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Cloud computing technologies: perspectives and challenges of business model application in Russia

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CLOUD COMPUTING TECHNOLOGIES: PERSPECTIVES AND CHALLENGES OF BUSINESS MODEL APPLICATION IN RUSSIA

Cloud computing is treated by most of the experts as one of the main trends of information technologies development for forthcoming years. In present article we focus on general overview of the main aspects of cloud computing services legal regime in Russia. Such aspects include, *inter alia,* intellectual property and contract law matters, taxation issues, execution of the agreements, warranties and representations under cloud computing agreements and personal data regulations.

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Introduction

Present article is dedicated to one of the most popular and comprehensive topics of modern information technologies law – legal regulation of cloud computing technologies. In this article we try to examine main legal issues which cloud technologies providers may face establishing and doing their business in the Russian Federation. We hope that issues and the ways of their resolution addressed in present research will be of help for both cloud computing providers` legal counsels and legal researchers who concentrate on said topics of IT law in other jurisdictions.

Cloud services providers should consider a number of legal aspects which they will face doing cloud-related business it Russia. Both contractual services and licensing models under Russian civil law and regulatory implications should be taken into account during building of respective business model for this market.

In this article we provide general overview of Russian IT market and its cloud computing segment. This is to show the importance of cloud computing legal regulation for Russian market (Part «General overview of Russian market» of this article).

Further, we provide superficial background regarding main types of clouds and business models which are common for international cloud computing services (Part «Background» of this article). These two parts of the article are deemed to be of help for those readers who are not familiar with either cloud computing business generally or its development in Russia.

The other parts of the article are dedicated to legal matters of providing cloud computing services in Russia and relate to intellectual property, contract law matters, taxation issues, execution of the agreements, warranties and representations under cloud computing agreements and personal data regulations.

In present article we focus on general overview of the main aspects of cloud computing services legal regime in Russia, while the detailed analysis must be conducted for each specific cloud computing services model to be offered at Russian market.

General overview of Russian market

It is obvious that cloud computing is treated by most of the experts as one of the main trends of information technologies development for forthcoming years. Being in line with global tendency, most of major players of Russian IT sector are looking forward to growing demand of main B2B customers for this business model.

The whole Russian IT sector market amounts to approximately 34 bln. US Dollars in 2012 (without telecommunication services and equipment, 62 bln. US Dollars with telecom)[2], the forecast of growth for 2013 is 3 to 4 percent. While the market is not as broad as those in certain developed countries, it appears to be the largest one in Commonwealth of Independent States (post-Soviet region) and therefore is treated as an attractive one for numerous key players of international IT market.

Cloud services are expected to be an essential part of IT market. In accordance with said researches, at the time being about 11% of enterprises in Russia are currently using cloud computing services, among them 13 % are using Infrastructure as a Service, 11,5 – Software as a Service and 2,5 – Platform as a Service[3], which is relatively insufficient in comparison to certain developed countries, and the market is expected to increase up to 30-40 % and even more. While recently Russian market of public cloud services was dramatically small (for example, in 2009 – about $ 5 mln.[4]), the forecast for Russian cloud computing sector for 2015 is about 1,2 bln. US Dollars[5] or even more.

A rapid pace of cloud computing services expansion leads to optimistic forecasts issuing by IT analytics and experts[6]. Most of key international players at cloud technologies field such as, for instance, Microsoft, Google, IBM, VMware, are going to offer (or already offer) their cloud-based services for their Russian clients. In most cases they deal with cloud technologies in close cooperation with major Russian system integrators and service providers.

Background

In accordance with classical definition based on US NIST research[7] cloud computing is a model of services, computing and data storage based on the access of end-users via web to a distributed server capacities integrated into a single network of such capacities (called cloud). Cloud computing is generally associated with three main service models: Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS):

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[2] Here and below - averaged forecasts based on researches of IDC, Gartner and Russian IT associations (AP KIT, Russoft) and other market statistics.
[3] All these types of cloud computing services are described in Part «Background» below.
[4] In accordance with IDC research «Russia Public IT Cloud Services Market 2010–2014 Forecast and 2009 Analysis»
[5] A forecast of IDC, see: http://www.tadviser.ru
[6] See, for instance: Andrey Sosnikhin, New Trand in Infrostructure: cloud computing and the Internet of Things. //www.cnews.ru/article/2013/07/18/novyy_trend_v_infrastrukture__oblachnye_vychisleniya_i_internet_veshhey_535832; Cloud services: an overlook from Russia // www.cnews.ru/mag/2011/CloudTechnology.pdf.
[7] See: http://www.nist.gov/itl/cloud/index.cfm.

- Software as a Service is a software delivery model in which software solutions or applications and associated data are centrally hosted on the cloud.

- Under Platform as a Service model service provider allows customer to use the computing platform and related network, servers and storage based in the cloud to develop, store and distribute customer's own software applications.

- Infrastructure as a Service being a basic cloud computing service means a model where service provider offers infrastructure (virtual of, less often, physical server machines, servers memory, network facilities and some associated middleware) to customers.

Further, this is common to determine four main types of clouds distributed infrastructure:

- Private cloud - means the cloud created for and operated by a single user. This type of cloud is common for B2B cloud relations when the customer considers high level of security and privacy of data placed in the cloud.

- Public cloud is a cloud combining spread distributed server facilities (in most cases located in different data processing centers which may be based in different countries) and with an access for a wide number of users to the cloud.

- Community cloud is a network combination of server facilities for several entities, usually of the same type of business (universities etc.) to the entire cloud.

- Finally, hybrid cloud is a combination of private, public and/or hybrid clouds.

The main features of the cloud are the following:

- remote access (generally via web-interface) of users to the cloud;

- using pay-as-you-go remuneration model (not always, indeed);

- ability (especially in public cloud) to transfer data from one server to another within the cloud automatically to avoid peak overloads of certain servers while other servers are unloaded.

The advantages of cloud computing technologies use are quite obvious: customers do not have to procure expensive servers and other equipment to build their own data processing centers, the costs time for system integration are about zero level etc. On the other hand there are concerns from customers` side related to sensitive data flow to the cloud and associated data security risks.

These concerns are usually considered by Russian customers - both large enterprises and public corporations as well as SMBs - making a decision to move to the cloud.

Below we refer to certain legal aspects and nuances which should be taken into account during building the cloud business in Russia.

Contractual models and Intellectual Property nuances

It is customary for cloud computing agreements (with, of course, some variations dependent to the services model - SaaS, IaaS of PaaS) to combine licensing and services provisions. For instance, in SaaS or PaaS models there is a bulk or relations such as a grant of a license to use respective software platform or application, provisions related to the access to the service via web interface, specific warranties regarding non-infringement of third parties` IP rights, certain performance guarantees for the service, service level provisions etc. While IaaS model is generally used for an access to hardware, it is also customary to state in IaaS agreements certain licensing provisions, which relate to middleware, for instance.

Most of agreements which international cloud technologies providers use in this area which either combine licensing and services models or contain services provisions only (an access to software, platform etc. placed in the cloud as a service). One of the main issues – types of contracts to govern software use – related to such contractual models for cloud technologies relates to specifics of copyright protection under Russian Law. Therefore we should examine main provisions of said copyright law in the light of its application to cloud technologies matters. January 1, 2008 a new Fourth Part of Russian Civil Code was adopted and replaced all old Laws on different intellectual property types[8]. This Part of Civil Code currently regulates all intellectual property relations in Russia. In particular, all matters connected to exclusive rights to the software and the ways of software use and transfer are covered by chapters 69 (General Provisions) and 70 (Copyright Law) of Civil Code Part Four.

Article 1233 of Russian Civil Code states that the right holder may dispose of his exclusive right to the result of intellectual property in any manner not contradicting the law and the essence of such exclusive right, including its assignment (alienation) under an agreement to another person (an exclusive right assignment agreement) or the granting to another person of the right to use

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[8] Initially after creation of post-Soviet law legal system intellectual property relations were regulated by a number of separate Laws related to certain fields of intellectual property; among such laws there were the Laws regulated protection and use of software – Copyright Law and the Law on legal protection of Computer Programs and Databases. While both Laws provided specific regulation of software licensing, we do not review these Laws within this article as both Laws had been repealed before cloud computing as business model became spread and popular in Russia.

the relevant result of the intellectual activity or means of individualisation within the limits set by an agreement (licence agreement). Further, it is stated that an agreement that does not expressly state that the exclusive right to the result of intellectual property is assigned in full shall be deemed a licence agreement.

Article 1235 says that under the licence agreement one party being the holder of the exclusive right to the result of intellectual property (licensor) undertakes to grant to the other party (licensee) the right to use such intellectual property within the limits set out in the agreement.

While said provisions generally allow any kinds of agreements related to intellectual property (including software) disposal, initial look at these provisions in complex allows us to say that the grant of usage rights to software shall be performed under license agreement only.

To consider whether it is necessary to use licensing model while providing cloud computing services we should review the definition of the term «use» of intellectual property under Russian copyright law. The main point here is to define if an access to software based in a cloud must be interpreted as a «use» of the software under Russian Law or not.

Item 2, Article 1270 of Russian Civil Code stipulates a number of copyrighted work usage types (so called «methods of use»). Among others there are two methods of use which shall be taken into account when considering licensing model to be applied to cloud technologies – the right of reproduction and the right of distribution.

A right of reproduction of a copyrighted work is defined in details in par. «a» of Item 2, Article 1270 of Russian Civil Code. It means the manufacturing of one and more copies of the work or a part thereof in any material form, including the form of a sound or video recording, the manufacturing of one and more three-dimensional copies of a two-dimensional work and of one and more two-dimensional copies of a three-dimensional work. Besides, in this case, a recording of the work on an electronic medium, including saving in a computer memory, shall also be deemed reproduction, except for cases when such saving is temporary and is an integral and significant part of a technological process solely intended for legally using a record or legally making the work known to the public.

As we may learn from the definition below the reproduction takes place when the software is to be downloaded on certain tangible medium (it may be personal computer, server etc.) In most software as a service models users do not need to download the software from the cloud on their devices but are able to access the software in the cloud directly via web-interface. It means that

the reproduction of «clouding» software does not take place. The situation differs when users are required to download and install certain applications to access the cloud (it may be so called «thick» clients for different kinds of system administrators of enterprise solutions etc.)

The distribution of a work is the other method of use which should be considered in the light of choosing contractual model for cloud services. Russian law (e.g. par. «b» of said Item 2, Article 1270 of Russian Civil Code) defines distribution through «sale or another alienation of its original or copies». Current practices of this provision interpretation treat it as distribution of copyrighted works on tangible media only (on CD or DVD disks, for instance). While it is still more or less customary for certain kinds of works (books, paintings etc.), it appears to be quite archaic even for such traditional types of software as computer games and similar software, and of course it does not relate to such distribution models as software as a service or platform as a service at all.

Thus we may assume that both said methods of use are irrelevant to cloud computing. The only related issue which is still uncertain under Russian intellectual property law lies in the field of simple operation of the software placed in the cloud interpretation. Indeed, an operation of software (i.e. an execution of the software binary code to obtain certain result) is not mentioned in the list of methods of use in Article 1270 of Russian Civil Code; at the same time this list is stipulated as non-exhaustive. Provided that the risks of leaving certain methods of use out of the scope of license agreement are quite sensitive (Article 1235 of Russian Civil Code states that any right or method of use which is not directly mentioned in license agreement shall be treated as not granted), it is customary to include the operation of the software as one of methods of use in software license agreements governed by the laws of Russia. Case law does not provide clear interpretation of such approach necessity to date.

From cloud computing perspective it means that an access to the cloud (and consequent operation of software placed within such cloud) in software as a service or platform as a service models may be interpreted in certain circumstances as relations which necessarily require licensing provisions in respective agreements.

Respectively, under Russian copyright law an access to the software placed in the cloud in a number of cloud computing models cannot be granted under pure services agreement without certain risk for these agreements to be void. At the same time it is obvious that agreements related to cloud computing cover services as well. Such services provisions include, *inter alia*, service level agreement (SLA) provisions which relate to certain performance criteria guaranteed

by cloud computing services provider; technical support obligations etc. The problems of said combination are addressed in the next part of this article.

Taxation issues

We dedicated an essential part of this article to detailed review of contractual matters (namely, choosing between licensing, pure services and combined models of agreements for cloud technologies) not for nothing. The importance of careful contractual model choice for cloud technologies offerings on Russian market arises not from pure contract law concerns only (said risks of possible courts` interpretation of agreements missing necessary prescribed by law elements as void or as loss of contract) but also (and in practice far more often) from taxation reasons.

The key taxation point in software license deals in Russia is that they are VAT-exempt. It is stated in Par. 26, Item 2, Article 149 of Russian Tax Code. This preference was adopted by Russian legislative authorities along with the adoption of aforementioned Fourth Part of Civil Code in 2008 to encourage IT companies and other hi-tech businesses operating on Russian market. The exemption spreads on software, databases, all intellectual property covered by patent law (inventions, utility models and industrial designs), semiconductors and know-how assignment and licensing deals. At the same time services related to said intellectual property such as, for example, implementation of software, technical support, software development etc. are not VAT-exempt.

While the initial idea of taxation preferences for high-tech businesses was progressive and must be supported, further practical steps connected to these measures implementation fell to certain difficulties and uncertainties.

Russian tax authorities issued a number of interpretations of mentioned Tax Code provision connected to different specific types of software deals and agreements. In particular, it was explained that payments under complex software agreements which combine both licensing and services provisions shall be subject to value added tax in whole.

This interpretation generated essential problems for application of international templates of cloud computing agreements which, as mentioned above, usually combine both services and licensing provisions in entire agreement. The risks are obvious in the event of splitting payments for services and license fees in one single payment under an agreement (which is quite common

for cloud computing agreements where user pays for the whole service which includes an access to the software, technical support etc.)

Therefore it is generally advisable to divide the agreements related to cloud services to pure service agreements (e.g. for technical support etc.) and pure license ones, where possible. In most cases it causes a number of problems (especially dealing with international public cloud service providers which are not always able to adopt their contractual models to local specific legal environment); at least it doubles a paperwork which may be critical for public clouds with their thousands of end-users.

Possible compromise may be found in dividing of license and service payments within single complex agreement which is far less risky than splitting service and license fees into single amount.

It is important to note that certain positive court practice has been formed in respect of software transactions taxation during recent 2-3 years. In particular, Federal Arbitrage Court of Moscow region (a court of cassation within Russian branch of commercial, so called arbitrage courts) in its decision[9] supported the ruling of a court of inferior instance and cancelled the fine and other liability imposed by tax authority in respect of complex transaction.

In this case tax authority imposed a fine and charged additional VAT amount to a tax payer by reason of unlawful (from its point of view) application of said VAT exemption under Par. 26, Item 2, Article 149 of Russian Tax Code. The tax authority appealed that the whole transaction related to services, and there were no grounds to use the preference related to licensing and assignment.

The courts decided that the agreement was complex and included both services and the rights transfer. The rights transfer shall be subject to VAT-exemption, therefore the tax payer did not pay VAT at this amount lawfully. The other important statement highlighted by the court in this decision is confirmation that the counterparties in the deal are free to stipulate their own provisions in respect of the nature of the transaction which may supersede certain statutory provisions of the Fourth Part of Civil Code.

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[9] Federal Arbitrage Court of Moscow District, ruling # KA-A40/6631-1, case # A40-121512/10-116-485, July 5, 2011.

This and certain other arbitrage court decisions essentially corrected taxation practices in respect of VAT preference for software taxation during last several years. While these cases did not relate to cloud computing, they influenced the whole software industry and its business practices, so currently cloud computing providers have more options to adopt convenient contractual models without essential tax risks in Russia, provided that all contractual financial provisions drafted carefully and in accordance with ongoing trends in case law. Each particular business model shall be reviewed and amended separately, of course.

Execution of cloud computing agreements

It seems to be obvious that agreements execution form is one of crucial issues in cloud technologies business. This issue arises in public clouds especially, where a service provider has to deal with a crowd of end-users.

Russian Law provides come specific requirements which relate to entering into software agreements.

Under general rules of Russian contract law (Articles 158-160 of Russian Civil Code) a deal may be executed in both verbal and written form unless the written form is required by the operation of law or agreed by the parties.

Article 1235 of Russian Civil Code directly requires that license agreements shall be made in writing unless otherwise stated in special articles for specific types of license agreements. In the event the license agreement fails to comply with this requirement it will be treated as void.

Such specific exception is stated in Article 1286 of Civil Code for software agreements. It states that software (and databases) license agreements may be entered into by special way which is described as the following: «A licence agreement granting a right to use a computer program or database may be concluded by means of concluding a contract of accession between each user and the relevant right holder, the terms of the agreement being available on the acquired copy of the program or database or on the package thereof. The start of use of the program or database by the user as it is defined in the terms shall be deemed the user's consent to the conclusion of the agreement».

As follows from this broad definition, the article allows using classical shrink-wrap licenses. This type of licenses appears to be more or less convenient for distributing off-the-shelf software on tangible media via traditional distribution channels (shops etc.) and is in consistence with

distribution method of use (in the meaning described above in present article). Using shrink-wrap licenses software vendor (being a right holder of the software) is able to enter into direct end-user license agreements with end users respectively and to avoid unnecessary sublicensing through chains of its distributors who sell tangible media with its software.

Meanwhile it is absolutely obvious that this contracting model is irrelevant for any distribution of the software via electronic means of communication and especially for cloud computing models where no tangible media are transferred. For latter models click-wrap licensing is commonly used. Unfortunately, to date click-wrap licenses are not directly allowed by Russian Law, which is automatically means that click-wrap licenses embedded in the software will most likely falls to the aforesaid provision of Article 1235 and will be treated as void. This question was broadly discussed by both software industry representatives and legal professionals, and the ways of this restriction elimination have been searching during recent years, but currently it is quite risky to use click-wrap licenses on Russian market.

Warranties in cloud computing agreements under Russian Law

Warranties and representations of the parties also have certain specifics in cloud computing agreements. In most cases warranties are provided from both service provider's and user's sides. Service provider warrants that it is entitled to license the software placed in the cloud and does not violate third parties` IP rights by such licensing; further, it is traditional to state certain performance guarantees for web-service, e.g. to state a percentage of web-service availability for the customer (usually - not less than 99% within the term of agreement). These warranties are usually connected to Service level agreement which may be either included in the agreement or annexed to it or stands as a separate document (for instance, on the provider's web-site). On the other side, Customer warrants and represents that by placing the data into the cloud it will not breach any IP rights of third parties, as well as any regulations on personal data of its consumers etc. Most of the agreements also contain indemnity clauses in the event of any party's breach of aforementioned warranties.

While these warranties, guarantees and representations generally meet Russian law requirements, there might be some issues related to indemnity clauses enforcement. While an obligation of a party to reimburse any damages causes to the other party by first party` breach of its warranties must be acceptable under Russian law, a cross-obligation of injured party to make a substitution of the defendant` rights in court proceeding may contradict to procedural laws of Russia. In this

respect it may be reasonable to draft such cross-obligation in more prudent words, such as, for instance, an obligation of non-breaching party to provide the other party with a possibility to be involved into the proceeding.

Personal Data in the cloud

Traditional issue which cloud computing vendors are dealing with in many jurisdictions relates to data protection in the cloud. Russian Law provides quite broad and complicated legal regime on personal data use and protection, therefore it will be reasonable for cloud computing services provider to consider this legislation requirements and respective risks and consequences of its breach before starting offering the services to Russian customers. In this article we will highlight just selected issues related to personal data protection, while the comprehensive research should be made in connection with certain cloud computing business model.

The main risks of cloud computing services provider are related to potential liability and respective reputation risks in the event of any loss or leakage of personal data placed in the cloud by its customer. Russian law will in certain cases treat cloud computing service provider as a person whom the controller of personal data engaged to process such data (an approximate analog of «processor» in EU legislation).

Russian Personal Data Law was essentially amended at summer 2011. There was a number of new requirements which may apply to the processor. These requirements may be classified as legal and technical ones.

Legal requirements relate to a number of legal and organizational measures to be implemented by a service provider. We will mention just a couple of them which may be of essential importance for international service providers. Russian data protection laws require high level of data protection for those controllers and processors which are going to transfer personal data outside Russian borders. These requirements are especially important for public cloud service providers operating distributed server facilities in many countries combined in the cloud.

There are two separate regimes of personal data transborder transfer. The first regime applies to the transfer of data to countries adequately protecting personal data under their local legislation; this regime do not provide any specific requirements in addition to general rules of «domestic» data processing. The second one is in effect where the data is being transferred to any other countries and requires broader obligations of the controller. Namely, in this case it is necessary to obtain written consent to such cross-border dataflow from each person whose personal data is

being transferred (which may lead to irresolvable problems for public cloud service providers with their thousands and millions of end-users). The criteria for countries adequately protecting personal data is the following:

- the country there the recipient of data is located is a member of Counsel of Europe Convention on Personal Data[10];

- the country where the recipient of data is located was included in a special list to be issued by Russian public authority responsible for data protection (Roscomnadzor).

Before Roscomnadzor issued said list, only the members of mentioned Convention had been treated as countries with adequate data protection. Currently there are 44 states acceded to the Convention, and most of them are European ones. Neither US, nor developed Asian countries have signed the Convention, therefore service providers hosting their server facilities in said countries might face certain difficulties with Russian customers which were going to put personal data of their clients or employees to such cloud.

In March 2013 Roscomnadzor issued the list of countries[11] providing adequate personal data protection which are not members of Counsel of Europe Convention on Personal Data.

The selection has been made on the following principles:

- A country must have respective personal data protection legislation;

- A country must have respective public authority responsible for personal data protection;

- A country must have adequate mechanisms of personal data protection.

This list includes the following countries: Australia, Argentina, Israel, Canada, Morocco, Malaysia, Mexico, Mongolia, New Zealand, Angola, Benin, Cape-Verde, South Korea, Peru, Senegal, Tunis, Chili, Hong Kong (but not the whole China) and Switzerland.

Currently we may assume that cloud computer providers which are going to offer in Russia services related to personal data operation may develop their international cloud distributed infrastructure with certain degree of certainty. At the same time it is important to consider that a number of developed countries (e.g. the United States) are out of both lists of countries.

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[10] Counsel of Europe. Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data, Strasbourg, 28.01.1981.
[11] Roscomnadzor Order dated 15.03.2013 # 274

The other issue relates to the technical requirements for an information system of personal data processing. According to Personal Data Law as well as a number of regulations of Russian public authorities a processor performing automated personal data processing is expected to create a secured and safe information system with several levels of data security. General requirements applying to such information system include, among others, an implementation of data security tools in the system which have to be certified by respective Russian authority (FSTEK) as well as security measures for communication channels used for data flow to the information system etc. Besides, certain additional extended requirements apply to cloud computing systems related to the processing of data via information system connected to Internet and with distributed network of data processing centers.

Conclusion

It is obvious that the implementation of local Russian Law requirements may be problematic for an international cloud computing network operating globally. Therefore it is important to clarify the expansion of such requirements to foreign service providers offering services in Russia and holding their server facilities abroad. Any particular cloud computing system should be examined carefully on case by case basis. For instance, it is important to identify the nature of customers` access to the cloud - for example, in the event the cloud facilities are located outside Russia, but customers are expected to install certain software application to upload an information into the cloud (so called «thick clients») may lead to the application of Russian law and regulations requirements to such system. Taking into account extensively growing Russian market of cloud computing services international providers should consider detailed review of their offers in the light of specific local requirements in this field.

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