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Introduction

Dear readers,

In the first months of 2017 NASK ended the direct service of registrants of .pl domain names. As a result of NASK’s cessation of the direct service and registration of .pl domain names, 100% of registrants are serviced by NASK’s Partners in the Registry-Registrar model.

As in every quarter, you will find in the report detailed information on .pl domain name market in respect of both registrars and registrants. A short summary of the first three months of 2017 was presented in part “Q1 2017 in .pl registry – facts and figures”. This is the first edition when the report has been extended with a new cycle, titled “Insight into .pl registry”, containing interviews with employees engaged in daily performance of tasks pertaining to NASK’s role as a country code registry.

In the beginning of April 2017 NASK’s Partners were invited to take part in the workshops on DNSSEC service, organized by .pl registry. Events of this kind, embedded in the activity of ccTLD registries and good practices of cooperation with Partners, will be permanently present in the activity calendar of the Polish registry. The participants of the meeting, held in April, were the Partners willing to apply gained knowledge and practical skills while implementing the service increasing the security level of .pl domain names at their clients. For more details read the interview with Maciej Andziński who conducted DNSSEC workshop for NASK’s Partners and shares his observations and knowledge on the application of DNSSEC in Poland and abroad.

I wish you pleasant reading of the report on the .pl domain name market for the first quarter of 2017.

Wojciech Kamieniecki
NASK Director
NASK's report for the first quarter of 2017

2,677,692 active .pl domain names

- 2,822 names registered daily average
- 254,013 new names

- 34,054 names secured with DNSSEC
- 1,010 agreements on options renewed for consecutive 3 years
- 100% of Partners' share in the .pl domain name market
- 37,582 transfers
- 4,623 new agreements on options
- Effectiveness of options 44.95%

- 1,026,507 registrants
- 66.75% of registrants were entrepreneurs
- 33.25% of registrants were natural persons

211 Partners of .pl registry

- 2.61 names fell for one registrant
- Over 481 thousand renewed names

1,000,016 IDNs

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`.pl` domain names active in DNS

**Domains in `.pl` registry**

At the end of March 2017 there were **2,677,692** domain names active in DNS. From the beginning of the year that number decreased by **25,473**.

In the first quarter of 2017 in `.pl` registry out of all names active in DNS **75.44%** were registered directly in the top level domain (.pl), **19.85%** in functional domains (e.g.: .com.pl, .net.pl) and **4.71%** of names in the regional domains (e.g.: .waw.pl, .bialystok.pl).

The age of all names, active in `.pl` registry, was divided as follows: **9.48%** - names registered in 2017, **31.72%** - in 2016, **36.43%** - names registered between 2006 and 2010, whereas **6.25%** - names registered between 1994 and 2005.

Number of `.pl` domain names in DNS

Number of `.pl` domain names active in DNS as divided into the type of zone, Q1 2017

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>second level domain</td>
<td>75.44%</td>
</tr>
<tr>
<td>functional</td>
<td>19.85%</td>
</tr>
<tr>
<td>regional</td>
<td>4.71%</td>
</tr>
</tbody>
</table>

Number of domain names active in DNS as divided into the year of registration, Q1 2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>849,432</td>
</tr>
<tr>
<td>1995</td>
<td>120,085</td>
</tr>
<tr>
<td>1996</td>
<td>152,283</td>
</tr>
<tr>
<td>1997</td>
<td>178,301</td>
</tr>
<tr>
<td>1998</td>
<td>215,749</td>
</tr>
<tr>
<td>1999</td>
<td>253,847</td>
</tr>
<tr>
<td>2000</td>
<td>295,295</td>
</tr>
<tr>
<td>2001</td>
<td>333,647</td>
</tr>
<tr>
<td>2002</td>
<td>381,011</td>
</tr>
<tr>
<td>2003</td>
<td>440,784</td>
</tr>
<tr>
<td>2004</td>
<td>502,991</td>
</tr>
<tr>
<td>2005</td>
<td>565,831</td>
</tr>
<tr>
<td>2006</td>
<td>629,336</td>
</tr>
<tr>
<td>2007</td>
<td>692,840</td>
</tr>
<tr>
<td>2008</td>
<td>753,223</td>
</tr>
<tr>
<td>2009</td>
<td>811,446</td>
</tr>
<tr>
<td>2010</td>
<td>869,102</td>
</tr>
<tr>
<td>2011</td>
<td>925,361</td>
</tr>
<tr>
<td>2012</td>
<td>980,424</td>
</tr>
<tr>
<td>2013</td>
<td>1,034,281</td>
</tr>
</tbody>
</table>
Transfers

From the beginning of January to the end of March 2017 .pl domain registrants 37 582 times changed a registrar servicing their names. In 1 193 cases the service was transferred with a simultaneous renewal of the .pl domain name for a consecutive billing period with 677 of them being effected after the previous billing period had been completed.

Renewal of a domain name for a consecutive billing period

In the first three months of 2017 over 481 thousand names were renewed, constituting 61.14% of all .pl domain names subject to be renewed for a consecutive billing period in a discussed quarter.

Out of all renewed names, those maintained directly in the .pl domain constituted 76.17%, in functional domains 19.22% while in regional domains 4.61%.

Out of all .pl domain names renewed in the first quarter of 2017 32.72% were registered before 2011, 7.40% in 2011, 8.33% in 2012, 9.04% in 2013, 10.90% in 2014, 13.62% in 2015, 17.93% of names in 2016, whereas for 0.06% of names a registration date fell in 2017.
During the first quarter of 2017 254,013 names were registered in the .pl domain. The number of registrations in particular months of the first quarter amounted to: 83,561 in January, 84,118 in February and 86,334 in March.

Daily average 2,822 .pl domain names were registered, while the amount of registrations effected in particular months equalled 2,696 in January, 3,004 in February and 2,785 in March. The share of registrations of second level domain names, i.e. directly in the .pl domain, in the total number of registrations amounted to 75.37%.

The share of domain name registrations in functional extensions, e.g. .com.pl, .org.pl, amounted to 20.39%, while 4.24% of all the names, entered in the .pl registry within the period under discussion, constituted new registrations of regional domains, e.g. .waw.pl, .bialystok.pl.
Registrants of .pl domain names

Registrants in the .pl registry

At the end of March 2017 in the .pl registry there were recorded 1,026,507 unique registrants among which 66.75% constituted entrepreneurs and 33.25% natural persons. During the first quarter of 2017 the registry was enlarged by 1,035 registrants.

Out of 2,677,692 .pl domain names, active in DNS, 69.75% were maintained for entrepreneurs and organizations, while 30.25% for natural persons. On average 2.61 .pl domain names fell for one registrant.

From among 254,013 new registrations 62.58% were executed for entrepreneurs and organizations, whereas 37.42% for natural persons.

Place of residence of .pl domain name registrants

94.38% of names were maintained for the registrants domiciled in Poland. From among .pl domain names registered for foreign registrants most numerous names were maintained for registrants from Germany (1.34%), United States (0.86%) and Great Britain (0.62%).

More than 92% of new .pl domain names were registered for registrants domiciled in Poland. The highest number of .pl domain names abroad was registered for registrants from Cyprus (3.82%), Germany (0.75%) and Great Britain (0.64%).
Registrants vs .pl domain names

At the end of the first quarter of 2017 NASK was maintaining one domain name for 64.69% of registrants, two domain names for 15.09% and three domain names for 5.64%. 100 and more .pl domain names were held by 0.10% of registrants, with 67 thereof owned more than one thousand names.

Assignments

From the beginning of January to the end of March 2017 there were 33,309 changes of .pl domain names registrants.
Registrants of .pl domain names

Division of .pl domain name registrations for a registrant’s country,
Q1 2017

92.11% Poland
7.89% other

Division of .pl domain names active in DNS for registrant’s country,
Q1 2017

94.38% Poland
5.62% other

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**Additional services of .pl registry**

**IDNs**

At the end of March 2017 the .pl registry contained 40,016 names with national diacritic signs (IDNs). As compared to the previous quarter that number decreased by 0.25%.

As the first quarter of 2017 ended, IDNs constituted 1.49% of all .pl domain names active in DNS.

During the first quarter of 2017 there were registered 4,800 IDNs which constituted 1.89% of all registered .pl domain names.
Additional services of .pl registry

**DNSSEC**

The number of .pl domain names, secured with DNSSEC (Domain Name System Security Extensions) protocol at the end of March 2017, amounted to **34,054**.

86.87% of secured names were registered directly in the .pl domain, 10.04% in functional domains and remaining 3.09% in regional domains.

In the first quarter of 2017 1.78% of newly registered names were signed with DNSSEC protocol.

Daily average **25** .pl domain names, with entries confirming proper protection with DNSSEC protocol, were being added to DNS.
From the beginning of January to the end of March 2017 4623 agreements on options for registration of .pl domain names were concluded. The number of agreements concluded in particular months of the first quarter of 2017 equaled: 1797 in January, 1493 in February and 1333 in March.

A record-breaking number of active agreements, 1010, were renewed for successive 3 years.

It is a result twice as much higher than in the previous quarter when 405 agreements on options had been renewed.

During the quarter under discussion 1137 active agreements on options ended with providing a .pl domain name for registration, whereas in 98 cases the registration procedure was not completed by an option holder, which resulted in the domain names being released to the group of names available for registration.

Since launching the service in 2004 to the end of the first quarter of 2017 the efficiency of providing .pl domain names for registration, under agreements on options, amounted to 44.95%.
The .pl registry, at the end of the first quarter of 2017, was cooperating under Partner Programme with 211 registrars. 131 NASK’s Partners had their registered offices in Poland, 54 in other European countries and 26 beyond Europe.

During the first quarter one new entity joined the Partner Programme, while two registrars resigned therefrom, being still at the phase of technical development of their systems.

Registrars from Poland, at the end of March 2017, were servicing 76.58% of active .pl domain names, 13.56% of names were being serviced by registrars of other European countries and 9.86% from remaining countries.
Registrars of .pl domain names

**Division of .pl domain name market**

Out of 2,677,692 .pl domain names, active in DNS at the end of March 2017, the largest share, namely 22.35%, was being serviced by Home.pl S.A. The highest number, as much as 34.61% of names, was registered through Nazwa.pl Sp. z o.o., which was servicing also the most numerous amount of registrants in the Polish registry. The share of the registrar, mentioned above, in the registrant market equaled 23.47%.

In the discussed quarter, options were most frequently set through Michau Enterprises Ltd., assisting in conclusion of 45.90% of agreements. The leader in providing DNSSEC services, thanks to which the Internet users are able to authenticate the information receiving from DNS, was OVH SAS which was servicing 93.96% of secured names.

![Market share between Partners considering .pl domain names secured with DNSSEC, Q1 2017](image-url)
Registrars of .pl domain names

Market share between Partners considering .pl domain names, Q1 2017

Market share between Partners considering new .pl domain name registrations, Q1 2017

Market share between Partners considering .pl domain name Registrants, Q1 2017

WLS market share between Partners, Q1 2017

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Why should I care about DNSSEC?

Interview with Maciej Andziński, a DNS specialist in the .pl registry, a long-standing professional in the security of the Internet and an author of publications on DNS and DNSSEC.

Maciej, you are involved in the field of DNS security in the .pl registry where registrants have been allowed to secure their domain names with DNSSEC solution for 5 years. Why do you think they should pay more attention to DNSSEC? DNS has been present in the Internet since its early days and designed in times when the net has not been called “global” yet, with the standards of security being entirely different. However, over the years the Internet has changed totally, key protocols providing communication in the global network, where DNS should be included, have been subject to slight modifications. As a result, many of those protocols were not meeting security standards of that time, therefore there arose a need of their redevelopment. In case of DNS, a supplement eliminating its susceptibility is actually DNSSEC. Why is it worth paying attention? We are more and more concerned about the security in the Internet, and DNSSEC is at the heart of communication in this network. DNSSEC, being a supplement of DNS, is becoming an applicable standard in the Internet.

How then would you explain what exactly DNSSEC is and what its presence denotes for a typical user of the Internet? DNSSEC (DNS Security Extensions) is the extension of DNS (Domain Name System), being an underlying instrument of communication in the Internet. In a certain sense, DNS might be denoted as a “phone book” of the Internet, the main purpose of that system is to translate the name, understood for a human (e.g. www.nask.pl), into information useful for computers (e.g. IP address, thanks to which the transmission of data in the Internet is possible). DNSSEC is the extension of DNS, which with the application of asymmetric cryptography implements mechanisms of data authentication. In other words, information in DNS, secured with DNSSEC, has a digital signature, therefore the verification of that information is possible. For an average internaut this technical slang means that, for example, after entering the address of their bank in a browser, they may be sure that in fact the website of that bank will be opened, not a website of a criminal who wants to steal their money.

At the end of March 2017, there were 34 054 domain names secured in .pl registry, whereby 93% being serviced by one registrar. What, in your opinion, may cause the actual situation, i.e. low level of applying DNSSEC amongst registrars? Implementation of each new technology entails the necessity of incurring certain expenses. According to our observations, it is just the main cause of the low rate of DNSSEC implementation in Poland. IT security is a value that is difficult to convert into profit in Zlotys or any other currency. It is frequently so that the implementation of security solutions implicates the complication of system and procedures, resulting with the security being neglected. Besides,
for some registrars DNSSEC still remains a curiosity. On the other hand, DNSSEC workshops, recently organized by NASK, have shown that this technology generates a lot of interest.

As a chairperson, how do you evaluate the DNSSEC workshops, held on 5 April 2017, for the Partners of .pl registry? From the survey, carried out among the attendants, we know their opinions, but what was the feedback for the .pl registry after that event?

I am pleased that the workshops attracted great interest. The main purpose of the workshops was to get the participants acquainted with the DNSSEC technology, in turn, for the registry it was an excellent opportunity to better understand the needs of the entities interested in the implementation of DNSSEC.

How does Poland fare by account of DNSSEC application as compared to other countries?

When we look at global statistics regarding the application of DNSSEC we may distinguish several outstanding domain registries, e.g. .nl (Netherlands), .no (Norway), .cz (Czech Republic), where the percentage of signed domains fluctuates at around 50% and more. In Poland this rate amounts to only over 1% with almost all of domain names, secured with DNSSEC, being registered by foreign NASK’s Partners. I am mentioning about registrars since they are a natural liaison between the registry and registrants of domain names, thus their participation in the process of securing a domain name with DNSSEC is necessary. As a registry, we are trying to both build the awareness of threats at domain registrants and promote secure solutions among the Partners, the example of that activities are DNSSEC workshops, organized recently at NASK.

What are global trends in the development of DNSSEC technology?

Previously I have compared DNS to a “phone book” of the Internet, in that “book” we may save a variety of information useful in the process of transmitting data through the Internet. DNSSEC, by means of cryptography, enters digital signatures for data in DNS, in other words, we gain guarantee of the credibility of information saved in that “phone book” of the Internet. That, in turn, paves the way to many new applications of DNS, e.g. using it as a carrier of information on a digital certificate for a domain name. Those certificates are currently a foundation of a secure data transmission during browsing websites or sending email, however, the method of their authentication leaves a lot to be desired. The idea of using DNS as a trusted source of information on certificates (DANE – DNS-Based Authentication of Named Entities, RFC6698) is only one of examples of recent concepts on how to apply DNSSEC.

Back to our native soil, who, according to you, should in particular be interested in that service? Are there in this group, for example, Polish e-commerce entrepreneurs?

Definitely yes. I would recommend the implementation of DNSSEC to every domain name holder. First of all, this technology should be attractive for entities particularly exposed to hacker attacks, e.g. banks or online shops.

Does a secured domain name, where an online shop is operating, protect an e-entrepreneur from a black scenario written by a hacker?
Insight into .pl registry

The security of Internet systems is a complex issue, therefore it is difficult to talk about any remedy. However, DNSSEC is a perfect, often an underestimated tool, which may significantly improves the security of an e-entrepreneur.

And how should a registrar prepare to the implementation of the DNSSEC technology? How can a Partner check whether they are ready for DNSSEC?

The best solution is to come and join workshops organized by NASK. There are many compilations on good practices regarding the implementation of DNSSEC, it is by far an important subject, for the discussion of which we do not have enough time during this short interview, I believe. There is no universal formula for everyone. Launching DNSSEC itself is not very complicated, however, it is worth to be appropriately prepared for it, because possible errors may be painful. Besides, as everywhere where cryptography is engaged, the same iron rules are binding: safe storing of cryptographic material and cyclic exchange of keys.

Those Partners which are not interested in launching DNSSEC should also remember one thing: DNSSEC has been applied in the .pl registry for almost 6 years and one cannot ignore its existence. Each year we detect tens of domain names which have ceased to be visible in the Internet due to wrong execution of a domain transfer from a partner, where the domain name has been secured with DNSSEC, to a partner which does not support this technology.

In many ways of our life activity we try to verify the authenticity of obtained information and, for example, while preparing for a journey we check, just to be on the safe side, the level of provided medical services and then we care for obtaining credible information. I will venture an opinion that a DNSSEC service is an answer for us why we should verify information coming from the Internet. Would you agree with that?

Interesting comparison. Indeed, the issue of the credibility of information, published in the Internet, has been frequently raised lately. Although DNSSEC is more related to technical aspects of the operation of global network, some correlative meaning may be perceived here.

We are waiting then for the actions to be taken in that field by NASK’s Partners and we wish all common users of the Internet safety and comfort, as in case of a journey. Thank you very much for the conversation.

Thank you.

The interview was conducted by Anna Gniadek and Alina Wiśniewska-Skura.