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INTEGRATION OF THE INFORMATION PROCESSES. AUTOMATION AND UNIFICATION OF THE JUDICIAL SYSTEM

M. Petrova

The implementation of the concept of e-government and e-justice is one of the most significant reforms of the administrative institutions in Bulgaria. This implies solving basic tasks such as creating effective web sites of the official government institutions and providing interactive services with simple, intuitive and secure procedures for interacting with citizens and the business.

The main problems in the field of web services in the judicial system in Bulgaria have been identified, such as irrational use of resources, duplication of data, multiple input of identical information, lack of automated data exchange between different systems even within the same administration.

A system compliant with digital administration standards has been modelled that implies a technological opportunity to eliminate manual manipulation of IT infrastructure and avoid paper documentation and multiple collection of

information from users. Introducing an integrated environment for the exchange of electronic documents and optimizing any business process of communication and information exchange has been offered.

An automated approach to building a web portal for the judiciary using the technology of automatic generation and adding of virtual web hosts has been proposed. Advanced technological solutions such as the use of scripts for intelligent administration and maintenance of webpages and the web portal as a whole have been developed. This makes it possible to significantly reduce maintenance time, improve the security and reliability of the system for accessing judicial services by citizens.

Keywords: judicial system, e-justice, web portal of the judicial system, virtual host, web server, e-government, information development of public authorities.

ІНТЕГРАЦІЯ ІНФОРМАЦІЙНОГО ПРОЦЕСУ. АВТОМАТИЗАЦІЯ ТА УНІФІКАЦІЯ СУДОВОЇ СИСТЕМИ

Петрова М. М.

Упровадження концепції електронного уряду та електронного правосуддя є однією з найбільш значущих реформ адміністративних інституцій у Болгарії. Це передбачає вирішення таких основних завдань, як створення ефективних веб-сайтів офіційних урядових установ і надання інтерактивних послуг за допомогою простих, інтуїтивних і безпечних процедур взаємодії із громадянами та бізнесом.

Виявлено основні проблеми у сфері надання електронних послуг у судовій системі Болгарії, таких як: нерациональне використання ресурсів, дублювання даних, численне введення ідентичної інформації, відсутність автоматичного обміну даними між різними системами, навіть у межах однієї й тієї ж адміністрації.

Розроблено модель системи, що є сумісною зі стандартами цифрового адміністрування, яка передбачає технологічну можливість усунути ручне маніпулювання ІТ-інфраструктурою та уникнути паперової документації, а також багаторазового збирання інформації від користувачів. Запропоновано впровадження інтегрованого середовища для обміну електронною документацією та оптимізації будь-якого бізнес-процесу комунікації й обміну інформацією.

Запропоновано автоматизований підхід до створення веб-порталу для судових органів із використанням технологій автоматичного генерування та додавання віртуальних веб-хостів. Подано передові технологічні рішення, такі як використання скриптів для інтелектуального адміністрування та підтримки веб-сторінок і веб-порталу загалом. Це дозволяє значно скоротити час обслуговування, підвищити безпеку й надійність системи для доступу громадян до судових послуг.

Ключові слова: судова система, електронна судова система, віртуальні веб-вузли, веб-сервер, електронне урядування, інформатизація органів державної влади.

ІНТЕГРАЦИЯ ИНФОРМАЦИОННОГО ПРОЦЕССА. АВТОМАТИЗАЦИЯ И УНИФИКАЦИЯ СУДЕБНОЙ СИСТЕМЫ

Петрова М. М.

Внедрение концепции электронного правительства и электронного правосудия является одной из наиболее значимых реформ административных институций в Болгарии. Это подразумевает решение таких основных задач, как создание эффективных веб-сайтов официальных правительственных учреждений и предоставление интерактивных услуг с помощью простых, интуитивных и безопасных процедур взаимодействия с гражданами и бизнесом.

Выявлены основные проблемы в сфере предоставления электронных услуг в судебной системе Болгарии, такие как: нерациональное использование ресурсов, дублирование данных, множественный ввод идентичной информации, отсутствие автоматического обмена данными между различными системами, даже в рамках одной и той же администрации.

Разработана модель системы, совместимая со стандартами цифрового администрирования, которая предусматривает технологическую возможность устранить ручное манипулирование ИТ-инфраструктурой и избежать бумажной документации, а также многократного сбора информации от пользователей. Предложено

внедрение интегрированной среды для обмена электронной документацией и оптимизации любого бизнес-процесса коммуникации и обмена информацией.

Предложен автоматизированный подход к созданию веб-портала для судебных органов с использованием технологий автоматического генерирования и добавления виртуальных веб-хостов. Представлены передовые технологические решения, такие как использование скриптов для интеллектуального администрирования и поддержки веб-страниц и веб-портала в целом. Это позволяет значительно сократить время обслуживания, повысить безопасность и надежность системы для доступа граждан к судебным услугам.

Ключевые слова: *судебная система, электронное правосудие, веб-портал системы правосудия, виртуальный веб-узел, веб-сервер, электронное правительство, информатизация органов государственной власти.*

Informatization of judicial bodies is a manageable conceptual process aiming to maximize the modern ICT potential [1; 2]. Its assessment may be performed by different criteria: the level of informatization in terms of access and transmission of information to citizens, providing services to the population and integrated strategic data in the judicial sphere.

The main problems in Bulgarian public administration are: irrational use of resources, data duplication, multiple input of identical information, lack of automated data exchange between different systems, even within the same administration [3].

The efforts aim to build models and standards for digital administration and provide technological possibility of eliminating paper documentation and multiple collection of information from users. This is achieved by introducing integrated environment for exchange of electronic documents and optimizing every business process of communication and information exchange.

The main problems with the integration of the information processes in the public sector and automation and unification of the judicial system in Bulgaria and other countries have been considered in the works of such scientists as N. V. Nenkov, Y. Dyachenko [1], G. Dimitrov, K. Koeva [2], I. Savov [3], J. R. Gil-Garcia, T. A. Pardo [4], V. Kumar, B. Maheshwari, U. Kumar [5], and others.

However, the change of the main trends in the development of information processes in the public sector and automation of the judicial system all over the world require indepth and comprehensive research into developing and providing interactive services in the e-government and e-justice spheres, which makes the article topical.

The research aims to identify the prospects of information processes in the public sector and elaborate the methods of integration of the information processes and unification of the judicial system.

Over the years, every Bulgarian court has developed its own website model. As a result, they received various solutions, information is not presented in accessible way, there are no sitemaps, identical information is located in different locations (menus). All this hinders the different types of users who work with the sites. Very few court websites are convenient and easy to use. Some websites are being maintained and further developed, but some are not kept up to date, and are even obsolete.

Individual sites in varying degrees and in different ways meet the needs of Bulgarian citizens and their repre-

sentatives to obtain information about courts' general activity, as well as examined cases. This is important in terms of the need on the legislative level to regulate the more active use of information technologies by judicial authorities.

There is a great variety of structure, content and formats in which mandatory online information is published. Unification of judicial information is part of the equal access to justice.

Courts' websites must first provide information to citizens to allow them to navigate in approaching a specific court, i.e. to have information about its structure, contacts, cases it has examined, common information about bank charges, have available forms and templates for the most common legal process. This information is static in nature and does not change frequently after its creation. An important part is maintaining dynamic information, located on the site – related to cases examined by courts, information on the progress of cases, schedules of court hearings.

Placement of reliable, operational, complete and current information about the activities of the authorities on the court website makes it possible to significantly simplify searching and finding relevant information, provides an opportunity for citizens and organizations to make inquiries and obtain reports online.

Publications of court decisions online is a key amendment to justice transparency. Publication of judicial acts not only opens up new possibilities for dialogue between the court and the public, but also creates a new tool, improving the judicial practice, legislation and development of legal science.

Criteria for easy use must be implemented in terms of personnel and users. Easy to use applications contribute to increasing employee motivation, their effectiveness and satisfaction of their work. For users it is important that the application enable consistent and intuitive natural navigation, site structure be tailored to their needs.

At the same time it must allow introduction of various control systems, which prevents editing or deleting the contents of the documents presented, as well as any other interference that can compromise their authenticity.

Mandatory information includes: general, reference and contact information, statistics, reports of future events, laws and regulations. The site can present documents or links to documents of a superior institution, relevant materials in accordance with the institution functions, etc.

It is possible to implement the following activities: providing access to document templates, a possibility of submitting claims electronically, presentation of evidence in electronic form, sending electronic summonses and notifications, issuance of judicial acts in electronic form, etc.

Realizing the e-government and e-justice concept involves solving basic tasks such as creating effective websites of the official state institutions and continually maintaining and updating the presented information and providing interactive capabilities with simple, intuitive and secure procedures for cooperation of citizens and the business with various government agencies.

Concerning the work principles, associated with electronic document exchange within the Bulgarian judicial system it is accepted, that it is necessary to establish single for all processes principles of e-justice, similar to the principles of electronic government, which are established by the Law on Electronic Governance (LEG) [6] (a one-time collection and reuse of data, official notification from the primary data administrator in their change to a particular citizen and automatic request and provision of data). LEG requirements, related to ensuring interoperability and information security, are fully applicable to the judiciary too.

The implementation of the reform for transitioning to e-justice could not be achieved without clear normative rules established by the law.

In 2009, a regulatory framework was created for enforcement bodies through a number of regulatory documents in the form of instructions for institutional identity of administrations, domain names and subdomains used by administrations, and design requirements for administrations' websites.

Judiciary Law focuses on the judicial system transparency and contains two important obligations of courts: to create official websites with specific content and publish judicial acts there.

In connection with these new opportunities, certain rules have been created requiring the judiciary to use uniform rules, procedures, technology and functional parameters in ensuring opportunities for conducting proceedings in electronic form and in the course of certification – making statements in electronic form. Special regulations have been developed for conducting proceedings in electronic form [6 – 9].

At present, judicial authorities in Bulgaria are able to maintain websites providing the possibility of conducting proceedings in electronic form with a legal matter at any time.

The Supreme Judicial Council (SJC) determines with its Act requirements to the judicial authorities' websites, technical requirements and rules for conducting proceedings in electronic form, their formats and technical requirements to be met by electronic documents, sent to and from judiciary authorities, formats of scanned documents and other electronic evidence, stored for electronic cases, methods of electronic payments for state fees, expenses and other liabilities to judicial authorities, graphical and other interfaces of information systems used by judicial authorities.

Officially in Bulgaria there is no uniform standard and minimum requirements to the court website structure and content. According to the Law amending the Law on the Judiciary, it is created with an ordinance which specifies the requirements and which is available on the SJC, Ministry of Justice and the integrated e-Justice Portal websites.

There is still no unified system for naming the websites and selection of domains for the judiciary suggesting that in each case the most convenient for the moment solution is being sought.

The Law on the Judiciary [10] defines a unified e-justice portal, which provides access for citizens to exercise their procedural rights in front of all judicial authorities, as well as opportunity to request conducting certification statements by those authorities. It is planned that the functionality of the portal dynamically expand over time.

The plenum of the SJC, after consultation with the Minister of Justice, builds and maintains a unified e-Justice Portal (UEJP) [11 – 13]. Judicial authorities will conduct certification statements, issue acts and all other statutory proceedings in electronic form¹.

When performing a procedural action that launches a separate proceeding, an electronic case is created in the judicial authority information system, which is a combination of all electronic documents and information produced or provided by participants in the proceedings and the judicial authorities, regarding exercised procedural rights or certification statements, all electronic documents and evidences and other data, processed by the judicial authority in relation to the proceeding.

The law requires SJC to organize development of this portal within three years after the entry of the amending law [14]. By the end of this period the judicial authorities will have the possibility to maintain websites which provide an opportunity for conducting proceedings in electronic form.

The SJC adopted rules on access to electronic court proceedings in the courts, through the new centralized UEJP developed under an SJC Project with OPAC [6]. For e-justice portal pilot testing, SJC determined six courts: the Supreme Cassation Court; the Court of Appeal Sofia; the Regional and District Court of Blagoevgrad; the Regional and District Court of Smolyan. During the pilot testing phased transfer of information from electronic files of court cases in CMS to the portal directory was performed, and citizens and lawyers are given the opportunity to register a personal account to access the portal through an application form, approved by the SJC [15; 16].

UEJP provides [4]: request carrying out certification statements and procedural steps in electronic form; delivery of messages and summonses; access to electronic cases and public records supported by judicial authorities. UEJP provides free and public access to protocols and

¹ Valid from 10.08.2019.

statistics for random selection during the allocation of cases, which are provided in the law or any other enactment. It provides access to other information and functionalities.

The future architecture of e-justice is built on the principles of SOA and is based on the use of open sources. Thus interested parties are given opportunity to freely develop processes and services, and define a unified data format with a single design.

Rates of development of devices, systems and solutions in the ICT sector are very dynamic. For this reason, systems and solutions for e-government and e-justice must meet the established international standards and be as independent as possible of specific operating systems, platforms, technologies, software and suppliers.

Such standards in the field of e-governance (and e-justice) are being developed by a number of international organizations [2]:

- The International Organization for Standardization (ISO);
- The Internet Engineering Task Force (IETF);
- The United Nations Centre for Trade Facilitation and Electronic Business;
- The Organization for the Advancement of Structured Information Standards (OASIS);
- The World Wide Web Consortium and others.

The action plan eEurope+, setting priorities for development of information society in Bulgaria, recommends applying the main guidelines of the Web Accessibility Initiative (WAI) of the W3C Consortium, which developed a number of documents concerning all aspects of the problem of accessibility.

Through an expressly developed methodology, adapted to the UN methodology for index of readiness of the world countries to use e-government (Global EGovernment Survey) [17; 18], in 2013, an index was developed to study web page contents of all 113 regional courts (RC) in Bulgaria [19]. 81 indicators, divided into 13 groups, have been developed. The analysis covers the results by groups of indicators, as well as by court area of District and Appellate courts.

This study was conducted successively in several stages in 2013 and 2014 together with students in the master's program "IT in the Judicial and Executive Bodies" of the University of St. Cyril and St. Methodius, the city of Veliko Tarnovo, Bulgaria and in June 2015 with a team of experts from the European Law Association.

An updated study was conducted in 7 June 2016 – 14 June 2016, again with students of master's program "IT in the Judicial and Executive Bodies" in the University of St. Cyril and St. Methodius, the city of Veliko Tarnovo, Bulgaria. Monitoring of the information resources of the judicial and executive power is realized by the methodology [19], which investigates and determines the requirements for content and characteristics of their official websites. The study scope includes a total of 182 web-sites of courts: 7 Courts of Appeal; 28 County courts; 113 Regional courts; 5 Military courts; 28 Administrative courts and the Specialized Criminal Court.

For analyzing the content of the sites, the method of Web content analysis [20] was used, which was carried

out by experts studying the content of sites in the online mode to determine the presence or absence of selected characteristics.

The main objective of the analysis of the websites of the courts in Bulgaria is to reveal and report the readiness for providing electronic access of citizens to legal information and the extent of the use of information and communication technologies in the judicial system, quantitatively report on the expression of individual characteristics which influence the websites unification, and on this basis to outline ways and means to carry out the activities for implementation of the judiciary reform.

Analysis of the courts' websites revealed that they need a major reorganization as they are created according to their own structural scheme (according to the institution organizational chart). These sites will primarily help users to find and obtain necessary services. Citizens and the business should have and get the opportunity to receive the necessary information when they need it, not when the government, respectively the judiciary, decides to provide it.

Services for providing information in electronic form, related to the judicial system and the electronic exchange of legal information in the network and search engines are obsolete or completely missing. The success in offering electronic services is primarily the result of independent efforts of various administrations and rarely has a synergistic effect in others.

Apparent in very few institutions, publication on the Internet is associated with internal teams, formed to determine mandatory publishing information.

Hiding basic information such as biographical data of judges has an extremely negative effect on the perception of citizens about those who dispense justice.

Despite the good prerequisites and adequate conditions, courts' websites have mostly representative functions, currently offering to the public mainly information (and it is not full), rather than actual opportunities for citizens to receive specific administrative services electronically.

The analyzed websites do not have an appropriate functional structure and information content from a consumer perspective: design (information and graphics) is polytype; navigation is difficult; operating online services are almost unavailable in the context of the European vision.

The results of the study on the institutions' websites imposed the following main conclusions:

- differently styled module design, architecture of each web page, navigation, frontend design, the language the information is being presented in;
- websites have different style, quality and volume;
- each web page presents legislation base in a different size;
- only a few web pages present information in a foreign language (at least a bilingual version);
- the language, used in court websites is not easy enough for citizens to understand;
- searched information is not easily found, due to various ways of its ordering and presentation;
- judicial acts are published, but access to them is different on each web page, which creates confusion and difficulties;

- there is no unification of the works with the electronic requests and the electronic submission of information. Application templates, submitted to the particular court (in 108 sites) vary in terms of formatting, layout, etc.

The above conclusions attest to a serious delay of Bulgarian courts in digitization compared to European practices. It is necessary to develop and introduce uniform standards that Bulgarian courts' websites have to meet with regard to publicity and transparency, in accordance with the expectations of civil society and raising the judiciary prestige. This is important in terms of the need to establish uniform judicial standards to ensure equal access to justice for Bulgarian citizens from all regions of the country.

The study shows the perceived need for change. At present court websites do not fully exploit their resources and capabilities of the Internet – they interact with citizens fairly limited, do not provide the necessary and important information to citizens.

Monitoring results show that despite all efforts (and financial resources), capabilities of the Internet technologies are still underutilized. There are a number of difficulties caused by technical and organizational problems and contradictions in the current legislation.

For example, payment of fees for various administrative services is traditionally carried out by the known for decades service – cash desk or by bank transfer on a specific desk, rather than offering online payment of fees, so the practices of electronic technology in this field have not been implemented yet.

Although courts have the necessary technological infrastructure and Internet access, offering interactive online services is very slightly developed in practice, they are still not able to offer full online interaction with both physical and legal entities – actual users of administrative services.

Overall, it can be concluded that all courts in Bulgaria have websites, but not all perceive the web space as dynamic media and means of communication with the public in terms of two-way communication. The shown insufficient level of the Internet pages of the courts is too low compared to the level of the digital development of EU member states.

Currently, IT resources are managed in a fragmented way, which is a prerequisite for inefficiency, overspending and inexpedience. Good practice shows that systems should operate on the basis of unified and formalized objects (data, documents, processes, technological solutions, etc.) [14, p. 23].

It is obvious that judicial authorities in Bulgaria are trying to meet the European model of ICT development and participate fully in the online exchange of data and information in the EU.

This implies developing new methods for automated electronic exchange of information while ensuring protection of data and inability for them to be subject to unlawful actions by unauthorized entities, including within the administration, receiving or storing them [21].

Recommendations for automation and unification. Innovation trends:

After the websites current state has been analyzed, the necessity for unification has emerged along with ways for

achieving it: unifying the websites of the judicial authorities by standardizing their information structure and the online services they offer; developing and implementing a unified model for the websites of the courts and the prosecution.

This process includes standardization of the architecture, navigation links, design, as well as introduction of mandatory "search engine" for access to court documentation and reports on the status of cases. An essential part of the overall unification of the court websites is the introduction of standards for static and dynamic part in each page, as well as providing the information in an accessible and understandable for the users way.

Therefore it is necessary to take the following steps:

- to provide that website information migrate from the static category "business card" to the dynamic category "source of relevant legal facts";
- to establish a standard for formation of domain and subdomain names used by judicial administrations to address their official websites, according to the standard model set by the W3C consortium;
- to unify websites by standardizing their information structure and the offered online services; to develop and implement a unified model for websites of the courts and the prosecution;
- to establish a standard for the formation of the names of e-mail addresses used by judicial authorities and their administrations; to introduce a single infrastructure for e-mail, identification of magistrates and court officials, so that citizens could easily identify these addresses; personalization of e-mails and ability to ask a specific person responsible for a given thematic area, questions, would contribute to a better "citizen-court" interaction, also facilitate the awareness of administrative processes;
- to create a normative framework, which regulates all dynamic relations, not subject to a permanent regulation – requirements to: the format of the submitted e-documents, interfaces for performing electronic submissions, websites public interface design, others;
- to monitor and control immediate publication of judicial acts on court websites, according to Art. 64 of the LJ; and timely publication of all documents and materials contained in annual plans;
- to introduce clear and precise rules for publishing information on the website of the court;
- to make websites at least bilingual, with feedback forms, introduce more electronic services;
- to build a bank of electronic of documents, related to administrative services in the judicial system at the national level;
- to publish information not only for judicial acts but also for other court orders (expert opinions, complaints, etc.);
- to develop software that allows searching court judicial acts by attributes, so that citizens could navigate in the practice of court on specific issues and tailor their defense accordingly;
- to provide details on some existing categories, subject to online publication;
- to connect the databases of court cases and judicial acts, so that users could search simultaneously in both databases;

- to integrate the database of the judicial acts into a unified official portal for legal information;
- to improve system administrators' qualification in order to ensure development of information technology;
- to publish biographical data of judges and information about their income and obligations;
- to adapt the site map or alphabetical directory, menu to user needs (such elements are almost missing at present). An example is the separation of official-administrative functions from purely informative functions on judicial websites;
- to make websites accessible for specific groups of people, such as people with disabilities, people using PDA, etc.;
- to provide for ability to conduct polls, forums and collect specific user information or opinions, related to design;
- to build support pages, explaining functions of each service to users.

Administration's plans and strategies, judicial administration structure and all services, auctions, decisions and regulations of the court, cannot be ignored as well.

It is necessary to unify the judicial authorities' websites by standardizing their information structure and online services; develop and implement a unified model of a website for the courts and the prosecution.

In terms of innovation, one must take into account the need to introduce fundamentally new services (generation of documents, automated extraction of data from paper), new software solutions (content management systems, documents and files, modelling tools and tracking

processes, data stores or portal type applications), new engineering approaches and technology solutions and more.

Development of mobile services is of increasing importance for the telecommunication sector and socioeconomic progress worldwide. This sector receives a further boost in its development also through the more widespread use of new mobile devices, applications and systems [3, p. 37; 22].

In addition to web accessibility standards, the system must be fully compatible with mobile devices (smartphones, tablets, netbooks, etc.), i.e. interactive responsive design. Analysis of the survey results showed that the entire content of court websites can be divided into two major parts. The first part contains general information for all courts: national legislation, document templates, etc. A variation of this category may be information related to this court: news, events, decisions, orders, etc.

The second part of the site content consists of unique information: judicial acts, documents, references to the court, a list of employees, receiving time, administrative provisions of the presiding judge, etc.

The presence of two fundamentally different data units could be a prerequisite for organizational separation of the activities for publishing information on the court website. Publishing common for all courts information is more logical to be centralized, while unique information should be published by system administrators or another authorized person in each court (Fig. 1).

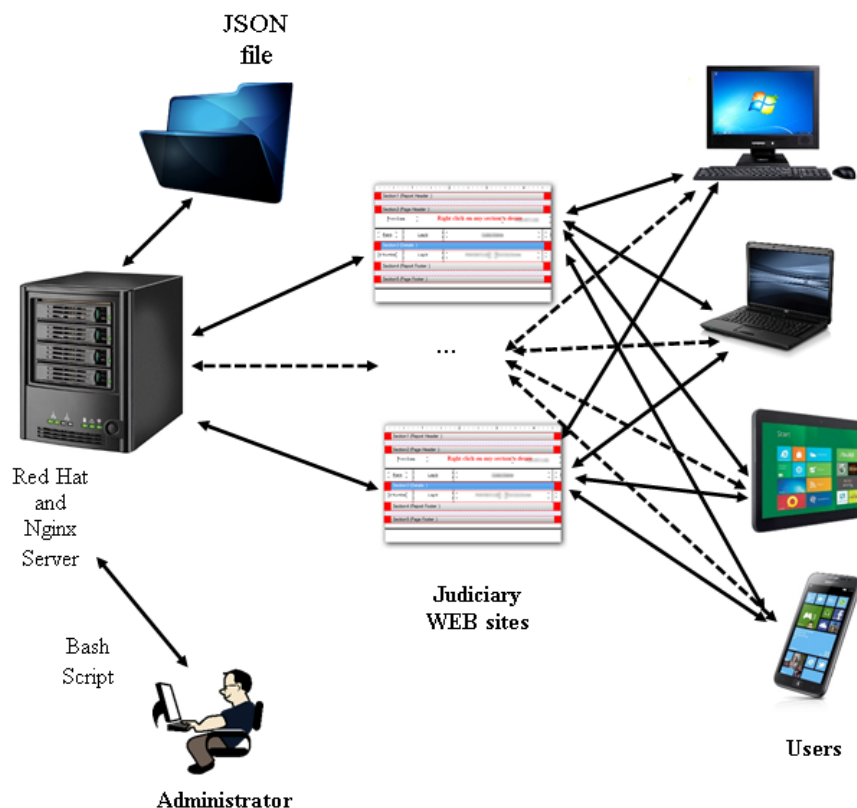


Fig. 1. Automating the generation of virtual hosts for the judiciary web pages

Dividing publishing responsibilities reduces employees' workload at site, and the outcome is unity of the published common information.

Particular attention must be paid to the quantity and quality of information, provided by courts, its accessibility and options for feedback.

The report offers an approach to automating the hosting of court web pages on a single web server. Each website has a different domain or a different sub-domain in a common domain. Each of these websites needs a virtual host configuration file on the web server, so that it can be accessed. All websites are using a common backend platform but have unique designs (frontend), configurations, characteristics, application and services scopes.

Manually adding these virtual host files is time-consuming (authentication on the server, copying an existing configuration file, editing new data, making it available on the web server, restarting), and prone to frequent configuration mistakes, which might prevent the web server from starting and running correctly. An expert in system administration, familiar with the web server and the application environment, must perform each of these updates.

In a Linux server environment, the process can be automated with a combination of Bash and PHP scripts.

The web server is not relevant; it can be Nginx or Apache. Depending on the used DNS service, adding of DNS records for new domains could also be automated. Amazon Web Services (AWS), for example, have an easy to use API, which allows this process to be automated.

Since all websites will use a common platform, their virtual hosts will be very similar with small differences – different server names, environment variables setting the correct site, additional configurations unique to a specific website. For that purpose, a template of a virtual host has been created, which consists of common configurations and placeholders, which will be filled in with values, specific for each website. These specific values will be entered in JSON (JavaScript Object Notation) files, since this format is easy to use and understand. Each JSON file represents one website configuration.

A Bash script can iterate through those JSON files and call a PHP script, which reads their content and the virtual host template, fills the placeholders with corresponding values from current JSON file and thus generates a complete virtual host configuration file. That way in a few seconds one can generate hundreds of virtual hosts by executing a simple command (Fig. 2).

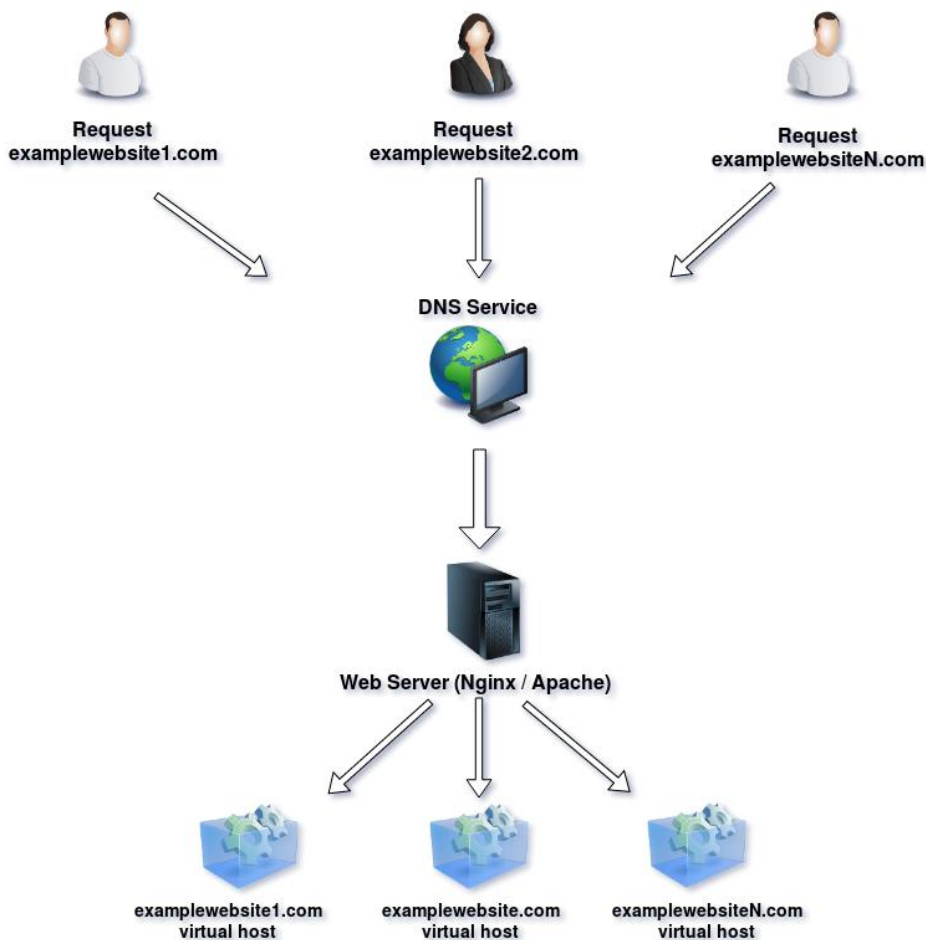


Fig. 2. The architecture with a single web server, hosting multiple domains

Adding new virtual hosts is a matter of creating a JSON file with appropriate values and run the Bash script, which does not require any special system or web administration skills. A huge benefit is that updates concerning all websites can be easily done by simply editing the virtual host template and run the script, which will regenerate all virtual hosts with new configuration.

The offered technology allows improving security, reducing possibility for errors and unifying the platform for accessing judicial institutions' services.

This is a stage of the overall construction of state administration's digital system in compliance with EU requirements.

Their integration removes the existing variety of implementations, which makes citizens' access to a large number of administrative services easier [23; 24]. Thus transparency and accessibility is achieved in large portions, which is a step to a reform in that field.

The suggested technology and methodology for building a web-portal of the judicial system achieves technological and organizational results, which allows speeding up the planned reform.

The system of automatic addition of virtual hosts makes easier the development of an integrated web-portal of the judiciary and web sites of different courts. This results in reducing the time and significant improvement in the security and reliability of the system.

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