

Особенности разработки и размещения веб-сайтов в "облачных" сервисах на примере Amazon

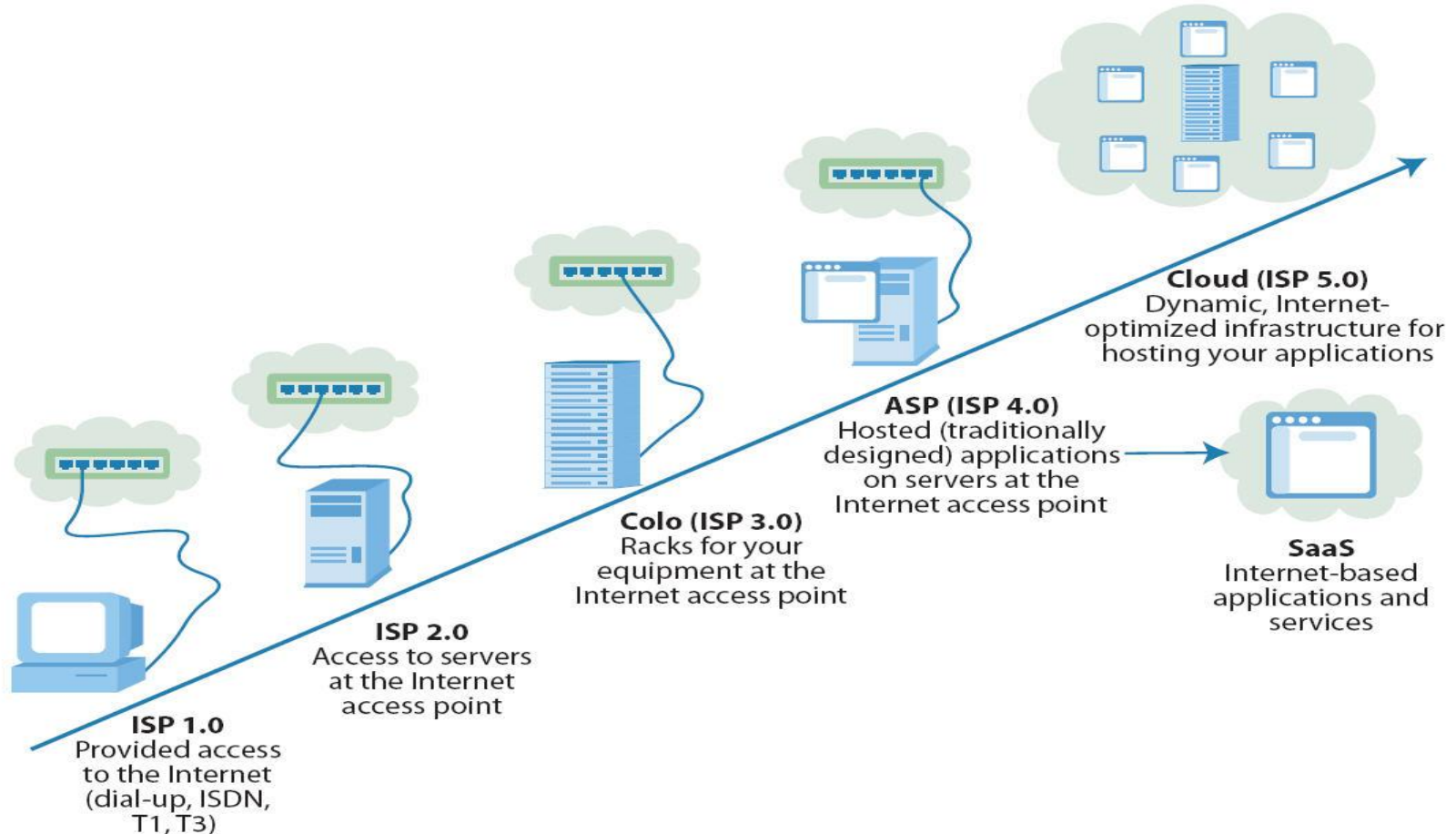
Евгений Мясущкин

Кварт-Софт

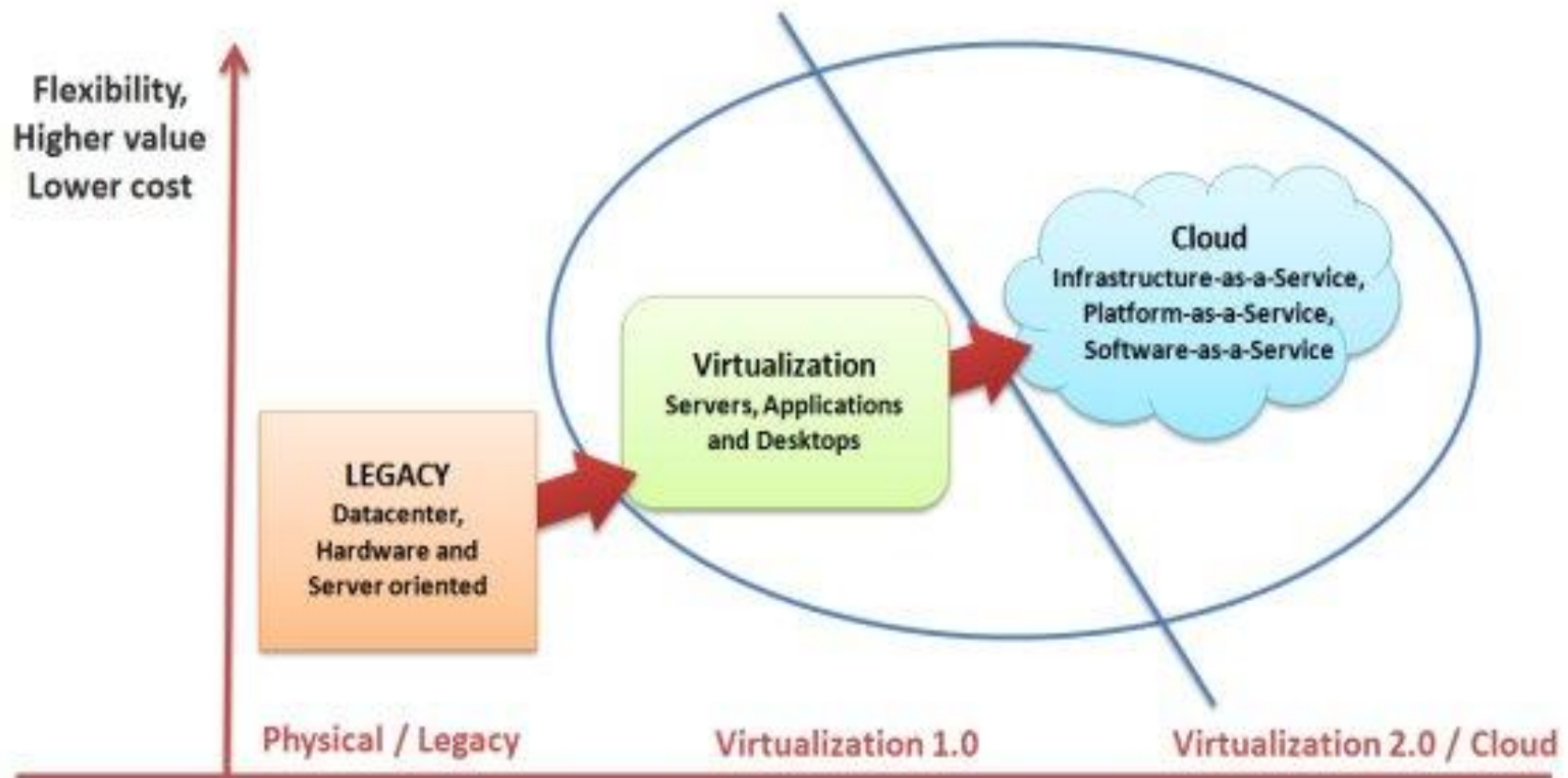
2010

Основные этапы развития хостинг - сервисов

Figure 3 Cloud Computing: The Latest Evolution Of Hosting



Тенденции развития хостинг - сервисов



Облако для каждого



Экономические преимущества облачных сервисов

- Нулевые авансовые инвестиции в инфраструктуру
- Оперативное расширение
- Эффективное использование ресурсов и их контроль
- Оплата по использованию
- Снижение времени на запуск

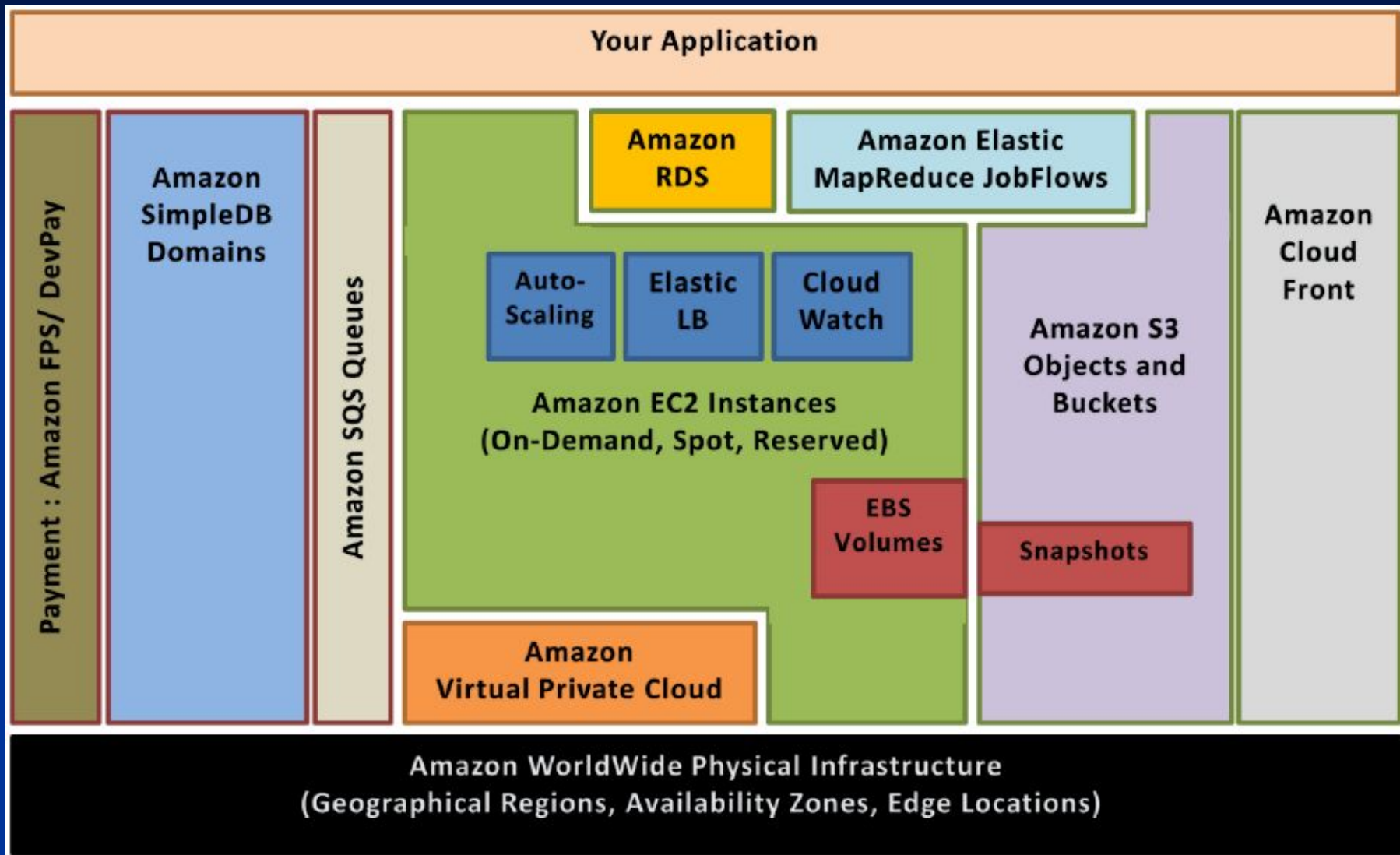
Технические преимущества облачных сервисов

- Автоматизация – “Scriptable infrastructure”
- Авто-масштабирование
- Проактивное масштабирование
- Более эффективный ЖДЦ
- Лучшие возможности тестирования
- Аварийного восстановления и обеспечение непрерывности бизнеса
- Автоматическое управление трафиком в облаке

Поставщики облачных сервисов



Структура сервисов Amazon Cloud



AWS Console

- Amazon EC2
- Amazon Elastic MapReduce
- Amazon CloudFront

- Navigation
- Region: US East ▾
- > EC2 Dash
 - INSTANCES
 - > Instances
 - > Spot Requests
 - IMAGES
 - > AMIs
 - > Bundle Tasks
 - ELASTIC BLOCK STORE
 - > Volumes
 - > Snapshots
 - NETWORKING & SECURITY
 - > Elastic IPs
 - > Security Groups
 - > Key Pairs
 - > Load Balancers

Amazon EC2 Console Dashboard

- US East (Virginia)
- US West (N. California)
- EU West (Ireland)

Getting Started

When you start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

[Launch Instance](#)

Note: Your instances will launch in the US East (Virginia) region.

Service Health

Current Status	Details
Amazon EC2 (US East - N. Virginia)	Service is operating normally

[View complete service health details](#)

My Resources

You are using the following Amazon EC2 resources in the US East (Virginia) region: [Refresh](#)

- 1 Running Instance
- 1 Elastic IP
- 1 EBS Volume
- 1 EBS Snapshot
- 4 Key Pairs
- 1 Security Group
- 0 Load Balancers

Related Links

- > Documentation
- > All EC2 Resources
- > Forums
- > Feedback
- > Report an Issue

AWS Console – Instances Launch













Request Instances Wizard

Cancel X

CHOOSE AN AMI INSTANCE DETAILS CREATE KEY PAIR CONFIGURE FIREWALL REVIEW

Choose an Amazon Machine Image (AMI) from one of the tabbed lists below by clicking its **Select** button.

Quick Start My AMIs Community AMIs

	Getting Started on Fedora Core 8 (AMI Id: ami-b232d0db) Minimal Fedora Core 8, 32-bit architecture, Apache 2.0, and Amazon EC2 AMI Tools.	Select 
	Ruby on Rails Web Starter (AMI Id: ami-22b0534b) Fedora Core 8, 32-bit architecture, Ruby 1.8.6, Rails 2.2.2, RubyGems 1.3.1, Mongrel 1.1.5, and MySQL 5.0.45	Select 
	LAMP Web Starter (AMI Id: ami-2cb05345) Fedora Core 8, 32-bit architecture, PHP 5.2, Apache 2.2, and MySQL 5	Select 
	Basic Fedora Core 8 (AMI Id: ami-84db39ed) Minimal Fedora Core 8, 32-bit architecture, and Amazon EC2 AMI Tools.	Select 
	Basic 64-bit Fedora Core 8 (AMI Id: ami-86db39ef) Fedora Core 8, 64-bit architecture, and Amazon EC2 AMI tools.	Select 
	Getting Started on Microsoft Windows Server 2008 (AMI Id: ami-69c32f00) Microsoft Windows Server 2008 R1 SP2 Datacenter edition, 32-bit architecture. Microsoft SQL Server 2008 Express. Internet Information	Select 

AWS Console – Instances Actions

The screenshot displays the AWS Management Console interface for 'My Instances'. At the top, there are navigation buttons for 'Launch Instance', 'Instance Actions', and 'Reserved Instances', along with 'Show/Hide', 'Refresh', and 'Help' options. Below this, a 'Viewing:' section allows filtering by 'All Instances' and 'All Instance Types'. A table lists instances with columns for Instance ID, AMI ID, Root Device Type, Type, Status, Lifecycle, Public DNS, Security Groups, Key Pair Name, and Monitoring. One instance is shown with a status of 'running'. A context menu is open over this instance, listing actions under three categories: 'Instance Management' (Connect, Get System Log, Create Image (EBS AMI), Launch More Like This), 'Instance Lifecycle' (Terminate, Reboot), and 'CloudWatch Monitoring' (Enable CloudWatch, Disable CloudWatch). Below the table, a summary card for the selected instance shows details for 'Description' and 'Monitoring'.

Instance	AMI ID	Root Device Type	Type	Status	Lifecycle	Public DNS	Security Groups	Key Pair Name	Monitoring
<input checked="" type="checkbox"/> i-00efdd6...	ami-0859bb61	store	c1.medium	running	normal	ec2-174-129-29-178.compute-	default	qs	disab

Instance Management

- Connect
- Get System Log
- Create Image (EBS AMI)
- Launch More Like This

Instance Lifecycle

- Terminate
- Reboot

CloudWatch Monitoring

- Enable CloudWatch
- Disable CloudWatch

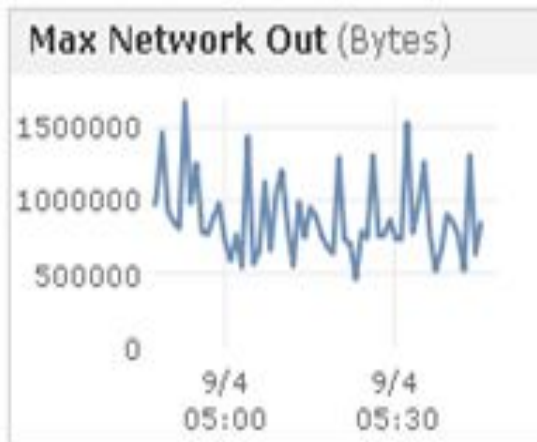
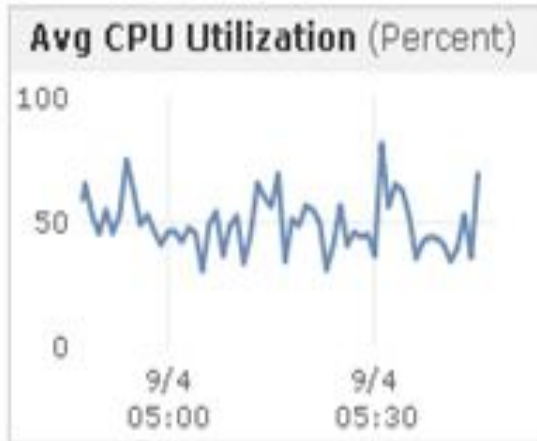
1 EC2 Instance s

EC2 Instance: i-00efdd6...

Description | **Monitoring**

AMI ID:	ami-0859bb61	Zone:	us-east-1a
Security Groups:	default	Type:	c1.medium
Status:	running	Owner:	639678307181

AWS Console – Instances Monitoring



Выводы

- В данном докладе представлено краткое описание архитектуры облачных сервисов понимание которых необходимо для выработки эффективных подходов к разработке высоко нагруженных приложений.
- На примере облака Amazon, были рассмотрены ключевые компоненты работы любой распределенной системы (сервер приложения, БД, файловое хранилище и распределений нагрузки между ними)