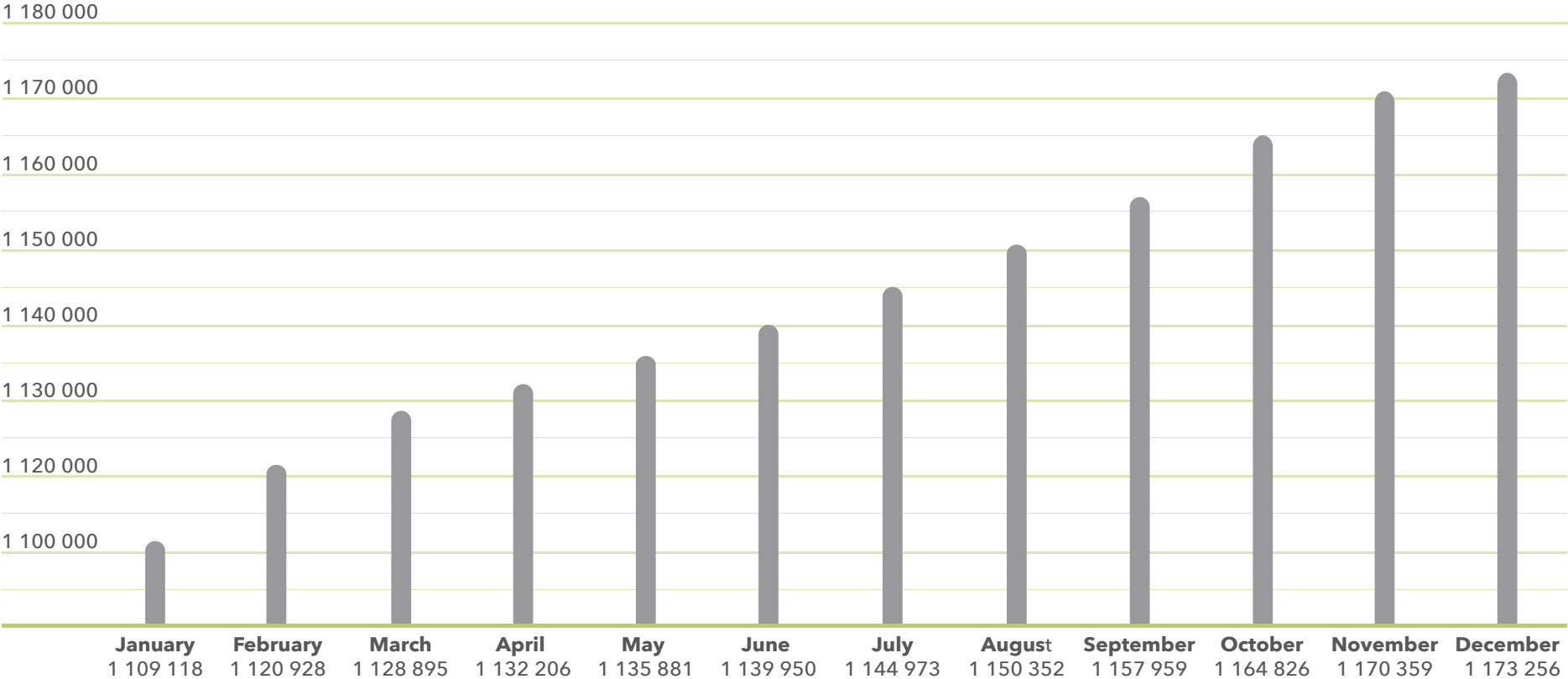
Ondřej Filip, Executive Director

# 4 The .CZ Domain

### 4.1 Status and Trends in the Number of Registrations

During the year 2014, the total number of domains in the .CZ zone increased by 73 350, which represents an increase by almost 8%. In spite of it being a lower number compared to the last year, the Czech national

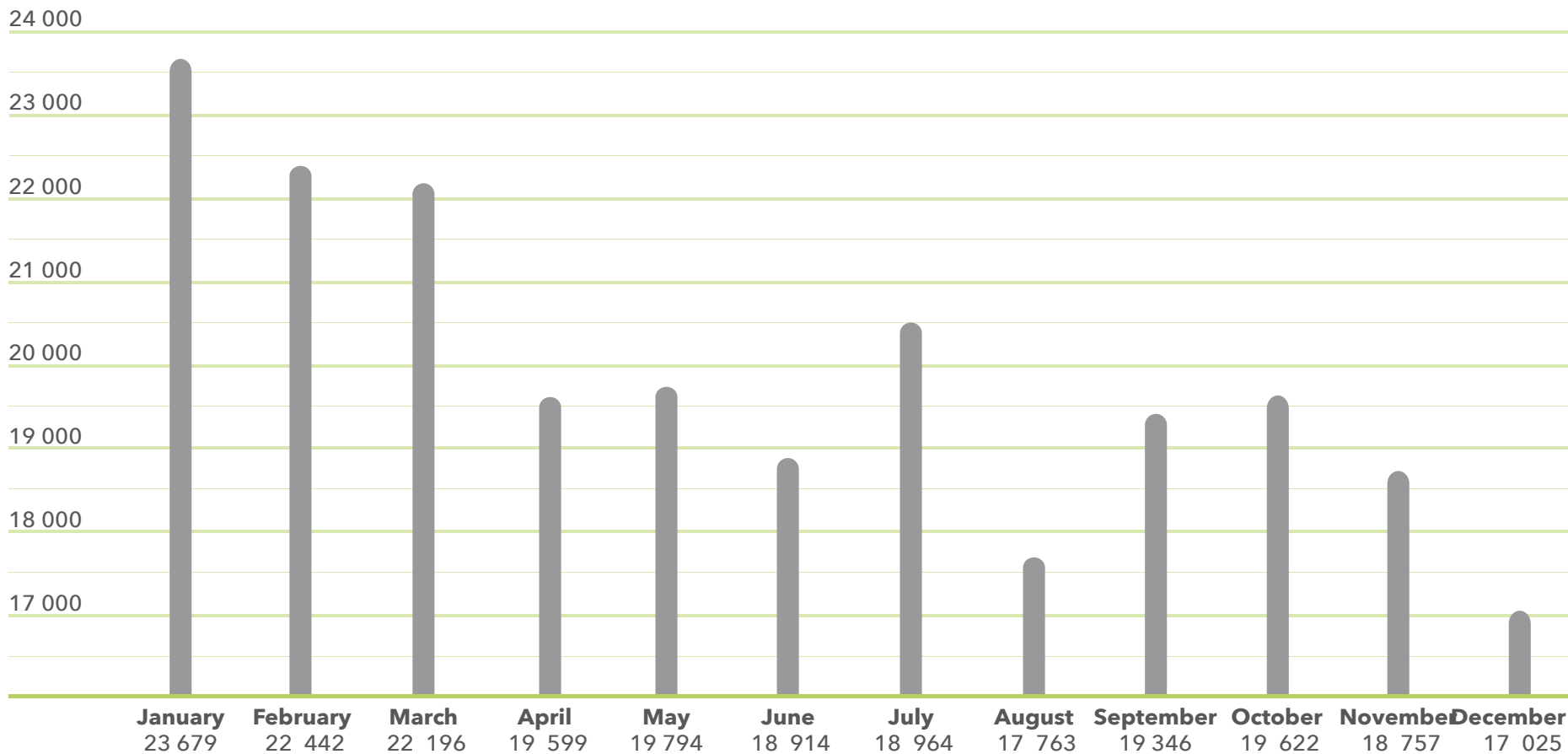
domain was among one of the fastest growing national domains in Europe like those of Portugal (.pt), Sweden (.se) or Estonia (.ee). Deceleration in growth is, however, a trend experienced by most of the registrars.



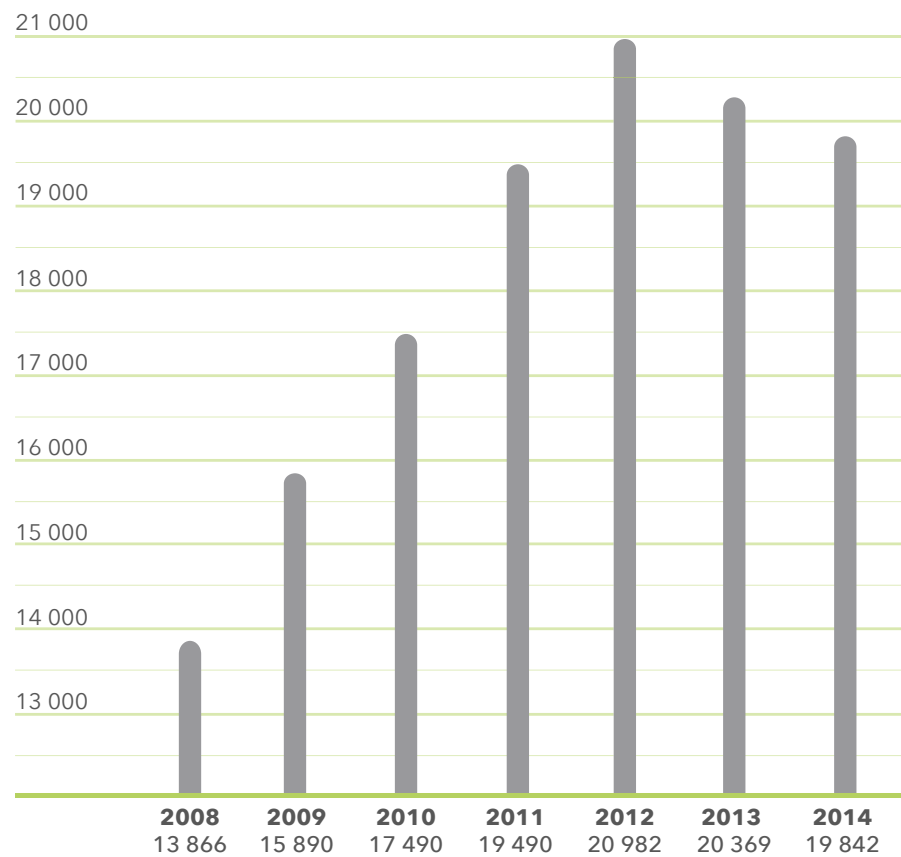
The total number of registered .CZ domain names in 2014

In 2014, an average of 19,842 new domain names was registered every month. In comparison with the previous period, it is a slight decline, due mainly to somehow limited capacity for further growth, faced by admini-

nistrators of other domain zones as well. The following graphs show the number of new registrations by month in 2014 and the evolution of the average number of new registrations since 2008.



The number of newly registered .CZ domain names in 2014



New registrations 2008-2014 (monthly average)

## 4.2 Registrars

The system of .CZ domain name administration is based on a distributed principle in which the registration of domain names is carried out by appointed registrars who are contractual partners of the CZ.NIC Association. CZ.NIC acts as their wholesale partner responsible for the technical operation of the .CZ top-level domain. The total number of 45 registrars – 29 local and 16 foreign ones – means that end customers have a wide range of options and ensures sufficient competition.

### 4.2.1 List of .CZ Domain Name Registrars

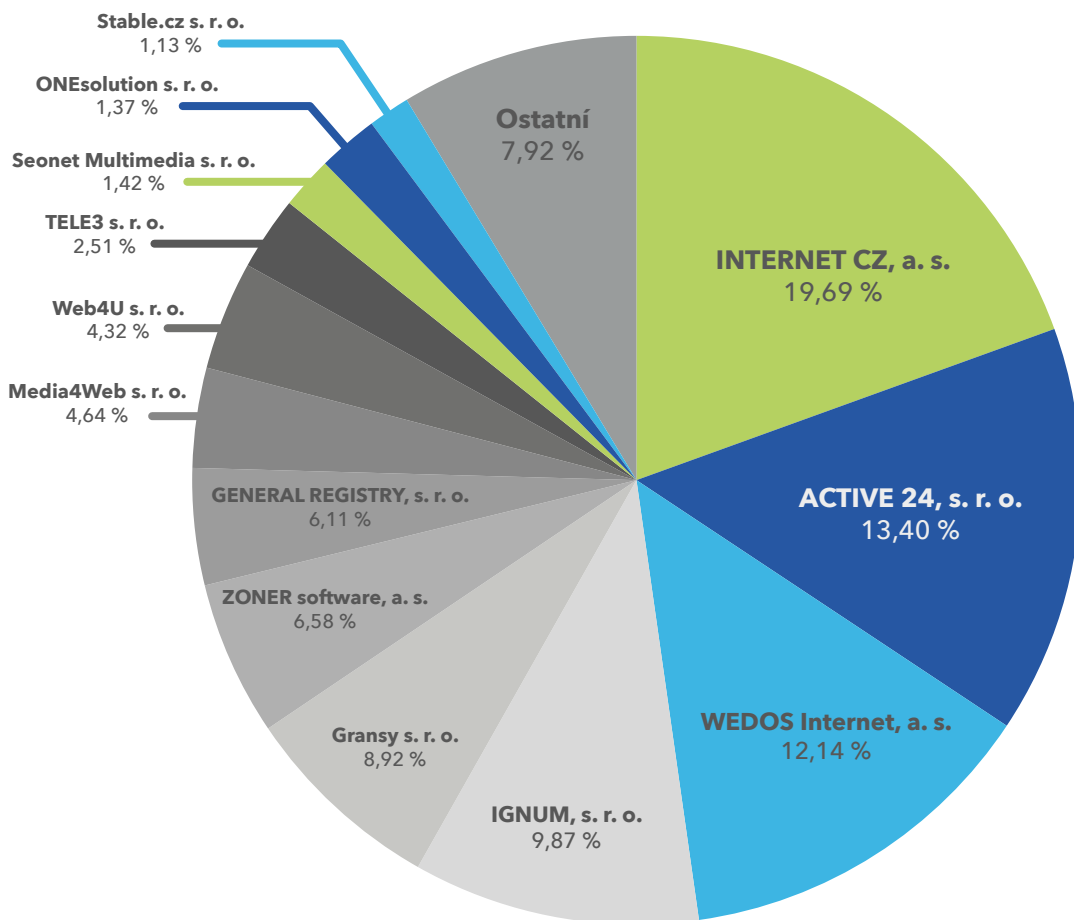
List of all accredited registrars as of December 31, 2014

1API GmbH	Gransy s. r. o.
1X s. r. o.	ha-vel internet s. r. o.
Above.com Pty. Ltd.	IGNUM, s. r. o.
ACTIVE 24, s. r. o.	Instra Corporation Pty Ltd.
AERO Trip PRO s. r. o.	INTERNET CZ, a. s.
Ascio Technologies inc.	InterNetX GmbH
ASPone, s. r. o.	IP Mirror Pte Ltd.
AXFONE s. r. o.	Key-Systems GmbH
CORE ASSOCIATION	KRAXNET s. r. o.
Dial Telecom, a. s.	MarkMonitor Inc.
e-BAAN Net s. r. o.	Media4Web s. r. o.
Economia, a. s.	MIRAMO spol.s r. o.
Gandi SAS	NEW MEDIA GROUP s. r. o.
GENERAL REGISTRY, s. r. o.	nexum Trilog a. s.

O2 Czech Republic a. s.	TELE3 s. r. o.
ONE.CZ s. r. o.	TERMS a. s.
ONEsolution s. r. o.	united-domains AG
OVH, Sas	Variomedia AG
PIPNI s. r. o.	Web4U s. r. o.
ProfiHOSTING s. r. o.	Websupport, s. r. o.
Safenames Ltd.	WEDOS Internet, a. s.
Seonet Multimedia s. r. o.	ZONER software, a. s.
Stable.cz s. r. o.	

### 4.2.2 The Largest Domain Name Registrars

Just like in the previous year, the largest registrars in terms of the number of administered domains are INTERNET.CZ, a. s., ACTIVE 24, s. r. o., WEDOS Internet, a. s., IGNUM, s. r. o., and Gransy s. r. o. The list of registrars with a market share over 1 % is shown in the following chart.



### 4.2.3 Registrar Certification

Launched in mid-2011, the certification project is intended to help end users (i.e., those interested in domain registration as well as current domain name holders) make sense of the increasing number of registrars, particularly regarding the portfolio and quality of services they offer. The certification methodology was developed in cooperation with the registrars themselves and the Association for Electronic Commerce (APEK).

Registrars interested in participating in the project may be awarded the "certified registrar" logo for one year. From the original nine registrars involved in voluntary certification in 2011, the number rose to 12. From the perspective of the end customer, the continuously improving quality of services offered is particularly gratifying.

At the end of 2014, 9 registrars met the stringent criteria for awarding of five stars, which is one more registrar than one year ago. At the same time, now there are no registrars with only three stars. The Increasing quality of registrar services expressed by the number of stars awarded is shown in the following chart.

	2011	2012	2013	2014
★★★★★	3	6	8	9
★★★★	3	5	4	3
★★★	2	1		
★★	1			



#### 4.2.4 Cooperation with Registrars - Co-marketing Program

In accordance with its main activities and long-term objectives, the CZ.NIC Association wants to support the registration of top-level .CZ domains. However, since the national domain is administered in a distributed mode, the CZ.NIC Association has only very limited opportunities for reaching potential domain name holders with a targeted marketing campaign.

For this reason, we have established a co-marketing program in which (provided the prescribed conditions are met) CZ.NIC contributes to registrars' expenses for implementing communication campaigns aimed at promoting registration of domain names in the .CZ ccTLD. The amount of the CZ.NIC contribution depends on the size of the registrar, the volume of the campaign and fulfillment of other factors, such as the use of mojID or securing domains through DNSSEC, by which CZ.NIC tries to encourage registrars to spread these technologies.

In 2014, 13 registrars participated in this program, which is three more than the last year, who received a total of CZK 8,515,097 from CZ.NIC.

#### 4.3 Improving the Registry Data Quality

In 2014, the CZ.NIC Association continued improving the quality of data held in the registry of domain name holders. It focused on how to merge multiple duplicate contacts that have accumulated in the database over the years, and on the verification of user data in order to increase their safety and also to facilitate contact by CZ.NIC; for example at times when there is a risk of cancellation of the domain due to non-payment of registration fee.

During 2014, we managed to verify 14,053 users to mailing address level, which is an 88% increase compared to the last year.

#### 4.4 IDN (Internationalized Domain Name)

IDN is a system that enables Internet domain names to contain characters of national alphabets. In the Czech Republic that would mean that .CZ domain names could contain symbols with Czech diacritics - carons and accents.

For the fifth time in a row, the Czech Internet community refused the introduction of diacritics into the .CZ domain system. This conclusion is apparent from the results of the latest public opinion survey conducted every two years for the Association by the independent surveying agency Markent.

81% of corporate respondents and 68% of ordinary Internet users were against the introduction of IDN (Internationalized Domain Names). Detailed survey results including time series can be found at [www.hackycarky.cz](http://www.hackycarky.cz).

## 4.5 Customer Support

A key part of the operation of the .CZ domain is 24/7 customer support. The objective of customer support is to provide the best possible care to domain holders, particularly in situations when a domain registration is to be cancelled or transferred or when contact details change. Since 2010, our helpdesk has also been providing support to users of the mojID service – user validation.

In its relationship with domain holders, customer support uses a proactive approach in an attempt to eliminate all cases of domain set-out and expiration caused by outdated contact details or a forgotten payment. Due to the distributed system of .CZ domain administration, customer support is the only time when the CZ.NIC Association comes in direct contact with domain name holders.

Customer support newly started offering its services to not just domain holders, but also – through the CaptchaHELP service – to Czech Internet users with disabilities who have problems with reading the Captcha code, i.e. the deformed text, whose transcription, respectively reading presents difficulties especially for visually impaired users or those with dyslexia.

Apart from the standard automated communication via e-mail, our customer support has manually sent an average of 1,915 e-mails monthly. It also made calls to 7,808 holders of domains scheduled for cancellation. Our helpdesk staff also responded to further 1,416 phone calls and 2,782 e-mail inquiries per month, which is a 14% and 43% growth since the last year, respectively (see table).

With the growing number of holders who transferred their registry contact under mojID and then started to use the Domain browser, the number of requests for blocking decreased because holders can now carry that out on their own.

	2010	2011	2012	2013	2014
<b>Manual check of domains prior to set-out</b>	-	8 916	15 176	18 586	21 598
<b>Manual check of domains prior to cancellation</b>	-	4 314	11 061	14 378	16 666
<b>Called contacts of domains to be cancelled</b>	4 263	4 314	4 767	6 690	7 808
<b>E-mails written prior to set-out</b>	1 201	1 429	1 708	1 716	1 915
<b>Responding to e-mail inquiries</b>	828	1 240	1 746	1 945	2 782
<b>Responding to telephone inquiries</b>	561	1 063	1 120	1 242	1 416
<b>Applications (validations, blocking...)</b>	145	180	248	315	454

*The data represents the average number of operations per month.*

# 5 Infrastructure

## 5.1 Technical Solution of Domain Administration

The DSDng central registry system was designed to be fully redundant. All hardware and software is located at two independent locations (TOWER data center in Prague 3 owned by Czech Radio Communications and Telehouse CE Colo in Prague 10), both in terms of access to the Internet and the electrical grid. Both locations are connected to the grid from two independent transformer stations, and there is a backup UPS power as well. Both locations have diesel generators for use in the event of longer power outages.

The system is designed as heterogeneous – failure of an individual hardware manufacturer cannot cause the central register to fail. Each location contains servers provided by different suppliers and running on a different architecture (Intel and AMD).

The central register software itself is designed to enable the swapping of any part of the architecture with its copy running at the other server/location, at any time. A critical component is the PostgreSQL database, which is constantly replicated to the other location during standard operation; when the primary location is down, traffic can be redirected to the replicated database without any limitation or impact on functionality. Backup systems run 24/7 and are designed to be able to take over and provide registry operation in a short time in case of any component failure.

In 2014, authoritative Knot DNS server was installed on a third of our servers, the database was upgraded and its replication method changed. These changes have reflected in higher performance and robustness of the system as a whole.

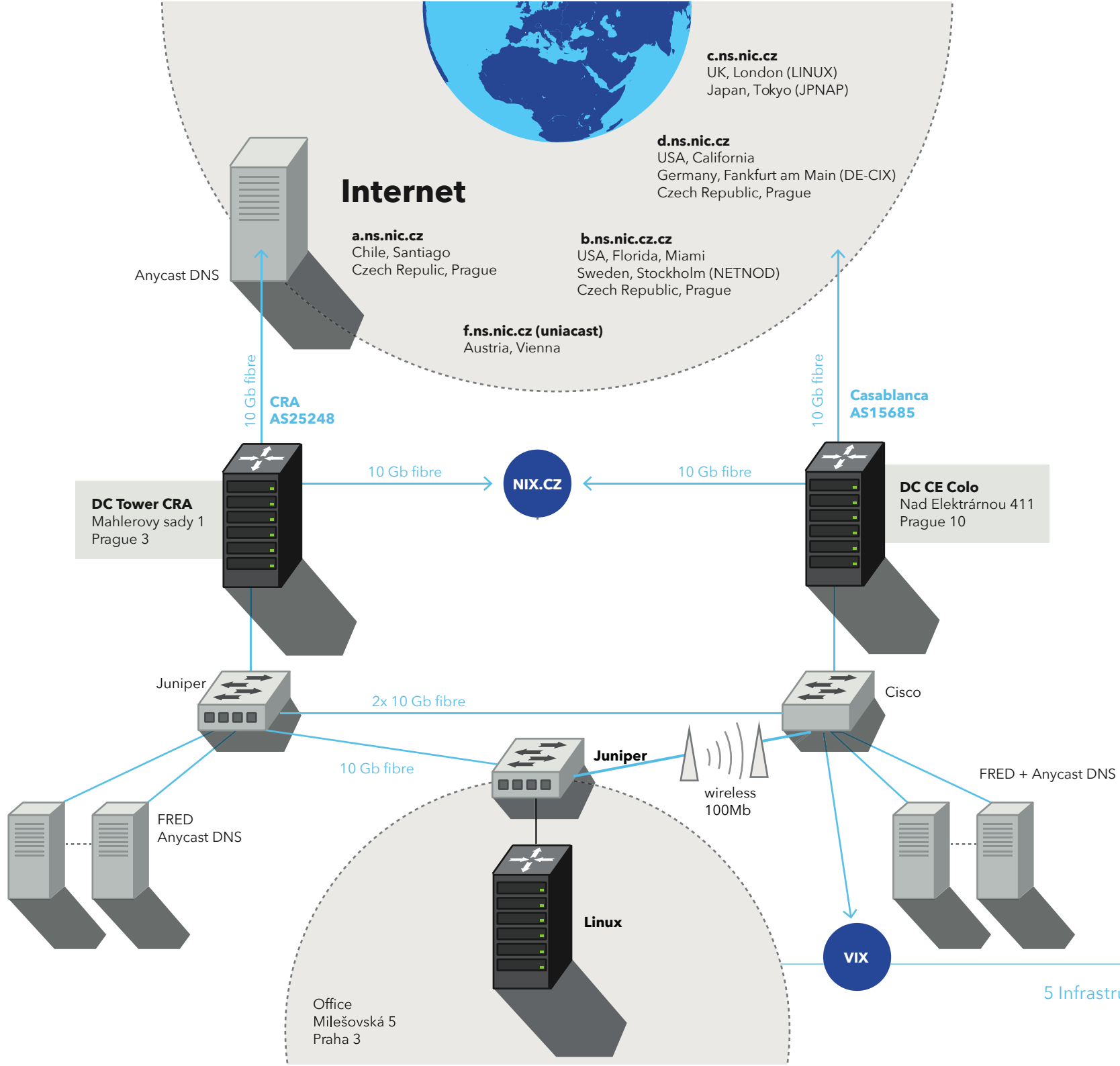
### FRED (Free Registry for ENUM and Domains)

The central register software developed and operated by the CZ.NIC Association was made available as free and open-source to support smaller registries. Smaller and starting registries can therefore operate their domain in a system designed for the Czech domain, which, with its parameters and capacity, is capable of handling much higher volumes of domain names than are currently registered in the .CZ ccTLD.

In addition to the Czech Republic, this system is now administering domains in six other countries – in Costa Rica (.cr), the Faroe Islands (.fo), Estonia (.ee), Tanzania (.tz), Angola (.ao), Albania (.al) and since 2014 also in Macedonia (.mk).

Servers maintaining records of .CZ domains are owned by the CZ.NIC Association and operated in several locations around the world, including Sweden (Stockholm), Austria (Vienna), the United Kingdom (London), Germany (Frankfurt), Chile (Santiago de Chile), the United States (Redwood City and Culpeper, which is an exception, as it runs on the equipment of the ICANN organization), Japan (Tokyo), and the Czech Republic (Prague).

The central registry system is ready for IPv4 and IPv6 operation, and its current implementation for the .CZ domain (and all DNS servers) runs on both of these protocols.



## 5.2 Support of Internet Infrastructure

### 5.2.1 IPv6 Support

IP addresses are the basic building blocks of the Internet. Without IP addresses, it would be impossible to connect to the worldwide web; computers would not be able to recognize each other or become linked in a global network. The current pool of IP addresses is almost exhausted; the last address blocks in Europe were allocated in September 2012. The answer to this shortage of IP addresses is a new version of the Internet protocol called IPv6, which provides a much greater stock of addresses as well as new possibilities.

The long-term goals of the Association include support of the deployment of this technology at all levels, i.e. content, networks and end devices. Together with registrars (who often also offer webhosting services), the CZ.NIC Association is also trying to support IPv6 on the side of web

	Web servers	DNS servers	Mail servers
<b>2010</b>	5,19 %	20,31 %	8,61 %
<b>2011</b>	9,48 %	45,90 %	8,70 %
<b>2012</b>	15,06 %	51,27 %	13,15 %
<b>2013</b>	19,46 %	55,11 %	15,22 %
<b>2014</b>	23,33 %	60,71 %	16,08 %

IPv6 support in the Czech national domain

and DNS servers. The Association is also involved in the promotion of IPv6 in state government, both within the European GEN6 project and in close cooperation with the Ministry of Industry and Trade. The government resolution adopted at the end of 2013 should also contribute to further acceleration of the deployment of IPv6 in public administration.

Thanks to these activities, support of IPv6 in the Czech Republic continues to grow every year; according to independent surveys, the Czech Republic is currently one of the most advanced countries of the world in the deployment of IPv6.

### 5.2.2 DNSSEC Support

DNSSEC is an extension of the domain name system (DNS) which increases its security. DNSSEC technology assures users that the information obtained from DNS has been provided by the correct source, is complete, and its integrity has not been compromised during the transmission.

DNSSEC has been available in the Czech national domain .CZ since 2008. The number of domains secured with this technology keeps growing, partially thanks to cooperation with registrars. With its share of signed domains, the Czech Republic ranks among world leaders.

At the end of 2013, the Czech government adopted a resolution according to which all government bodies are required to secure their domains with DNSSEC technology by June 30, 2015. In 2014, this resolution together with the evaluation criteria for the Golden Crest Award has contributed to the growth of secured domain names held primarily by public administration. Thanks to these and other measures, at the end of 2014

both absolute and relative shares of the DNSSEC secured domains were the largest in the history of the Czech domain name registry.

In addition to registrar support, DNSSEC is also gradually being deployed by major Internet service providers in the Czech Republic, making this system fully operational for most Internet users.

<b>2008</b>	0,01 %
<b>2009</b>	0,23 %
<b>2010</b>	14,74 %
<b>2011</b>	34,07 %
<b>2012</b>	37,70 %
<b>2013</b>	37,12 %
<b>2014</b>	38,57 %

### 5.3 Support of Basic Internet Infrastructure

In 2014, the CZ.NIC Association continued to operate mirrors of F and L root servers. These are mirrors of two of the thirteen root name servers underpinning the Internet domain name system (DNS). Their operation improves not only the security and stability of the root server system on a global scale, but also its availability in the European region.

In addition to the root servers, the Association's infrastructure is used to support developing registries by operating secondary name servers for their ccTLD. This option for national domain administration is used by Angola and Tanzania.

Another form of supporting local Internet communities is hosting the websites of some non-profit organizations, e.g. the popular Linux distribution Ubuntu.

### 5.4 Grounds for operation of the Czech domain and the CZ.NIC Association

Having existed for more than 15 years, the CZ.NIC Association finally moved from rented premises to its own property. Since the end of December 2014, the Association along with its study center CZ.NIC Academy and a mojID service validation spot can be found at a new address: Milešovská 1136/5, Prague 3. The new address is officially valid from January 1, 2015.

The new building provides more space for individual departments of the Association. It is also ready for possible staffing growth of CZ.NIC in the future.

The new building provides more space for individual departments of the Association. It is also ready for possible staffing growth of CZ.NIC in the future.

# 6 CSIRT Security Team



*With the constantly growing significance of the Internet and the increasing number of users, the number of security incidents has also risen (abuse of a computer, network element or network for illegal purposes - e.g. spam distribution, breach of copyright laws, phishing, tapping of classified data), as has their severity. For this reason, there is an acute need to create, formalize, and improve the efficiency of protection against such attacks. CSIRTs (Computer Security Incident Response Teams) have been created for this purpose.*

*The CZ.NIC Association, with its long experience in projects in the field of Internet infrastructure, has joined in the support of the activities of security teams at both the governmental and academic levels. The Association also operates its own CZ.NIC-CSIRT team, which is responsible for resolving incidents within AS25192 and incidents affecting the name servers of the .CZ and 0.2.4.e164.arpa domains.*

## **6.1 CSIRT.CZ - National CSIRT Team of the Czech Republic**

Based on an agreement with the Ministry of the Interior of the Czech Republic and on the signing of a joint memorandum, the CZ.NIC Association assumed responsibility for the operation and security of the national CSIRT of the Czech Republic on January 1, 2011 in response to the termination of the research project under which the CSIRT.CZ team had been operating before. When the agenda of cyber security was transferred from the Ministry of the Interior to the National Security Authority, the memorandum was replaced by a similar document concluded between

the CZ.NIC Association and the National Security Authority, effective as of April 1, 2012. According to this document, CZ.NIC shall ensure operation of the national CSIRT of the Czech Republic until the end of 2015, also in accordance with the recently adopted Act No. 181/2014 Coll., on Cyber Security, which anchored the operation of the national security team in the Czech legislation.

The main objective of the CSIRT.CZ team is to resolve incidents related to cyber security in networks operated in the Czech Republic. The team collects and evaluates data about reported incidents, passing those incidents to people responsible for the operation of the network or service where the incident occurred, or providing coordination and assistance.

In its activities, it cooperates with bodies at the national (National Security Authority, government CERT, academic CSIRTs, ISPs, banks) and international level (national CSIRTs of other countries, the European Network and Information Security Agency ENISA, FBI), exchanging information on individual incidents and the means of their resolution on the basis of mutual trust.

The CSIRT.CZ office also serves as the national Point of Contact (PoC) in the field of information technology and is a center for education and the promotion of cyber security.

### **6.1.1 Operation of the National CSIRT.CZ in 2014**

In 2014, the national security team focused primarily on further development of key services and on the capability to manage the new responsibilities created by the new Act No. 181/2014 Coll., on Cyber Security, which came into force on August 29, 2014 and most of whose provisions

become effective on January 1, 2015. The adoption of the act entailed redesign of the website in order to increase its usability and ease of navigation for the users and to make it simple for the obliged entities to fulfil their obligations defined by law.

At the national level, CSIRT.CZ gave considerable attention to preventive security measures and education by informing about the most important attacks aimed at users and businesses in the Czech Republic (e.g. fake 'distrain't' e-mails, recruitment of strawpersons etc.) through the new "Advice and guidance" section which provides the users and administrators with advice on enhancing the security of their operating systems. Further attention was directed to the training on cybersecurity operated under the auspices of the CZ.NIC Academy and to active participation in conferences and workshops focusing on safety. In 2014, a specialized training tailored for staff of the Safer Internet was also held.

The development of an information portal AZB (News from Security) is also related to educational and preventive activities. In 2014, the portal published a total of 663 news related to cyber security. The members of the CSIRT.CZ team also published numerous articles in professional journals (eg. SecurityWorld) or on specialized sites, esp. Root.cz.

As part of the prevention program, several scans of networks in the Czech Republic were conducted; the results served either to inform the administrators of vulnerable facilities (Heartbleed), or are used for example by banks to protect Internet banking users (ROMrom-0).

In several cases, the CSIRT.CZ team also managed to gain access to the information obtained by the attackers and thus to inform the concerned users about their systems being compromised.

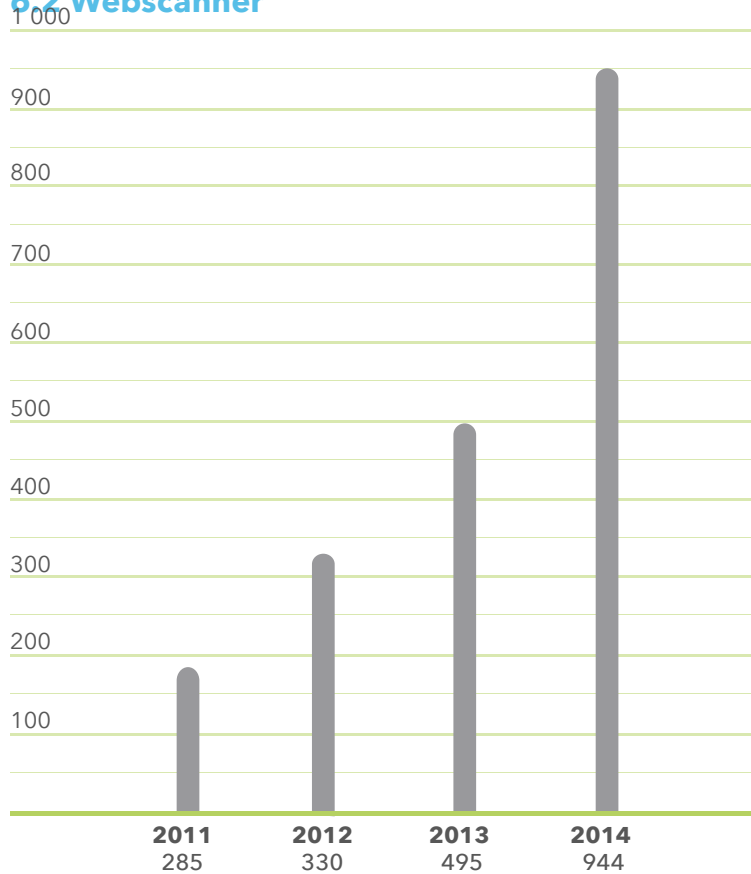
At the national level, the cooperation with other key actors in the CSIRT.CZ working group continued. In connection with the FENIX Project, implemented by the Czech NIX.CZ peering node there was also an increase in the amount of officially constituted CSIRT teams operating in the Czech Republic. Towards the end of 2014, there were already 16 teams accredited by Trusted Introducer. This created a need for a separate closed working group for formally constituted CSIRT teams. This new working group met in 2014 under the auspices of the National CSIRT.CZ to discuss improving cooperation between existing security teams in the Czech Republic, among other things. CSIRT.CZ has further deepened the cooperation with the National Security Agency as coordinator of cyber security in the Czech Republic, the cooperation with the National Center for Safer Internet (NCBI) and cooperation in the E-Crime working group. In several cases, CSIRT.CZ was also asked for advice and support by the Czech Police.

At the international level CSIRT.CZ continued its activity in the CECSP initiative (Central European Cyber Security Platform), established in 2013, which brings together government and national teams from the countries of the Visegrad Group and Austria. In 2014, a joint exercise was held by this platform, in which the Czech national team participated not only as a player, but it also took part in the preparations. As a player, CSIRT.CZ also successfully participated in the NATO exercise Cyber Coalition 2014. The most important exercise in 2014, however, was CyberEurope 2014 in which the national team managed to involve eight other prominent players from the Czech Republic. The national security team also continued to develop its existing cooperation with organizations TERENA and ENISA.

### **6.1.2 Brief Operation Statistics for 2014**

The total number of handled security incidents was 944, which is almost 100% more than in 2013. The following table evaluates the individual incidents by the success rate of their solutions:

## 6.2 Webscanner



Number of handled incidents

<b>Closed - resolved</b>	287
<b>Closed - we are informed</b>	177
<b>Closed - positive change</b>	413
<b>Closed - notification</b>	0
<b>Closed - unresolved</b>	67
<b>Closed - unable to resolve</b>	0

Handled security incidents (table)

<b>IDS</b>	2380	<b>Trojan</b>	56
<b>Phishing</b>	368	<b>Probe</b>	86
<b>Spam</b>	160	<b>Botnet</b>	0
<b>Malware</b>	117	<b>Portscan</b>	2
<b>Virus</b>	0	<b>Pharming</b>	18
<b>Other</b>	100	<b>Crack</b>	0
<b>DOS</b>	32	<b>Copyright</b>	0

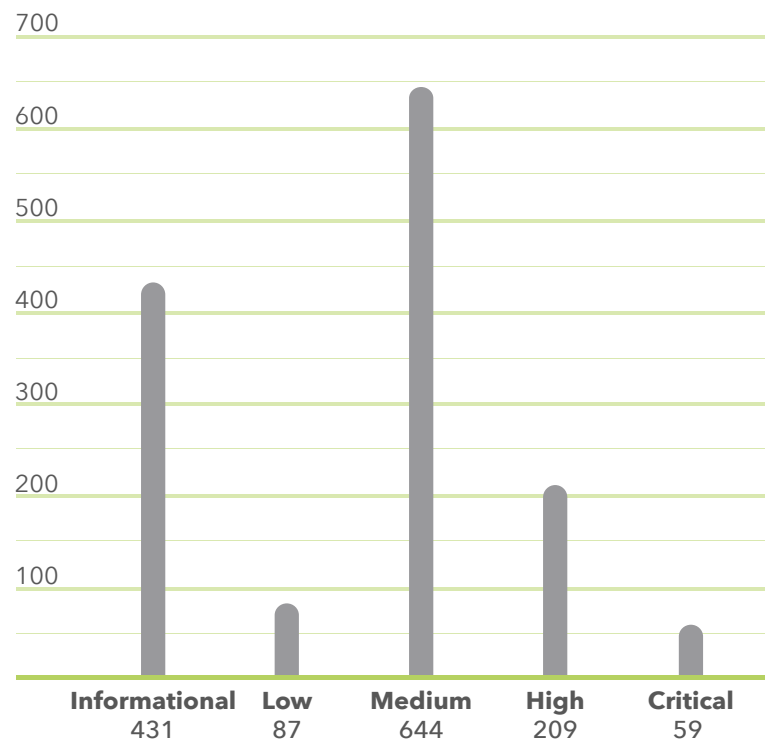
Statistics of incidents by type (table)

The Webscanner ([www.skenerwebu.cz](http://www.skenerwebu.cz)) service, launched in 2013, is another of NIC.CZ preventive security projects. This project is intended for operators and site administrators, allowing them to uncover potential vulnerabilities of their websites for free. The service is intended primarily for non-profit organizations, public sector and small and medium-sized enterprises, which cannot expend funds for the acquisition of a commercial solution, but they are nevertheless aware that the vulnerability of their website might easily become a problem for other Internet users.

The vulnerability analysis is performed in two stages. First automated tools are used, and subsequently an experienced tester carries out a manual test of the site, who (among others) assesses the vulnerabilities found in the context of the entire site and proposes appropriate solutions. At the end of the analysis, the applicant receives a message that contains the found vulnerabilities, their ranking according to the severity and proposals for possible solutions for the given vulnerabilities. When analyzing potential vulnerabilities, the service relies on both its own assessments and experience of the security team, as well as on the Top 10 list of the most severe security risks in general issued by the Open Web Application Security (OWASP) project.

In 2014, the Webscanner project team translated the entire OWASP TOP 10 document into Czech. This document describes the ten most dangerous vulnerabilities of web applications. Creating this translation has been well received by the community of web developers and administrator. During 2014, the project website was also expanded with new guidelines for administrators and developers.

In 2014, the CZ.NIC Association tested a total of 99 web applications in the project. During the testing, 1319 vulnerabilities were discovered. The



Found vulnerabilities according to risk of abuse

	2013	2014
<b>Number of orders for testing</b>	72	99
<b>Number of vulnerabilities detected</b>	437	1430

Growth of Webscanner use and detected vulnerabilities

following chart will show the distribution of vulnerabilities according to the severity of the threat they possess.

### 6.3 CZ.NIC-CSIRT

The CZ.NIC-CSIRT team is responsible for resolving incidents affecting the name servers of the .CZ and 0.2.4.e164.arpa domains. Under the terms of its registration, the CZ.NIC Association is entitled to invalidate the delegation of a domain name if the name is used in a fashion that endangers national or international computer security, particularly if through the domain name or through the services which are made available there, harmful content (especially viruses or malware) is distributed, or if the content of a different service is feigned (especially phishing).

The CZ.NIC-CSIRT team can also decide to cancel a domain name in case that the server that is made available through the domain name becomes a control center of an interlinked hardware network distributing harmful content (especially botnet).

#### Activities of CZ.NIC-CSIRT in 2014

As part of CZ.NIC-CSIRT activities, the team operates its own system that serves to search for attacked sites at .cz domains (MDM). Throughout 2014, we solved a number of different types of incidents at more than a thousand .cz domain names. In 2014, CZ.NIC-CSIRT joined the CZ.NIC Turris project, in form of both delivering data on dangerous IP addresses and making use of information coming from the Turris project. In 2014,

CZ.NIC-CSIRT also underwent a successful supervisory audit of Information Security Management System.

# 7 MojelD

## 7.1 What is mojelD?

MojelD is a unique service that has been allowing Czech Internet users to use one set of credentials to log in to different websites and electronic services for five years now.

With mojelD, Internet users no longer have to create new accounts and repeatedly go through the registration process; service providers on the other hand gain not just increased user convenience but also verified information on their visitors, whom they can provide with additional benefits.

The mojelD service is based on the OpenID standard, but includes unique features other OpenID services do not have, such as sharing user identity data during each login and verifying users with different methods for different levels.

In the development of this service, the greatest emphasis was placed on the security and trustworthiness of the entire system as well as on the protection of personal data.

The registry of user details is protected on the same level as the domain registry, and users themselves can define which details from their profiles can be hidden from the given provider each time they log in with their mojelD. This way, users have control over their data and know what information has been provided to each entity.

The new features of the mojelD service in 2014 include a public profile, thanks to which mojelD can now serve as a real Internet business card, or an option to create a mojelD account by using the pre-entered data directly from Facebook and LinkedIn.

## 7.2 Support of the mojelD service

Service providers are a key factor for future expansion of the service. The growing number of servers using mojelD affects getting new users, for whom it is important to be able to log on to as many services as possible using a single username in mojelD. This applies for both the services they use on daily basis, as well as to those (e.g. online stores) they visit for the first time - and mojelD helps them save time at registration and enable them to have control over the provided data.

The main effort of mojelD in relation to providers focused on entering new segments and strengthening its position in existing segments, such as e-commerce, news servers or websites of towns and villages. Thanks to working with Galileo Corporation, mojelD service was implemented on more than 100 sites of towns and villages, such as Dobruška, Mariánské Lázně or Přebouč. As for community servers, mojelD started a cooperation with the student portal Primát.cz or the advertising server Annonce.cz. In the field of e-commerce, logging in using mojelD was newly introduced for example by price comparison site Heureka.cz, Topfun video rental or the websites of Empresa Media group, such as Barrandov.tv.

Other steps designed to reach new user groups and increase the number of servers enabling login through mojelD include the development of a login module for the most widely used open source e-Learning platform Moodle.

In 2014, one of the chief support tools for mojelD was an incentive program that provides financial rewards to providers for new users who establish a user account on mojelD, based on the verification level these users reach. The 72 providers who participated in this incentive program brought in over 114,000 users.

### 7.3 External validation points

With the goal of making validation - which is the highest possible verification level of a mojelD account - more simple for end users, in 2014 CZ.NIC focused on further expanding the network of validation points.

These will continue to be set mainly in libraries and now also at town halls. In 2014, six new validation points were added - in the Ostrava City Library, bringing mojelD and its highest level of verification closer to the Moravian-Silesian Region, in the Town Library of Kutná Hora, Town Library of Ostrov in the Karlovy Vary Region, Central Bohemia Library in Kladno, in the town hall of Prague 22 - Uhřetěves and in the National Medical Library in Prague.

The visitors to three important IT conferences - E-Business Forum 2014 (EBF2014), Czech Internet Forum 2014 (CIF2014) and Internet and Technology 14 were also able to validate mojelD.

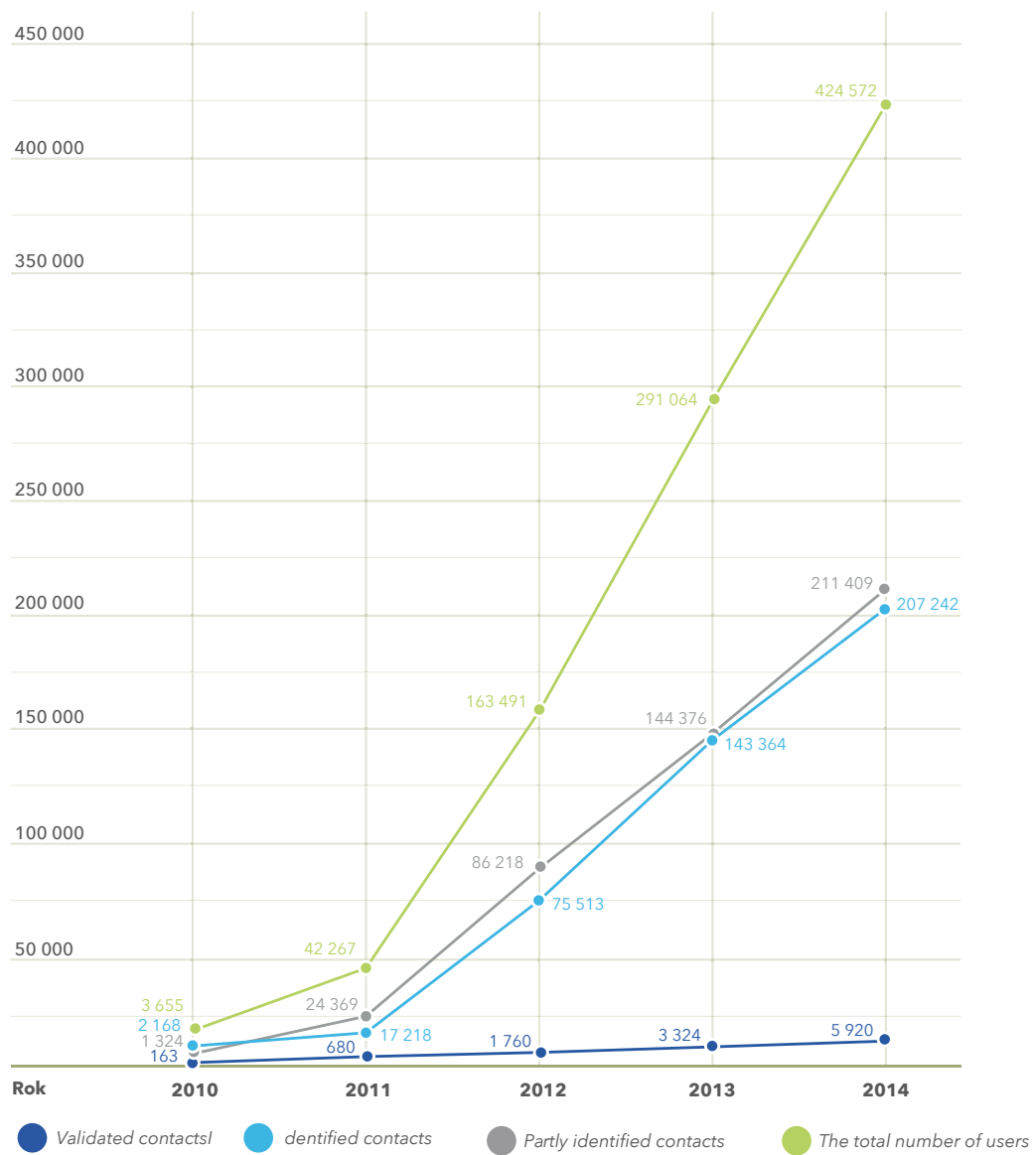
### 7.4 Users of mojelD

Its users are the most valuable part of mojelD - without growing user base, it would be difficult to acquire important service providers and bring the service into wider public attention.

In 2014, the CZ.NIC Association focused not only on the total number of users, but also on increasing the proportion of identified users (i.e. verified through mailing address). During 2014, the mojelD service gained 133,508 new users, which is 45% more than in the previous year. At the same time, the minimum level of 50% users verified at mailing address level was maintained. Thanks to the external validation points, the number of validated (i.e. verified through an ID) users has also shown a significant growth to almost 6,000. The European STORK 2.0 project assessed the trustworthiness of validation of these users with level QAA3 (Quality Authentication Assurance), which is the same as for example Swiss citizen eIDs.

MojelD is so far the only identification and authentication tool in the Czech Republic developed in accordance with European legislation in the field of electronic identification - the eIDAS (European Parliament and Council Regulation (EU) No. 910/2014 on electronic identification and trust services for electronic transactions in the internal market).





**8 CZ.NIC Laboratories**

## 8.1 Introduction

The CZ.NIC Laboratories are a separate organization focused on research and development, with a specialization in research of the Internet, Internet protocols, analyses of network operations, active and passive monitoring and designing prototypes for further development within the CZ.NIC Association.

The work of the Laboratories targets both local and foreign Internet communities with which they closely collaborate particularly in the research of new technologies and their deployment in practice.

## 8.2 Activities in 2014

In 2014, the CZ.NIC Laboratories were further expanded by a new branch in České Budějovice. This branch has, after Brno and Pilsen, become the third development workplace of CZ.NIC outside of Prague, and ensures close connection of university students with real life application.

The Laboratories focused on development of key projects, such as the BIRD routing daemon, the unique research project Turris or Tablexia, educational app for children with dyslexia.

### 8.2.1. New projects

#### Netmetr

In cooperation with the Czech Telecommunication Office (CTO), the applications and server of the Austrian regulator RTR were adapted to

Czech environment. The main aim of the mobile application is to give users the opportunity to check the quality of the Internet connection, both mobile and WiFi, including verification of compliance of network neutrality. The Netmetr application can be downloaded for free from Google Play (for Android platform). The publicly accessible part at [www.netmetr.cz](http://www.netmetr.cz) allows anonymous display of individual measurements and publication in the form of open data.

### 8.2.2 Ongoing Projects and Their Development

#### BIRD

This daemon for dynamic routing of the IP protocol is intended for Linux and BSD. The project began at the Faculty of Mathematics and Physics of Charles University, and the CZ.NIC Laboratories are participating in its further development. According to a survey by EURO-IX, an association of the world's largest Internet Exchange Points (IXP), BIRD's share continues to grow and in 2014, it was deployed at almost two thirds (62%) of all exchange points, which is 12% more than in the previous year. This makes the Czech software undoubtedly the most widely used route server software in Europe, far ahead of Quagga and CISCO. Peering centers using BIRD include the three largest peering centers in Europe: DE-CIX in Frankfurt, LINX in London and AMS-IX in Amsterdam. Outside of Europe, it is used by NAP Africa in South Africa, Point of Nigeria or JPNAP in Japan. BIRD is also used by the Netflix service in Open Connect Appliances.

### DNSCheck

DNSCheck is a tool that was developed to let users monitor, measure and, hopefully, also understand the operation of the Domain Name System (DNS). After a domain (zone) is added, DNSCheck verifies whether it is set up correctly by traversing DNS from the root (.) to TLD (Top Level Domain, such as ".CZ") and finally to the name server, which carries information about the specified domain (e.g. NIC.CZ). During this verification, some other tests are performed as well (checking host connectivity, validity of IP addresses or DNSSEC signatures).

### DNSSEC Validator

It is an add-on for Internet browsers that graphically shows whether a domain is secured by DNSSEC technology. DNSSEC Validator is available for all major Internet browsers - Mozilla Firefox, Google Chrome and Internet Explorer. In 2014, this add-on was upgraded with support for fingerprint authentication certificates in DNS (TLSA) and also made available in German and Polish language versions.

I

### Pv6 Widget

The IPv6 HTML Widget is another project of the CZ.NIC Laboratories intended to support the spread of new Internet technologies, namely IPv6 and DNSSEC, among regular users of the Internet. The widget supports almost all major browsers (Internet Explorer, Mozilla Firefox, Google Chrome, Safari, and others that support the Cross-Origin Resource Sharing technology).

The IPv6 Widget is offered as free and open-source software that can be added to websites to show visitors information about their IPv6 and DNSSEC support. In addition to showing this information visually, the widget can also compare the speed of connection via IPv4 and IPv6.

### Router Catalog

The catalog offers independent testing of routers designed for use in homes or small businesses. The main aim of the catalog is not only to determine the real parameters of the tested devices, but also to test them for support of new technologies (IPv6, DNSSEC), and then provide users with objective information for purchasing decisions. In 2014, more Wi-Fi routers were tested, and in December 2014, xDSL routers were also included in the testing. The number of tested routers has increased. The catalog currently offers tests for 49 products (five more than in 2013) from 15 different manufacturers (two more than in the previous year).

### Knot DNS

An authoritative DNS server that is being developed by the CZ.NIC Laboratories. The main advantage of this solution is its focus on performance and ability to achieve the best performance (qps) from available open source solutions (BIND, NSD) without compromising functionality and standards support. In 2014, version 1.6.0 was made ready for release. This version adds support for persistent zone timers. At the end of 2014, the first testing version of Knot DNS 2.0, was released.

### Multi-Platform Interface for Accessing e-Government Data Boxes

As part of the support of Internet infrastructure and free and open-source software, the CZ.NIC Laboratories developed an interface for accessing the Data Box Information System (ISDS) in 2010. The Datovka software package is currently available for users of personal computers running Linux and Windows; iDatovka exists for users of mobile devices such as tablets or smart phones, in versions for both Android and iOS (iPad, iPhone).

In 2014, the application was rewritten from Python + PyGTK to C ++ /Qt 5, which will facilitate its further development. At the end of 2014, both applications were used by more than 20,000 users, especially representatives of small and medium-sized businesses, self-employed and individuals.

### MDM - Malicious Domain Manager

Developed primarily for security teams of the CSIRT type, MDM (Malicious Domain Manager) is a tool that collects information about malware in the given domain space, enables simple communication with the responsible parties and monitors the progress of the solution. Besides the Czech security team, MDM application is also used in daily operations by the Slovak CSIRT.SK team.

### Unified CZ.NIC Statistics

Unified CZ.NIC Statistics is an independent portal, offering a variety of statistical information related to the Czech domain. All data are available in easy, user-defined charts and source data suitable for further use. In

addition to the number of domains, the portal provides statistical information on the shares of individual registrars, the state of implementation of IPv6 and DNSSEC and health of the Czech domain, which is determined by the DNSCheck tool. In 2014, thanks to the linking with the European project GEN6 there was a further extension of provided statistical data with the data on the current level of readiness for IPv6 of public administration in selected EU countries, including comparison of the individual countries.

### Tablexia

Tablexia is an educational game for tablets, which aims to promote the cognitive abilities of children with dyslexia, especially at secondary schools. Tablexia was created as open software, it is now available for the Android platform and it is provided to users free of charge. The first version of the application contained three separate games - the training of auditory discrimination, spatial orientation and working memory. In 2014, three more games were added that focus on training visual memory, attention and seriality. In addition, Tablexia was translated into Slovak. When developing this application, the CZ.NIC Laboratories collaborated with leading Czech experts on education of children with dyslexia. For further improvement, the game was tested with more than 200 students at for example private elementary school (ES) Integrál for children with specific learning disabilities (SLD), ES Táborská, ES Dolní Břežany, ES for children with SLD U Boroviček, ES Děčín IV, ES Prof. Matějčka in Most and Sázavská Grammar School. At the end of 2014, the Czech version of Tablexia was used by more than 1,000 users.

## Turris

The aim of the Turris project is analysis of the security situation in the networks of end users and research in the field of protection against cyber-attacks. Selected volunteers receive safety probe – the Turris router – that, in addition to normal home router functions, is also able to analyze traffic between the Internet and a home network to identify suspicious data streams. If such data stream is detected, the router alerts the Turris central of a possible attack. The system central then compares data from many connected routers and evaluates the detected threat. If the threat is classified as attack, updates are created and distributed throughout the network to help protect all other Turris users.

The Turris Project is unique also for its hardware that was, due to the high computational demands, tailor-made for the research goals of the project and is produced in the Czech Republic. The router design and all its software are provided under open licenses, giving everyone the opportunity to also check which data is being sent from their network and make sure that Turris has no “backdoor”. Due to the nature of the research project, the equipment is offered in the form of a long-term lease for a symbolic price of 1 CZK. In 2014, the distribution of the first thousand of probes (routers) took place, during which apart from Czech Internet community the ranks of content users were joined by such Internet giants as Vint Cerf and Steve Crocker. There was also continuous improvement of individual components: the Turris operating system got eight major updates, in-system communication and operation monitoring were improved.

## Creation of Internet Standards and International Collaboration

Employees of the CZ.NIC Laboratories are active participants of the IETF (Internet Engineering Task Force), which, among other issues, also deals with the creation of Internet standards (known as RFCs, Requests for Comments). Ondřej Surý, the Head of CZ.NIC Laboratories, is also signed under RFC 6594 which describes the support for the latest SSH keys using the ECDSA algorithm within the DNS records of the SSHFP type. Another standard that the CZ.NIC Association took part in is RFC number 6698, which concerns new DANE technology that enables the verification of certification authorities based on DNS.

Other significant activities of CZ.NIC in IETF include cooperation on the specification of core data models in the YANG language primarily intended for use with the NETCONF protocol.

## Education at the CZ.NIC Academy

Lab employees make significant contributions to education at the CZ.NIC Academy, leading courses focused on DNS and DNSSEC, the IPv6 protocol, the BGP routing protocol, and SIP protocol Internet telephony. They also give lectures at Czech universities and professional conferences at home and abroad.

# 9 Promoting Education and Awareness

*Integral parts of the Association's activities are educational and awareness-raising activities intended to promote better qualitative and quantitative use of the Internet as a tool for work or leisure time. The individual educational activities organized in 2014 targeted both the lay and professional public.*

## 9.1 Communication with the Public

The CZ.NIC communication takes place through multiple communication channels, depending on the target group of information recipients.

With external public, we communicate mostly through press reports and press releases that are received both by specialized journalists and journalists from the media focused on the general public or specific groups of recipients. The CZ.NIC Association publishes these releases in the News section on the main website [www.nic.cz](http://www.nic.cz). The News section is also included in the informational pages of the Association's education center, CZ.NIC Academy.

Other channels of communication with general public include accounts on social networks: Facebook, Twitter, Google+. The frequency of publishing information using these accounts was relatively high last year; messages together with images, photos or graphics were added almost every week, in some cases several of them. Thanks to that, the CZ.NIC Association had more than 1,500 Facebook fans at the end of the year, which represents a 26 percent increase compared to 2013. In addition, the number of fans on Twitter almost doubled since last year (more than 1,750

at the end of 2014). The Association continued using the Google+ service, though to a lesser degree than the abovementioned social networks.

Another communication channel was the NIC-NEWS, received by interested persons in the mailing list every 14 days. The Association's employees were informed about the activities of the Association through the IN newsletter with the same periodicity. The CZ.NIC Blog is also an important part of communication. Its authors are employees of CZ.NIC, whose activity led to the publication of 76 posts in 2014. The Association's blog fulfils a long-term role of semi-official communication channel of the Association (unlike the accounts on social networks). It is not uncommon that journalists from various fields make use of the information on the blog.

The communicated topics in 2014 were connected with the Association, its projects and activities as well as with other topics that have something to do with CZ.NIC and its activities. In contrast to the last year, when it was the technical media that published this information most frequently, there was more balance between technically-oriented and other media. Among the former, there were again mainly the web portals Lupa.cz, Root.

	Media appearances		Social networks	
	Original articles	Blog	Facebook	Twitter
<b>2012</b>	21	97	900	630
<b>2013</b>	29	95	1 100	1 000
<b>2014</b>	38	84	1 500	1 750



cz, AbcLinuxu.cz and Linux EXPRES. The Association communicated to the general public mainly through Novinky.cz and Deník. Topics related to Internet safety were again very successful.

In 2014, the CZ.NIC employees published a total of 38 original articles (which is 9 more than in the previous year), both at the above mentioned web portals and the magazines ComputerWorld or SecurityWorld. Ondřej Filip, executive director of CZ.NIC, and other staff (especially the security teams) repeatedly appeared as guests in television and radio programs.

## 9.2 "How to Use the Internet" Educational Series

In 2014, the educational series "How to Use Internet" that was first presented on Czech Television in autumn of 2012, continued with new episodes. This is currently the most noticeable awareness raising activity of the Association. The fifteen new episodes that were broadcasted in 2014 included the hundredth episode of this successful series. In addition to the new production, episodes from previous seasons were rerun during the year on channels ČT1 and ČT Sport, which led to a marked increase in the total number of views of the show. It was viewed by more than 100 mil. viewers, of which about 70 mil. in 2014.

The online version of the show "How to Use the Internet" also underwent changes. The website [www.jaknainternet.cz](http://www.jaknainternet.cz) was redesigned to include a new homepage with a welcome video and sorting of episodes into thematic categories. Subsites of individual episodes are now featured with links

for quick download of the videos and worksheets prepared for teachers in cooperation with the CZ.NIC Academy.

According to research conducted in October 2014 by an independent agency, 24% of Internet users in the Czech Republic know the series "How to Use the Internet". 92% of them consider the series instructive, almost 70% think the show provides useful information for work; 50% of the audience learned something new from the episodes.

## 9.3 The CZ.NIC Academy Education Center

Modern classrooms, experienced teachers and new topics in the field of Internet technologies together form a unique place with good facilities for educating IT professionals.

In 2014, main developments in the CZ.NIC Academy were in the course offer. Several specialized courses were added, three of them accredited. There is also another new facility for education in the newest Internet technologies.

Three new courses were added to the offer this year: "Web Application Security", "Practical Computer Safety" and "Practical Teaching with Tablets for Elementary and High School Teachers". In the first half of the year, we also organized a course named "How to Use the Internet" intended for a wide audience, which was inspired by the TV series of the same name.

The abovementioned course on teaching using tablet PCs was also accredited by the Ministry of Education, Youth and Sports. Another newly accredited course (this time by the Ministry of Interior) is "E-signature and

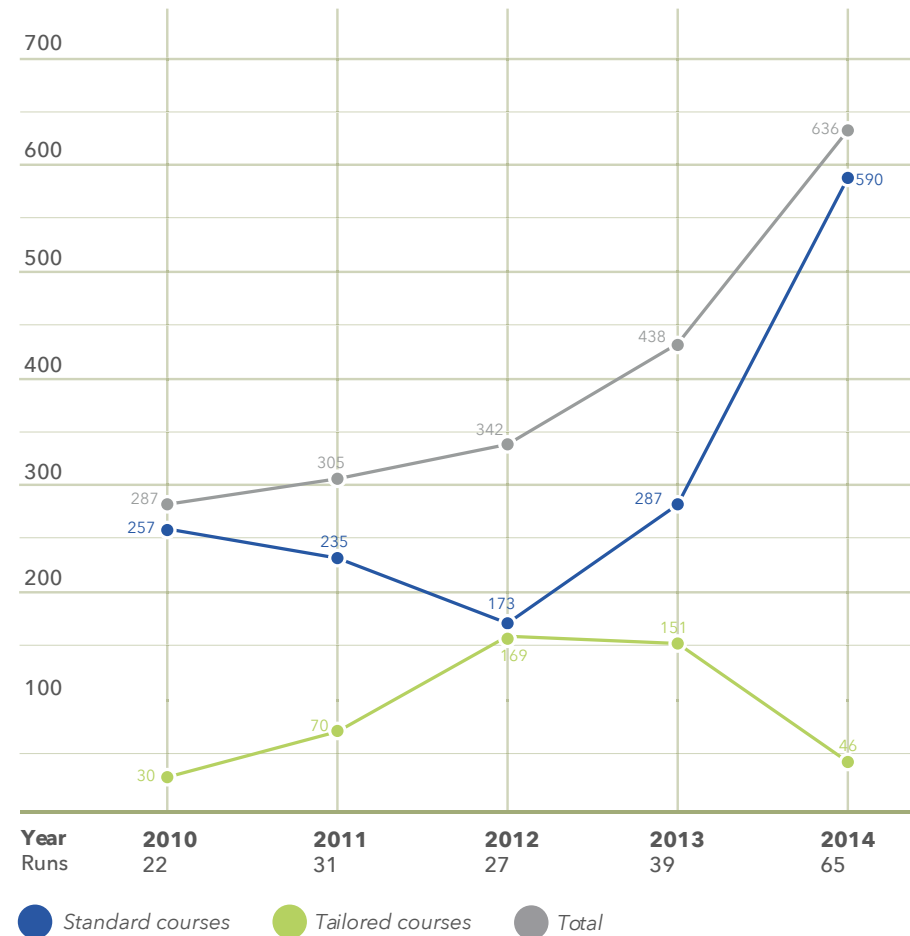
the Matter of Public Key Infrastructure". The third one is "Implementation of IPv6". This course is the only one in the Czech Republic that was accredited by IPv6 Forum, which also certified the course's lector, Petr Černo-houz.

Since autumn, potential IT students from Moravian-Silesian region have the CZ.NIC Academy much closer. In cooperation with the Faculty of Electrical Engineering and Computer Science of VŠB - Technical University of Ostrava, a new branch of the CZ.NIC Academy Education Center was opened. It is housed in the new premises of the faculty and has all modern equipment needed for the organization of specialized courses.

Ostrava became the third place after Prague and Brno that can offer fresh information on the Internet technology and practical skills indispensable in the rapidly changing world of IT, all in a modern setting with the assistance of experienced lecturers.

<b>Number of participants of specialized courses</b>	590
<b>Number of implemented specialized courses</b>	63
<b>Number of participants of tailored courses</b>	46
<b>Number of tailored courses</b>	2
<b>Number of students in on-site school courses</b>	1531
<b>Number of schools visited</b>	18

Throughout the year, the Academy held its traditional events for students of elementary schools, high schools and universities. For example, developers from the CZ.NIC Labs prepared a short lecture for students



Standard courses	Runs	Students
3D Printing	7	49
Web Application Security	2	34
Data Boxes	3	17
DNSSEC -DNS Security	4	28
E-signature and the Matter of Public Key Infrastructure	4	32
Implementation of IPv6	7	77
IP Telephony - SIP Protocol	4	22
IPv6 and DNSSEC in Public Administration and Public Tenders	3	32
How to Implement mojED	3	15
Open Source SW Quality Assurance I	2	24
Open Source SW Quality Assurance II	2	25
Počítačová bezpečnost prakticky	5	94
Praktická výuka s tablety pro učitele na ZŠ a SŠ	3	47
Principy a správa DNS	3	22
Směrovací protokol BGP	5	34
Svobodná aplikační bezpečnost I	2	15
Svobodná aplikační bezpečnost II	4	23

Kurzy na míru	Běhů	Studentů
Kurz Jak na Internet	1	37
Kurz pro učitele	1	9
<b>Celkem</b>	<b>65</b>	<b>636</b>

[List of courses implemented by the CZ.NIC Academy in 2014](#)

on the development of Android games. Besides, presentations focused mainly on domains, Internet technologies and safe behavior on the Internet were organized in schools all over the Czech Republic. The demand was great - they were attended by 1,531 students and teachers at 18 schools.

## 9.4 Conferences

In 2014, the CZ.NIC Association in collaboration with its partners organized two domestic conferences on the Internet and information technologies.

A two-day conference Internet and Technology 14 took place on May, 22 and 23, 2014 in the premises of the Staropramen brewery in Prague. At this traditional meeting of people interested in topics like domain names, the Internet or open-source projects, we presented news on projects Turris, Bird, DNSSEC and mojID, news on what is happening in the ICANN organization, information about the new gTLD domains or topics associated with safety. The conference was attended by more than 270 participants and 1774 viewers were watching it online.

A one-day 'sequel', Internet and Technology 14.2, was then held at the end of November at the Faculty of Information Technology (FIT) of the Czech Technical University in Prague-Dejvice. The program of the traditional weekend meeting consisted mainly of presentations of the CZ.NIC Association's own projects, such as the Knot DNS Resolver, news on the projects BIRD and Turris, status of the rom-0 error. However, these were also accompanied by presentations from the Association's partners, such as the FENIX Project and CESNET lectures. A new feature was the involvement of the community related to the Turris project in the competition for the most interesting enhancements of this unique device. The event was attended by 152 guests, while the online broadcast was watched by 838 viewers.

In 2014, the CZ.NIC Association presented itself at a number of specialized conferences in the Czech Republic and abroad. Examples of the domestic events include ISSS (Internet in Public Administration), InstallFest, Peering Day, Junior Internet, LinuxDays, Security 2014 and Law Tech Europe.

## 9.5 Seminars for legal experts

In 2014, two seminars for the professional legal community took place, both of which were focused on a crucial topic that is a new system of alternative resolution of disputes over Czech domain names. At the first seminar, which was held in early April, the participants were familiarized with the decision of the Czech Supreme Court, which in December 2013 questioned the current ADR system based on arbitration. Possibilities of further action were also discussed at this seminar for the first time.

Based on the results of the discussion of the first seminar and processed expert analysis, the first draft of the new Rules of alternative dispute resolution could be presented to the participants of the second workshop held on November 3, 2014.

Both seminars have traditionally been met with great interest, each of them having been visited by more than 40 legal professionals – mostly lawyers.

## 9.6 CZ.NIC Book Publication

Publishing of professional and popular titles related to the Internet and Internet technologies is another of awareness-raising activities of the Association. The CZ.NIC Publications publish books in printed and electronic versions; the latter are downloadable for free at [knihy.nic.cz](http://knihy.nic.cz). By the end of 2014, CZ.NIC Publications had already published 9 titles from domestic and foreign authors.

In the first half of 2014, Publications presented the book “Responsibility on the Internet” by Martin Husovec, then, at the end of the year, “LibreOffice Writer: A Practical Guide” by Vlastimil Ott, dedicated to those interested in this successful open-source text editor.

# 10 Cooperation and Partnerships

*The Internet is without any exaggeration the most important instrument of communication today, connecting tens of millions of users on all continents including Antarctica. We often hear that the Internet has no borders and does not fall within the jurisdiction of any government. This however does not mean that the Internet is uncontrolled or without rules. Unlike in many other fields, however, these rules are formulated by the Internet community, a large family of supporters and fans of this worldwide network. To ensure that the efforts of any single member or organization are not in vain, mutual cooperation is required both on the national and international levels.*

*Cooperation with domestic partners helps find the most acceptable system of national domain administration for Czech users while assisting, primarily through the projects of our Laboratories, with the spread of new technologies and development of the information society.*

*International cooperation not only helps monitor global trends, but with the active participation of the Association's employees also contributes to their creation and to shaping the future of technologies that affect our everyday lives.*

*With their high levels of professional knowledge, representatives of the Association, both management members and employees, are welcome guests at Czech and international professional forums.*

## 10.1 Czech Republic

Due to the importance of its activities, CZ.NIC is a natural partner of the public administration as well as of special interest groups focusing on the Internet.

### 10.1.1 Cooperation with Public Authorities

The importance of the system of domain name administration and related Internet infrastructure is comparable to the importance of other critical infrastructures, e.g. in energy or transport. As the administrator of the national domain, CZ.NIC considers protection of this infrastructure its duty and obligation towards the Czech Republic. For the purposes of future development, it is also a proud partner of many state institutions.

Under the Memorandum of Cooperation in the field of Internet governance and promotion of new technologies, concluded in 2012 with the Ministry of Industry and Trade, employees of CZ.NIC provided regular consultations especially on issues relating to Internet Governance and IPv6 and DNSSEC technologies within the framework of the national strategy for electronic communications Digital Czech Republic v. 2.0. Ministry of Industry and Trade in cooperation with the CZ.NIC Association also regularly publishes on its website information on the status of implementation of IPv6 in public administration.

The cooperation under the Memorandum concluded with the National Security Agency, which includes operation of the national security team CSIRT.CZ by CZ.NIC, was also successful. Experts of the team contributed to solution of cyber incidents and the preparation and correcting of the

Act on Cyber Security as well as to shaping of the position of the Czech Republic on the forthcoming Directive on Network and Information Security (NIS).

Due to the existence of disputes over domain names, cooperation between the CZ.NIC Association and the Arbitration Court attached to the Economic Chamber of the Czech Republic and the Agricultural Chamber of the Czech Republic is also quite important.

In cooperation with the local government, the CZ.NIC Association supported the Golden Crest Award for the best municipal website. As a technical partner of the competition, we evaluate the “support of IPv6 and DNSSEC” criterion and also participate in the evaluation of other criteria. In 2014, cooperation was established with similarly oriented competition Parádní web (“Awesome web”), organized by the Ministry of Interior and Public Administration magazine. Another significant activity for the local government was expansion of use of mojID in the municipal electronic services. The educational center CZ.NIC Academy is also involved in cooperation with public authorities by providing specialized courses such as one on Data boxes.

Other major partners of the Association from public administration include the Czech Telecommunication Office, Ministry of the Interior or the Vysočina Region.

### **10.1.2 Cooperation with NGOs and Social Responsibility**

#### **Safer Internet.cz**

The CZ.NIC Association is one of the partners of the Safer Internet.cz educational project, which aims to highlight the risks associated with using

the Internet and to offer effective ways of defending against them. The project targets various user groups and employs illustrative examples to help form good Internet security habits.

#### **People in Need**

Other social activities of the CZ.NIC Association include support of the People in Need organization and in particular its educational project “One World at Schools”, offering documentary films together with supplementary teaching aids to schools to help them explain current issues of the world and modern history.

#### **Forum for open data**

The CZ.NIC Association became a partner of the Forum for open data, which was initiated by Otakar Motejl Fund with the support of the Faculty of Informatics and Statistics of the University of Economics and the Faculty of Mathematics and Physics of Charles University. The key goal of this activity is to show the possibilities of open data in practice and to provide methodological and consulting support for public administration and the general public. Ondřej Filip, executive director of CZ.NIC was also the chairman of the jury of the Together We Open the Data competition, which awarded the best applications by students and general public that use open data for socially beneficial services.

#### **Helping Animals**

The CZ.NIC Association is a long-time contributor to the Prague and Zlín zoos, supporting the breeding programs of the Southern Cassowary, a



bird native to New Guinea and Australia. In the Czech Republic, there have been occasional sightings of its relative, the Domain Cassowary, a bird that has not yet been extensively studied. You can learn more about this peculiar species at [www.kasuar.cz](http://www.kasuar.cz).

### **The Heart on Hand Endowment Fund**

To support children from children's homes, the CZ.NIC Association became a partner of the 10th benefit concert of the Heart on Hand Endowment Fund that took place on November 25, 2014 at the National House in Prague - Vinohrady. Proceeds from the benefit concert of the endowment fund were used for activities of the children from children's homes.

### **10.1.3 Membership in Industry and Interest Organizations**

#### **NIX.CZ**

The largest Czech Internet Exchange Point (IXP) is an umbrella association for Czech and foreign Internet Service Providers for the purpose of interconnecting their networks. NIX.CZ is the largest IXP in the country and one of the most important ones in the world. The CZ.NIC Association is a member of NIX.CZ and takes an active role in seminars, workshops and other meetings organized by NIX.CZ. NIX.CZ is also a notable user of products of the CZ.NIC Laboratories, particularly the routing daemon BIRD.

#### **Tuesday Business Network**

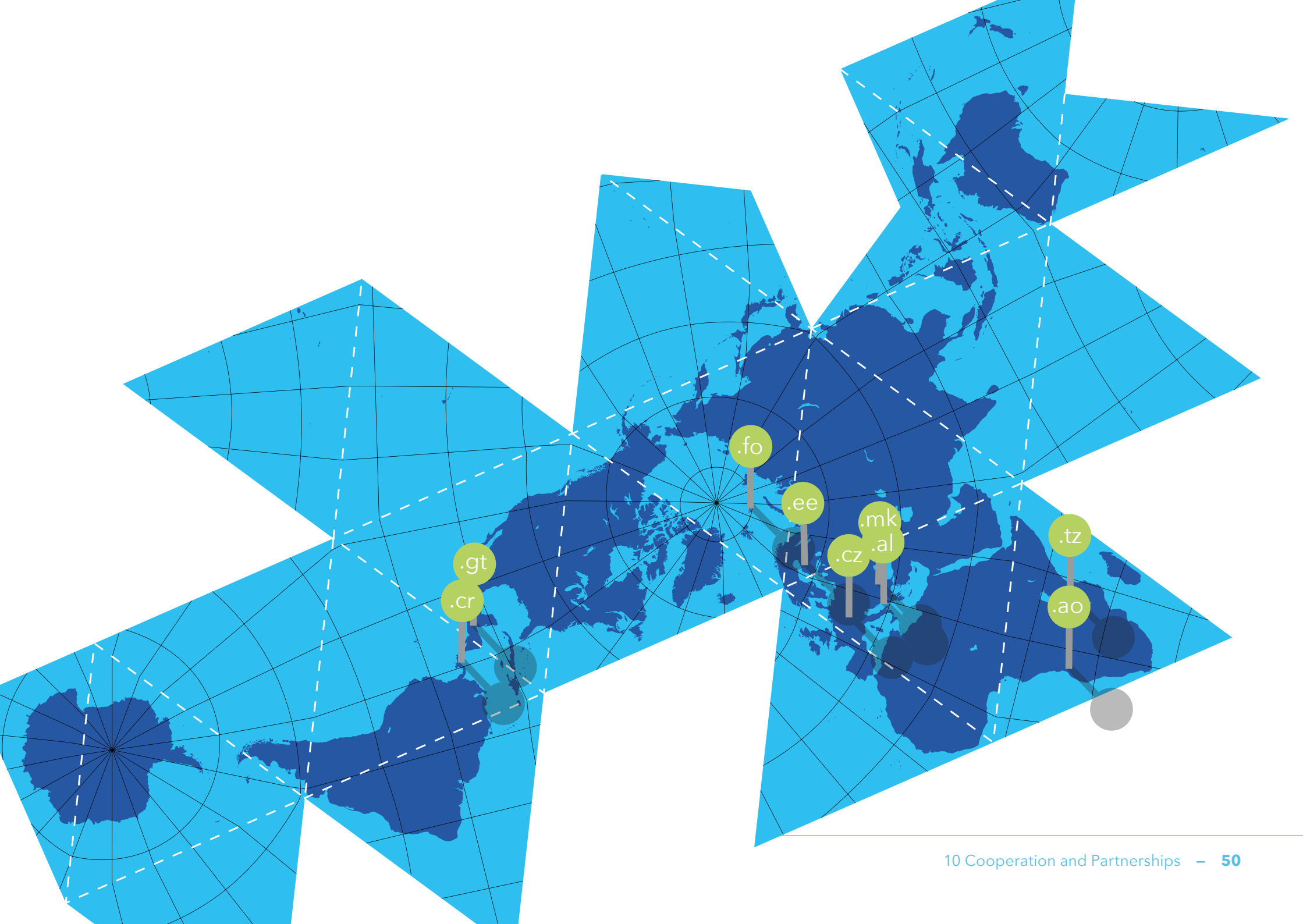
CZ.NIC is a member of this independent association that provides a platform for technology companies, investors and IT professionals to meet and share experiences.

## **10.2 Other Countries**

Thanks to the activities of the Association on the international Internet scene, foreign organizations are increasingly choosing CZ.NIC as a partner for cooperation and the Czech Republic as the location for their meetings. The CZ.NIC Association welcomes this opportunity, as it gives representatives of the local Internet community easier access to interesting topics and the world's leading experts on the Internet.

### **10.2.1 Cooperation with Foreign Registries**

Administrators of other national domain name registries are important partners of the CZ.NIC Association. In 2014, we launched cooperation with the registries of Guatemala (.gt) and Macedonia (.mk), which introduced FRED to the production environment. Guatemala became the seventh foreign national registry to use the Czech open source registration system



after Albania (.al), Angola (co.ao and .it.ao), Estonia (.ee), Costa Rica (.cr), Faroe Islands (.fo) and Tanzania (.tz).

### **10.2.2 Involvement in European Cooperation Projects**

In accordance with its long-term objective of developing Internet technologies and the information society, the Association took part in the following projects supported by the European Commission in 2014.

#### **GEN6 (Governments ENabled with IPv6)**

The goal of this project launched in January 2012 is primarily to support public administration in the transition to a new version of the Internet protocol, IPv6. The CZ.NIC Association carries out activities focusing on monitoring the preparedness for IPv6 of public administration in Europe and also works in the field of awareness-raising. In 2014, the CZ.NIC Association has regularly performed monitoring of preparedness for IPv6 of public administration in Europe, having newly added for monitoring Estonia and Portugal.

#### **STORK 2.0 (Secure idenTity acrOss boRders linKed 2.0)**

A project launched in April 2012 that focuses on the issues of cross-border recognition of electronic identification systems in Europe. In the project, the CZ.NIC Association is primarily looking at the possibility of utilizing mojID and extending it further in terms of new users and services. In 2014, the Association obtained QAA 3 (Quality Authentication Assurance) certification for the service, which is comparable e.g. to Estonian electronic citizen ID cards.

#### **e-SENS (Electronic Simple European Networked Services)**

Implementation of the project aimed at promoting electronic services and tools, such as electronic identification and electronic delivery of documents that was launched in April 2013. Objective of the project is to help support further development of the Digital Single Market and the electronic services of public and private sector.

Apart from these projects, the CZ.NIC Association submitted a proposal of CS Danube project (Cyber Security in the Danube Region) aimed at strengthening of trust between CSIRT security teams. Decisions on potential support of this project is expected in the first quarter of 2015.

### **10.2.3 Membership in Industry and Interest Organizations**

#### **APWG (Anti-Phishing Working Group)**

A global coalition of private companies, state institutions and security units focusing on the global fight against cybercrime, especially spamming.

#### **CENTR (Council of European National Top Level Domain Registries)**

A non-profit organization associating administrators of top-level domain names, both national and generic. The organization focuses mainly on European registries, but there are also representatives of other, more distant regions - e.g. Canada and Japan. Representatives of the CZ.NIC Association, a member since 2001, regularly participate in meetings of

the Admin (focusing on administrative and technical procedures in the registries), Legal & Regulatory (focusing mainly on issues connected with alternative dispute resolution, protection of personal data and other topics) and Marketing groups, as well as in technical workshops (Research & Development).

### **CECSP (Central European Cyber Security Platform)**

A joint initiative of the Czech Republic, Slovakia, Poland, Hungary and Austria, whose goal is sharing of information, best practices and know-how in the field of cyber threats and potential attacks. The Platform supports the coordination of team activities, joint education and drills. It provides a space that should be also used by the member countries for achieving a common position on international issues. Regular meetings serve to build trust between the teams and to share information. In 2014, the first joint exercise took place, which was also attended by the team CSIRT.CZ operated by CZ.NIC.

### **DNSSEC Industry Coalition**

An organization that strives to promote DNSSEC security technology worldwide. The goal of this organization is to adopt a unified approach in promoting and implementing DNSSEC for all potential users, including the domain registries of national and generic TLDs.

### **DNS-OARC (The Domain Name System Operations, Analysis and Research Center)**

A trusted platform that brings together key entities to share their experience from DNS operation, analyses, and research to be able to efficiently coordinate their activities, particularly those concerning the security of the system. Since 2010, this organization has been headed by Ondřej Filip, executive director of the CZ.NIC Association, who in 2014 was elected for his third term of office.

### **EURid (The European Registry of Internet Domain Names)**

An association which, based on authorization from the European Commission, administers the top-level .eu domain; CZ.NIC is an associate member and has a representative on its board of directors.

### **EuroISPA (European Internet Services Providers Associations)**

The European Internet Services Providers Association is the largest ISP organization in the world – it brings together over 2,300 ISP companies. Its objective is to represent ISPs within the legislative processes of the European Union and facilitate the exchange of experiences between individual ISPs. The CZ.NIC Association has been a member of EuroISPA since 2008.

### **ICANN (Internet Corporation for Assigned Names and Numbers)**

An international non-profit organization founded in 1998 whose main objective is not only the administration and issuing of generic and national top-level domain names, but also the assignment of IP addresses. The CZ.NIC Association, as the administrator of the .CZ national domain, sends

its representatives to regular meetings, and its specialists participate actively in working groups. For example, Ondřej Filip, executive director of the CZ.NIC Association, is a member of the prestigious Security and Stability Advisory Committee (SSAC).

#### **IETF (Internet Engineering Task Force)**

Founded back in 1986, the organization is directly linked to the birth of the Internet. It is made up of an international community of leading specialists, network architects, and representatives from the commercial sector. The IETF approves and promotes Internet standards, known as RFC documents, which govern the majority of Internet operations. Its meetings are also attended by many Czech experts from the academic and private sectors.

#### **IGF (Internet Governance Forum)**

The IGF is a free forum of all stakeholders from the public and private sector created by the UN in accordance with the conclusions of the World Summit on the Information Society (WSIS) in November 2005. IGF also includes the Multistakeholder Advisory Group (MAG), which aims to assist the UN Secretary General in preparing the forum. MAG has 50 members representing national governments, the private sector, civil society and the academic and technical communities. The Czech Republic has a single representative in MAG - Ondřej Filip, executive director of the CZ.NIC Association.

#### **RIPE NCC (Réseaux IP Européens Network Coordination Centre)**

An independent non-profit organization supporting Internet infrastructure. Among its key activities is the operation of RIR (Regional Internet Registry), which allocates Internet resources and related services (e.g. IP addresses) to its members. As one of its members, CZ.NIC takes part in regular meetings and also participates in other topical meetings and training sessions held by the organization.

#### **Trusted Introducer**

One of the activities of the TERENA organization, which brings together the CSIRTs throughout Europe and is a trustworthy center for the exchange of sensitive information and know-how between the individual CSIRTs. CZ.NIC is a member and is listed among registered CSIRT teams.

#### **BIND (Berkeley Internet Name Daemon)**

An association supporting the development of DNS software BIND.

#### **ISC (Internet System Consortium)**

An organization supporting Internet infrastructure and the operator of the F-Root server.

# 11 Association Structure

## 11.1 The membership base

The Association's membership base includes a whole range of entities, which make a significant contribution to the functioning of the Czech Internet. Among its members are representatives of Internet and telecommunications service providers, domain name registrars, publishers of Internet and print media, e-commerce businesses, and companies for whom the Internet and domain names are an important communication tool.

The CZ.NIC Association is one of the places where these representatives can meet and influence the future direction of the Czech Internet. The broad spectrum of business activities carried out by members and their involvement in the Association's activities, whether in the form of participation in general assembly meetings, working groups and workshops, e-mail conferences, or working directly within the Association bodies, enriches and expands the Association's knowledge portfolio and allows it to continually improve the efficiency of its management and react to the constant development typical for the Internet.

### 11.1.1 Membership Conditions

A member of the Association may be any legal entity fulfilling general membership conditions, including having a seat or an organizational unit in an EU Member State, having possession of at least one domain name with the .CZ ccTLD and payment of an entry membership fee.

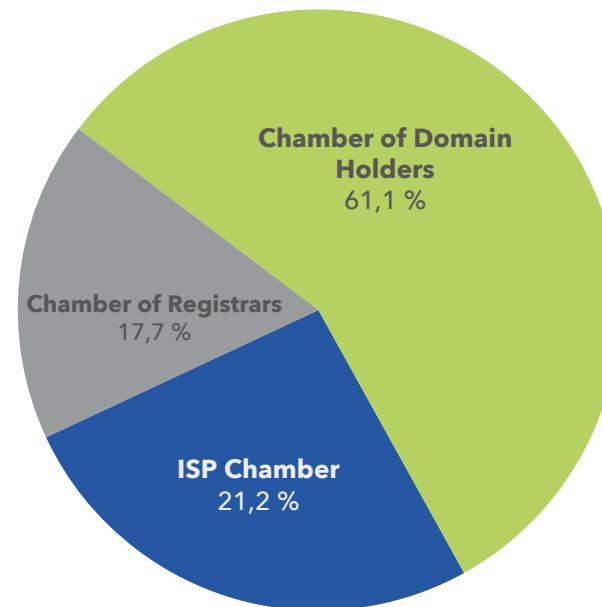
Association members are divided into three chambers: the Chamber of Domain Holders, the ISP Chamber, and the Chamber of Registrars. Special conditions for membership in individual chambers are set in the

Statutes. The chamber arrangement benefits Association members, who are able, together with other similarly focused entities, to better define and defend their opinions and interests. This arrangement has also made the operation and negotiations of the Association bodies more efficient, particularly the Collegium and General Assembly.

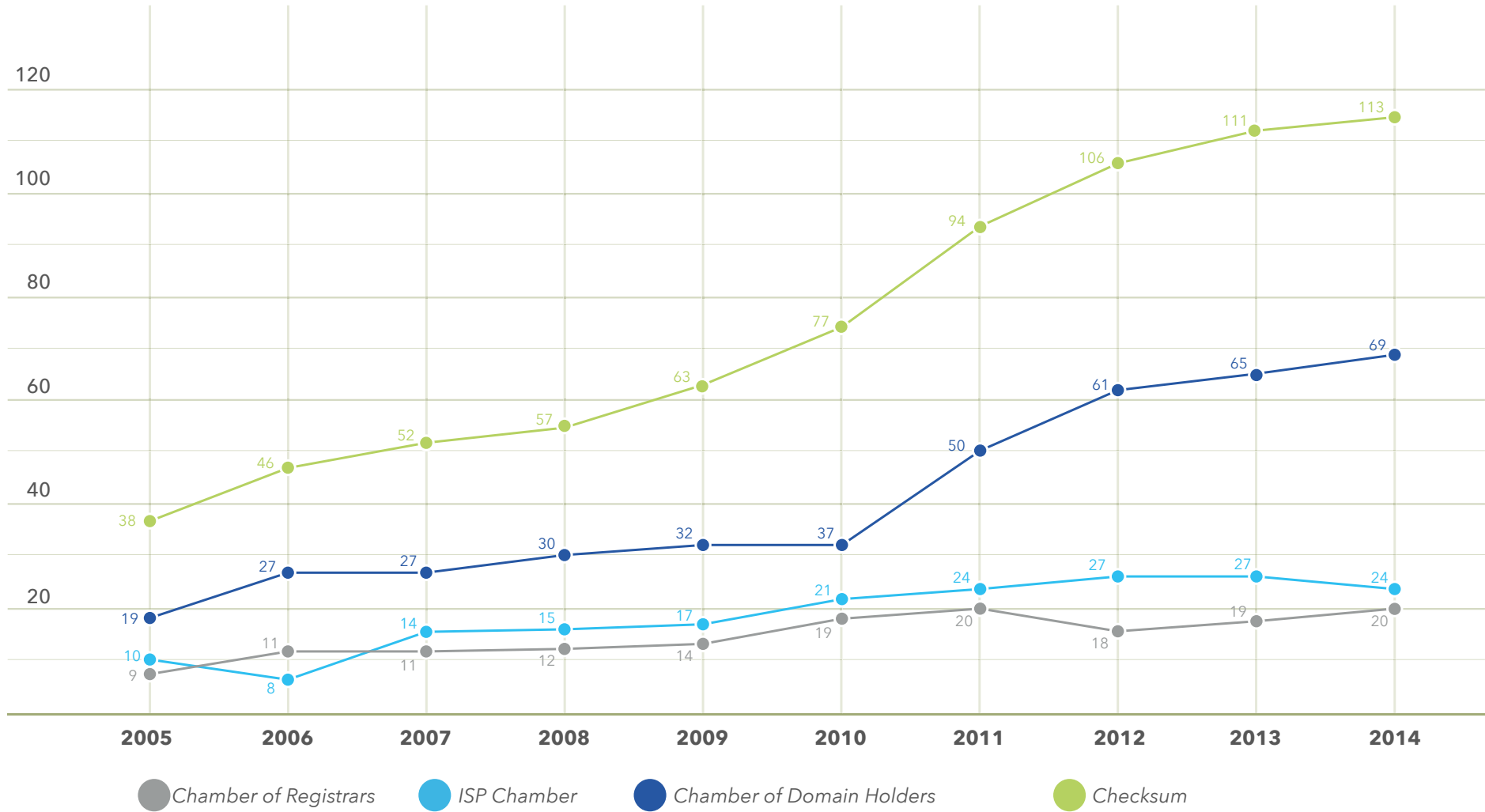
As of December 31, 2014 the CZ.NIC Association had 113 members, i.e. two more than a year before. The Chamber of Domain Holders was joined by four new members; another new member joined the Chamber of Registrars and three members left the ISP Chamber.

### 11.1.2 Number of Members by Chamber

Most members (61.1%) are found in the Chamber of Domain Holders, which also showed the largest increase.



### 11.1.3 Development of the Number of Members by Chamber





### 11.1.4 Přehled členů dle komor

#### Chamber of Domain Holders

##### Company

Company	ID
ABRATICA s. r. o.	26108534
ACOMWARE s. r. o.	25047965
ADAPTIVITY s. r. o.	24156027
Advio Network, s. r. o.	28565673
AKREDIT, spol. s r. o.	25797387
ALENSA, s. r. o.	27179681
AliaWeb, spol. s r. o.	26117363
Asociace pro elektronickou komerci (APEK)	68684797
AUDITEL, s. r. o.	26775034
BT Limited, organizační složka	70802025
CD PROFESIONAL security agency, s. r. o.	25712713
CISCO SYSTEMS (Czech Republic) s. r. o.	63979462
ComSource s. r. o.	29059291
Com-Sys TRADE spol. s r. o.	16188781
CQK HOLDING a. s.	28405579
CYBERSALES a. s.	26199653
Datahost s. r. o.	26390973
DELL Computer, spol. s r. o.	45272808
Dimension Data Communications Czech s. r. o.	26175738
ekolo.cz s. r. o.	27141659
EXPLORER a. s.	26726653
Google Czech Republic, s. r. o.	27604977
Greenlux s. r. o.	28608747
Holubová advokáti s. r. o.	24686727
IBM Česká republika, spol. s r. o.	14890992
ICZ a. s.	25145444
igloonet, s. r. o.	27713482
I. H. P. společnost s ručením omezeným	48117846
INBES, spol. s r. o.	14502593
Intell. Net s. r. o.	27971546
Internet Info, s. r. o.	25648071
Internet Mall, a. s.	26204967
i - registry s. r. o.	28451082
Kanlux s. r. o.	27804861
Klíč, spol. s r. o.	28129377
Laurián s. r. o.	29018919
MAFRA, a. s.	45313351
MARIAS s. r. o.	26136139
MASANTA.COM s. r. o.	25730533
MEDIA FACTORY Czech Republic a. s.	26288311
Michal Krsek & partneři s. r. o.	27418570
MITE Infonet s. r. o.	25660292
Moonlake Web Services, s. r. o.	29249911
Neutral czFree eXchange, z. s. p. o.	75093201
Nux s. r. o.	27234631
Občanské sdružení Ubuntu pro Českou republiku	22674608
Orange Business Czech Republic s. r. o.	49620037
Orego finance s. r. o.	24718955

PharoCom s. r. o.	25172131	<b>ISP Chamber Company</b>	<b>ID</b>
PP Partners Prague, a. s.	28204671		
Pražský Účetní Servis s. r. o.	26740575	ABAK, spol. s r. o., čes., ABAK, GmbH, něm., ABAK, Co.Ltd.,	
Q3, s. r. o.	26226073	angl.	40763153
Seznam.cz, a. s.	26168685	CASABLANCA INT s. r. o.	25079832
Skymia s. r. o.	28238613	CentroNet, a. s.	26165473
Software602 a. s.	63078236	CESNET, z. s. p. o.	63839172
Socha, spol. s r. o.	48291153	COOLHOUSING s. r. o.	14893983
SuperNetwork s. r. o.	25492063	ČD - Telematika a. s.	61459445
SVBsoft, s. r. o.	28523644	České Radiokomunikace a. s.	24738875
Tech Ware spol. s r. o.	14891107	Dragon Internet a. s.	27237800
TIKWI s. r. o.	28917651	Družstvo EUROSIGNAL	26461129
Trustica s. r. o.	26514362	Faster CZ spol. s r. o.	60722266
Unie vydavatelů, o. s. (Czech Publishers Association)	15887081	FreeTel, s. r. o.	24737887
Unisys s. r. o.	48109291	GTS Czech s. r. o.	28492170
ÚVT, s. r. o.	25701118	INTERNEXT 2000, s. r. o.	25352288
VIZUS.CZ s. r. o.	27155315	IPEX a. s.	45021295
VOLNÝ, a. s.	63080150	JHComp s. r. o.	26051362
Vymáhání a odkup pohledávek s. r. o.	27566510	LAM plus s. r. o.	25129619
Webarium, s. r. o.	26089602	NetArt Group s. r. o.	27612694
Webnames s. r. o.	44848692	PODA a. s.	25816179
		Qnet CZ s. r. o.	25518097
		STARNET, s. r. o.	26041561
		T-Mobile Czech Republic a. s.	64949681
		Trestel CZ, a. s.	26177129
		VSHosting s. r. o.	61505455
		2 connect a. s.	29007542

## Chamber of Registrars

### Company

	ID
ACTIVE 24, s. r. o.	25115804
Dial Telecom, a. s.	28175492
e-BAAN Net s.r.o.	26867257
GENERAL REGISTRY, s. r. o.	26027267
Gransy s. r. o.	28087755
IGNUM, s. r. o.	26159708
INTERNET CZ, a. s.	26043319
KRAXNET s. r. o.	26460335
Media4web, s. r. o.	26735903
NEW MEDIA GROUP s. r. o.	26124611
ONE.CZ s. r. o.	25503651
ONEsolution s. r. o.	27710335
O2 Czech Republic a. s.	60193336
Seonet Multimedia s. r. o.	27522041
Stable.cz s. r. o.	28741048
TELE3 s. r. o.	26096960
TERMS a. s.	14499037
Web4U s. r. o.	26058774
ZONER software, a. s.	49437381
1X s. r. o.	44632142

## 11.2 Association Bodies

### 11.2.1 General Assembly

The General Assembly is the supreme body of the Association, which is divided into three chambers - the Chamber of Registrars, ISP Chamber and the Chamber of Domain Holders. Every Association member has the right to participate in a meeting of the General Assembly and present their ideas, opinions, and comments.

### 11.2.2 Collegium

The Collegium is an Association body consisting of the members elected by the respective Chambers of the General Assembly and/or other persons. The powers of the Collegium include approving the budget and policies of the Association and electing or dismissing members of the Board of Directors and the Supervisory Board. The Collegium has 21 members, of which 18 are elected by the individual chambers of the General Assembly and three are nominated by public authorities. Term of office of members of the Collegium is three years.

#### Collegium members elected by the General Assembly

Collegium members representing the Chamber of Domain Holders from January 1 to December 31, 2014:

Marek Antoš

Štěpán Holub

Michal Pajr

Jiří Peterka

Jan Redl

David Vorlíček

At the General Assembly on December 17, 2014, Marek Antoš and Jan Redl were re-elected as members representing the Chamber of Domain Holders.

#### Collegium members representing the ISP Chamber from January 1 to December 16, 2014:

Ondřej Filip

Tomáš Košnar

Petr Kuneš

Jiří Kysela

Zbyněk Pospíchal

Karel Taft

At the General Assembly on December 17, 2014, Vlastimil Pečínka was newly elected to replace Petr Kuneš.

#### Collegium members representing the ISP Chamber from December 17 to December 31, 2014:

Ondřej Filip

Tomáš Košnar

Jiří Kysela

Vlastimil Pečínka

Jiří Kysela

Zbyněk Pospíchal

Karel Taft

#### Collegium members representing the Chamber of Registrars from January 1 to December 16, 2014:

Zdeněk Brůna

Marek Erneker

Martin Kukačka

Stanislav Kysela

Erich Syrovátka

At the General Assembly on December 17, 2014 Zdeněk Brůna was re-elected as a member representing the Chamber of Registrars, Tomáš Fiala and Jaroslav Štětina were newly elected to represent the same Chamber.

#### Collegium members representing the Chamber of Registrars from December 17 to December 31, 2014:

Zdeněk Brůna

Tomáš Fiala

Martin Kukačka

Stanislav Kysela

Erich Syrovátka

Jaroslav Štětina

#### Collegium members nominated by public authorities:

Marek Ebert, the Czech Telecommunication Office

Markéta Nováková, the Ministry of Industry and Trade of the Czech Republic

Marie Moravcová, the Czech Chamber of Commerce

### 11.2.3 Board of Directors

The Board of Directors is a statutory body governing Association activities and acting on its behalf. Its powers include approving the rules for the registration of domain names or for provided services. The Board of Directors has five members elected for three years. Members of the Board of Directors are elected and dismissed by the Collegium.

#### Board members from January 1 to December 31, 2014:

Karel Taft (\*1971), Chairman of the Board of Directors

Marek Antoš (\*1979), Vice-chairman of the Board of Directors

Tomáš Košnar (\*1965), member

Martin Kukačka (\*1980), member

Jiří Kysela (\*1955), member

### 11.2.4 Supervisory board

The Supervisory Board is the controlling body of the Association, which oversees the Board of Directors and the Association's activities. The Supervisory Board has three members, whose term of office is three years.

#### Members of the Supervisory Board from January 1 to December 31, 2014:

Jan Redl, Chairman of the Supervisory Board

Ilona Filípková, member

Jiří Peterka, member

# 12 Human Resources

*The strength of the Association lies in its professionally competent and skilled employees who are essential to the fulfillment of the Association's objectives and its further development. It is no exaggeration to say that many of our employees are leading experts in the field who have not only domestic, but also international reputation. In order to strengthen their individual competencies, all employees continuously receive further education in foreign languages, soft skills and professional skills to make sure they fully develop their professional and personal potential and obtain knowledge and skills that can contribute to the further development of both the Czech Internet and the Association. CZ.NIC creates a non-smoking environment for its employees, which has a positive impact not limited to the health perspective.*

## **12.1 Status and development of the staff numbers**

In 2014, the number of employees increased, though not as significantly as in the previous year. While there were 25 new employees last year, in 2014 the staff number increased by 5; most of them were admitted to the CZ.NIC Labs. In connection with preparations for the new role of the national team CSIRT.CZ under the Act on Cyber Security, the number of the security team employees was increased. Another section that grew was the PR department.

<b>Department</b>	<b>Employees</b> 1. 1. 2014	<b>Full-time equivalent</b> 1. 1. 2014	<b>Employees</b> k 31. 12. 2014	<b>Full-time equivalent</b> k 31. 12. 2014	<b>Employee change</b>	<b>Change in full-time equivalent</b>
<b>Executives</b>	6	6	6	6	0 %	0 %
<b>CZ.NIC Academy</b>	2	1,5	1	1	-50 %	-50 %
<b>CSIRT Security Team</b>	4	3,2	5	3,7	+25 %	+16 %
<b>Development projects</b>	1	1	1	1	0 %	0 %
<b>CZ.NIC Labs</b>	31	26,05	34	29	+10 %	+11 %
<b>Marketing/PR</b>	4	4	5	5	+25 %	+25 %
<b>Legal/secretariat</b>	2	1,5	2	2	0 %	+33 %
<b>Network Administration</b>	5	5	5	5	0 %	0 %
<b>Development</b>	14	12,15	15	12,65	+7 %	+4 %
<b>Customer Support</b>	10	10	10	10	0 %	0 %
<b>TOTAL</b>	79	70,4	84	75,35	+ 6 %	+7 %



## 12.2 Structure of employees

### 12.2.1 Educational Structure of Employees

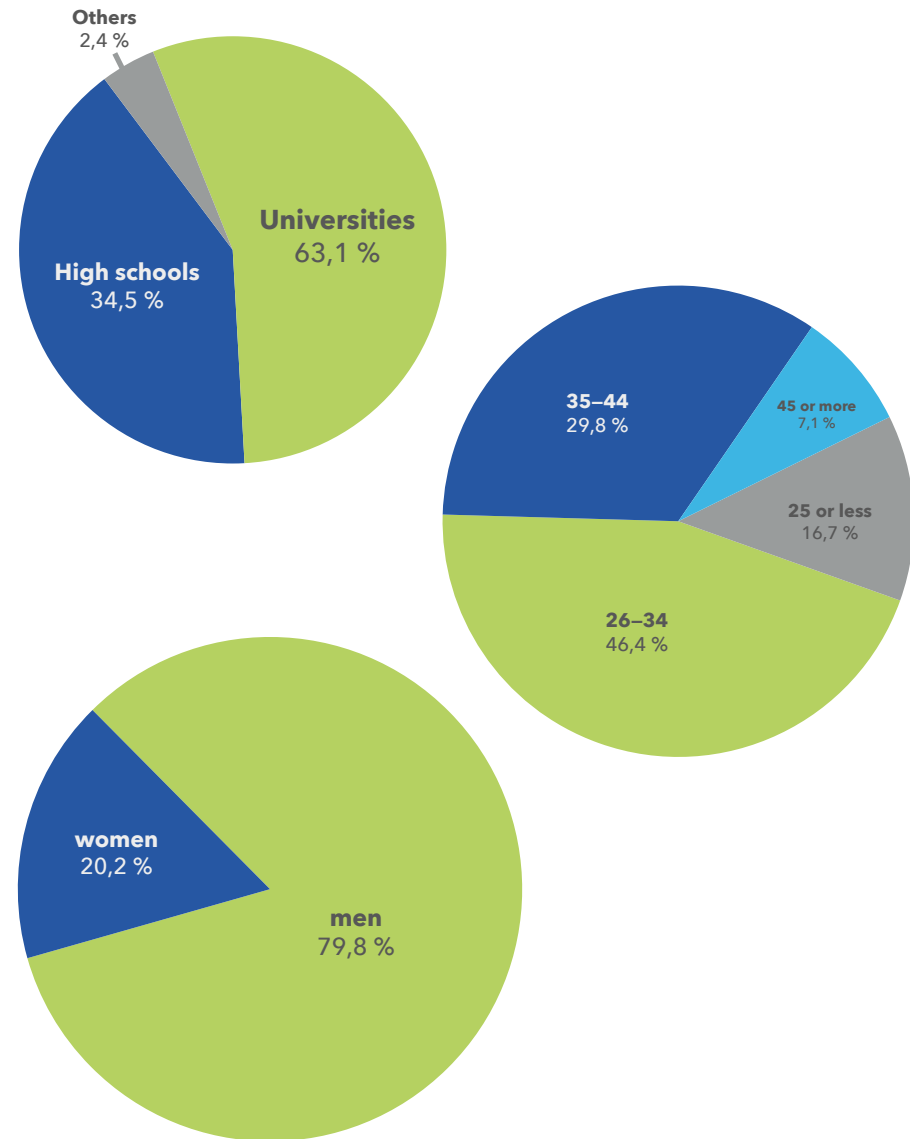
Most of the Association employees have university education. The CZ.NIC Association provides an opportunity to gain professional experience to fresh university graduates, and tries to create appropriate conditions for them, including establishing a new branch in Brno, Pilsen and recently also in České Budějovice. Thanks to these factors, the share of employees with university education is increasing – by almost 5% in 2014.

### 12.2.2 Age Structure of Employees

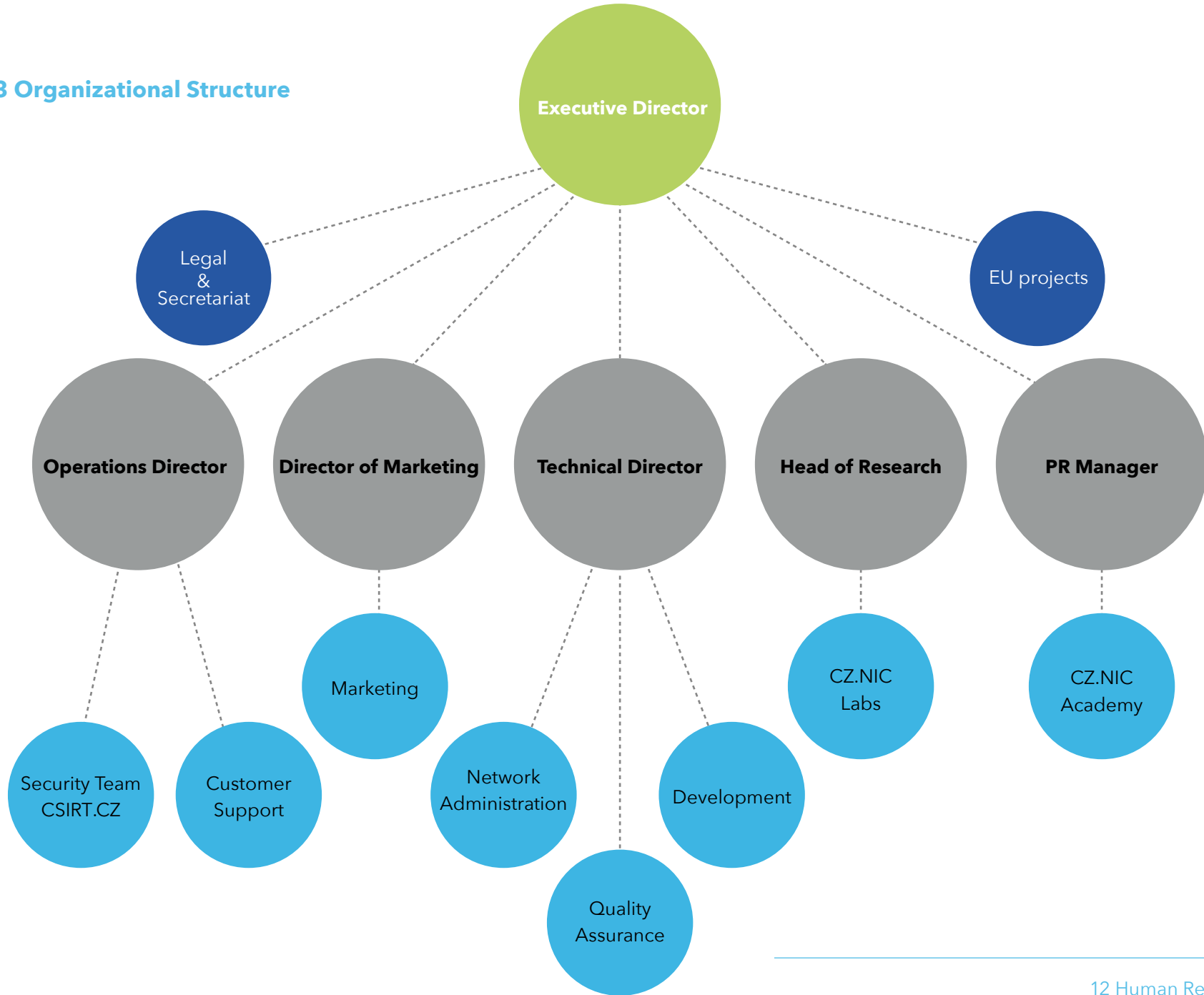
The average age of an Association's employee is 32.9 years. In terms of age structure, the dominating category is formed by employees aged 26 to 34, which is primarily due to the high number of employees with university education and the support of university graduates.

### 12.2.3 Gender Structure of Employees

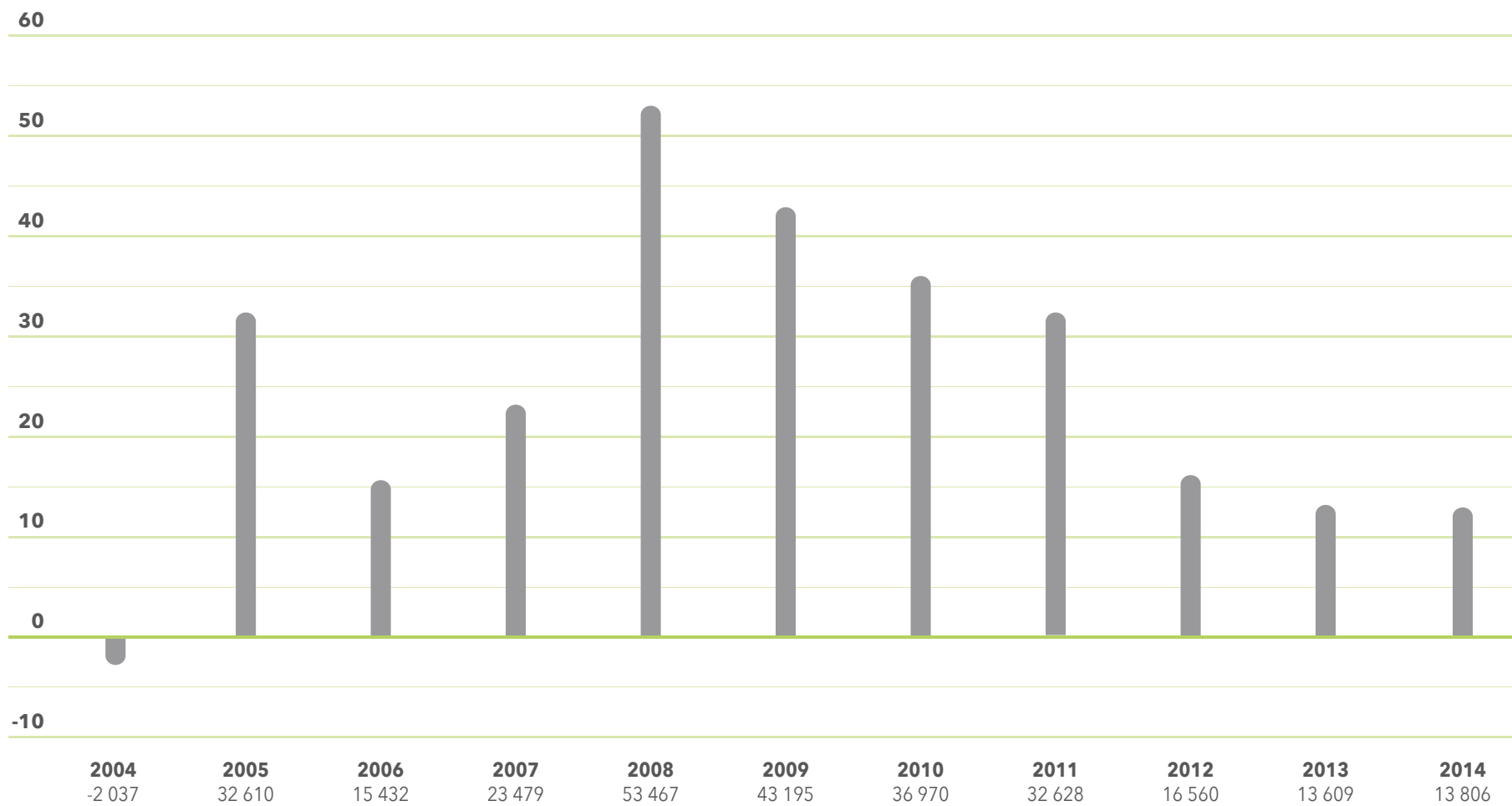
When hiring new employees, CZ.NIC promotes equal opportunities and participation of women. Their involvement is also supported by favorable labor conditions enabling the reconciliation of family and working life. However, due to the gender structure of graduates of engineering and technology university programs, men outnumber women as well as in other technology companies.



### 12.3 Organizational Structure

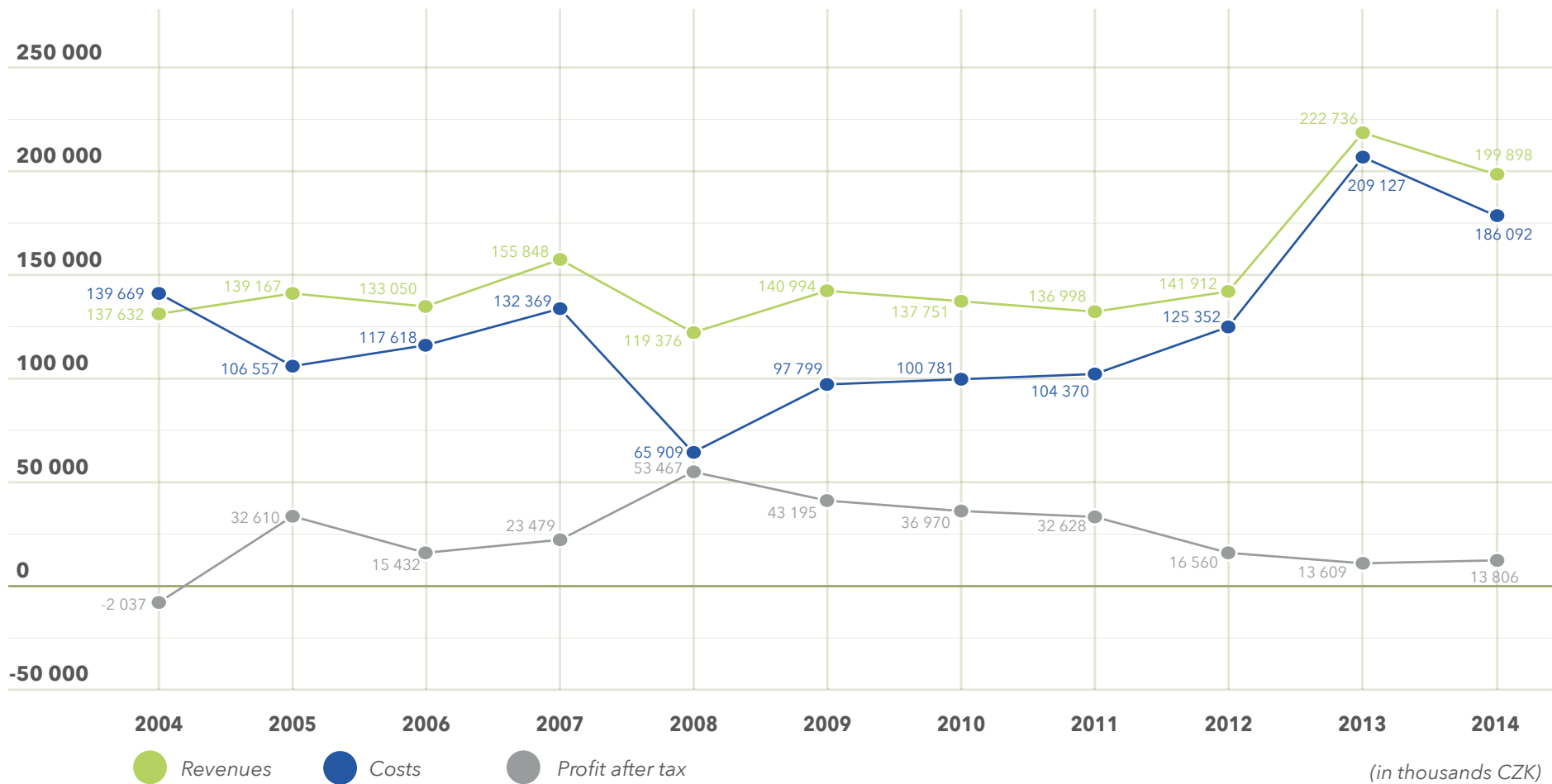


# 13 Selected Financial Indicators



(in thousands CZK)

Profit after tax



Profit after tax

# 14 Balance Sheet

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Total assets</b>	100 982	147 926	168 026	171 222	221 778	275 087	312 202	361 566	387 674	405 154	431 392
<b>Fixed assets</b>	6 347	3 044	10 156	8 381	8 135	8 268	12 258	8 781	63 840	77 095	101 406
<b>Intangible assets</b>	1 841	1 179	3 210	3 806	1 522	0	0	0	300	249	331
<b>Tangible assets</b>	4 506	1 865	6 946	4 575	6 613	8 268	12 258	8 781	63 540	76 846	101 075
<b>Financial investments</b>											
<b>Securities</b>											
<b>Current assets</b>	94 251	144 882	156 678	161 456	212 200	265 160	292 563	351 125	322 087	326 095	327 745
<b>Inventory</b>				55	211	48	184	278	189	277	453
<b>Long-term receivables</b>			106		715	1 196	1 351	1 379	1 335	59	59
<b>Short-term receivables</b>	880	852	2 872	1 018	1 051	1 851	4 338	12 180	10 676	18 540	22 100
<b>Financial assets</b>	93 371	144 030	153 680	160 383	210 223	262 065	286 690	337 288	309 887	307 219	305 133
<b>Other assets</b>	384	0	1 192	1 385	1 443	1 659	7 381	1 660	1 747	1 964	2 241

(in thousands CZK)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Total liabilities</b>	100 982	147 926	168 026	171 222	221 778	275 087	312 202	352 036	387 674	405 154	431 392
<b>Own equity</b>	6 014	38 624	54 056	77 535	131 181	174 197	211 167	243 795	261 094	274 591	288 397
<b>Capital stock</b>											
<b>Capital funds</b>											
<b>Funds from profit</b>	7 627	7 627	7 627	7 627	7 627	7 627	7 627	44 597	44 597	93 784	107 393
<b>Retained earnings</b>	424	-1 613	30 997	46 429	69 908	123 375	166 570	166 570	199 937	167 198	167 198
<b>Earnings of the reporting period</b>	-2 037	32 610	15 432	23 479	53 646	43 195	36 970	32 628	16 560	13 609	13 806
<b>Liability</b>	16 786	26 831	18 753	13 706	16 764	13 851	14 877	15 988	17 684	27 479	22 497
<b>Provisions</b>								9 530	884	1 832	1 662
<b>Long-term liabilities</b>					193				241	304	235
<b>Short-term liabilities</b>	16 786	26 831	18 753	13 706	16 571	13 851	14 877	15 988	16 559	25 343	20 600
<b>Bank loans</b>											
<b>Other liabilities</b>	78 182	82 471	95 217	79 981	73 833	87 039	86 158	92 253	108 896	103 084	120 498

(in thousands CZK)



# 15 Profit and Loss Account

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Output and sales</b>	136 250	139 020	131 864	147 564	108 671	109 764	120 980	127 135	134 030	142 295	155 134
<b>Of which revenue and sales</b>	136 250	139 020	128 952	144 740	108 671	109 764	120 980	127 133	134 144	138 755	150 880
<b>Capitalization</b>			2 912	2 824	0	0	0	0	0	3 379	4 044
<b>Production consumption and costs</b>	124 497	82 074	94 067	88 668	19 509	27 572	37 451	44 440	70 414	67 042	66 335
<b>Added value</b>	11 753	56 946	37 797	58 896	89 162	82 192	83 529	82 693	63 616	75 253	88 799
<b>Staff costs</b>	5 923	6 053	11 930	20 193	20 567	27 113	31 520	39 227	43 328	57 245	66 541
<b>Depreciation of assets</b>	4 294	4 944	4 900	6 042	5 851	5 069	6 980	6 145	4 183	4 922	13 296
<b>Accounting of reserves</b>								533	313	1 020	-137
<b>Other operating income</b>	421	-475	244	246	574	1 156	1 496	1 208	1 082	2 290	2 029
<b>Other operating costs</b>	598	321	516	435	393	433	3 034	351	626	916	1 432
<b>Operating profit or loss</b>	1 359	45 135	20 695	32 448	63 033	50 566	43 491	37 795	16 245	13 442	9 664
<b>Other financial income</b>	961	622	942	7 885	10 054	30 041	15 075	8 435	6 724	78 118	42 736
<b>Other financial costs</b>	2 719	115	81	7 077	4 129	25 342	11 208	4 623	685	74 915	38 254
<b>Profit or loss from financial operations</b>	-1 758	507	861	808	5 925	4 699	3 867	3 812	6 039	3 203	4 482
<b>Profit or loss from ordinary activities</b>	-399	45 642	21 556	33 256	68 958	55 265	47 358	41 607	22 284	16 645	14 146
<b>Extraordinary income</b>											
<b>Extraordinary costs</b>	1 638		6 124	9 777	15 312	12 070	10 388				
<b>Extraordinary profit or loss</b>	-1 638		-6 124	-9 777	-15 312	-12 070	-10 388				
<b>Profit or loss after tax</b>	-2 037	32 610	15 432	23 479	53 646	43 195	36 970	32 628	16 560	13 609	13 806

(in thousands CZK)

# 16 Revenue Development



# **17** **Data on Facts between the Date of Final Accounts and General Assembly**

No events occurred in the given time that would have had an impact on the data presented in the financial statements for 2014.

# 18 Auditor's Report

## Zpráva nezávislého auditora pro členy zájmového sdružení právníků osob CZ.NIC

Ověřili jsme příloženou účetní závěrku sdružení CZ.NIC, zájmového sdružení právníků osob, tj. rozvahu ke dni 31.12.2014, výkaz zisku a ztráty za období od 1.1.2014 do 31.12.2014 a přílohu této účetní závěrky, včetně popisu použitých významných účetních metod.

### Odpovědnost statutárního orgánu účetní jednotky za účetní závěrku

Za sestavení a věrné zobrazení účetní závěrky v souladu s českými účetními předpisy odpovídá statutární orgán sdružení. Součástí této odpovědnosti je navrhnout, zavést a zajistit vnitřní kontroly nad sestavováním a věrným zobrazením účetní závěrky tak, aby neobsahovala významné nesprávnosti způsobené podvodem nebo chybou, zvolit a uplatňovat vhodné účetní metody a provádět dané situaci přiměřené účetní odhady.

### Odpovědnost auditora

Naší úlohou je vydat na základě provedeného auditu výrok k této účetní závěrce. Audit jsme provedli v souladu se Zákonem o auditorech a Mezinárodními auditorskými standardy a souvisejícími aplikačními doložkami Komory auditorů České republiky. V souladu s těmito předpisy jsme povinni dodržovat etické normy a naplánovat a provést audit tak, abychom získali přiměřenou jistotu, že účetní závěrka neobsahuje významné nesprávnosti.

Audit zahrnuje provedení auditorských postupů, jejichž cílem je získat důkazní informace o částkách a skutečnostech uvedených v účetní závěrce. Výběr auditorských postupů závisí na úsudku auditora, včetně posouzení rizik, že účetní závěrka obsahuje významné nesprávnosti způsobené podvodem nebo chybou. Při posuzování těchto rizik auditor přihlídně k vnitřním kontrolám, které jsou relevantní pro sestavení a věrné zobrazení účetní závěrky. Cílem posouzení vnitřních kontrol je navrhnout vhodné auditorské postupy, nikoli vyjádřit se k účinnosti vnitřních kontrol. Audit též zahrnuje posouzení vhodnosti použitých účetních metod, přiměřenosti účetních odhadů provedených vedením i posouzení celkové prezentace účetní závěrky.

Domníváme se, že získané důkazní informace tvoří dostatečný a vhodný základ pro vyjádření našeho výroku.

### Výrok auditora

**Podle našeho názoru účetní závěrka podává věrný a poctivý obraz aktiv, pasív, a finanční situace CZ.NIC, zájmového sdružení právníků osob k 31.12.2014 a nákladů, výnosů a výsledku jejího hospodaření za rok 2014 v souladu s českými účetními předpisy.**

V Malenicích, dne 21. května 2015

Auditorská společnost:

Odpovědný auditor:



ADU.CZ s. r. o

Záměstí 68, 387 06 Malenice  
oprávnění KA ČR č. 368  
jménem společnosti ADU.CZ s.r.o. vypracovala zprávu Ing. Simona Pacáková, auditor,  
oprávnění KA ČR č. 1825

1 ADU.CZ s.r.o. - společnost zapsána v seznamu auditorských společností  
v Komofe auditorů České republiky, číslo osvědčení 368  
Na Záměstí 68, 387 06 Malenice, IČO: 62522078, DIČ: CZ62522078



2 ADU.CZ s.r.o. - společnost zapsána v seznamu auditorských společností  
v Komofe auditorů České republiky, číslo osvědčení 368  
Na Záměstí 68, 387 06 Malenice, IČO: 62522078, DIČ: CZ62522078





# 19 Place of business and contact information

## CZ.NIC, z. s. p. o.

Place of business (from January 1, 2015)

Milešovská 1136/5

130 00 Praha 3

Company ID: 67985726

VAT ID: CZ67985726

Tel.: +420 222 745 111

Fax: +420 222 745 112

[www.nic.cz](http://www.nic.cz)

The association is registered in the Register of Interest Association of Legal Persons at the Municipality of the City of Prague, registration number L 58624.

CZ.NIC - 24-hour customer support

Tel.: +420 222 745 111

Tel.: +420 731 657 660

E-mail: [podpora@nic.cz](mailto:podpora@nic.cz)