

THE CLOUD PRICING CODEX – 2013

The 451 Research Cloud Pricing Codex represents the first step in understanding the true cost and value of IaaS offerings. The aim of the Codex is to simplify a complex economic landscape, so that informed strategies for the development and implementation of cloud services can be identified by providers, consumers and others.

IIS | INTERNET
INFRASTRUCTURE
SERVICES

KEY FINDINGS

- Cloud computing once promised simple, usage-based charging for resources, similar to other utilities such as electricity; unfortunately, the current reality is far from this ideal. Pricing methods for IaaS consumption vary hugely between providers, but 451 Research believes all virtual-machine pricing methods fit into one of eight classifications – a cloud pricing taxonomy – with each pricing method having its own strengths and weaknesses for both consumer and provider.
- On-demand pricing enables experimentation; alternative pricing enables cost-effective implementation. The ability to consume resources, paying only for what is used, is the initial attractor for consumers, allowing experimentation and evaluation with no commitment and little risk. As a result, 9 in 10 IaaS providers surveyed by 451 Research offer on-demand pricing. However, as experimentation turns into implementation, consumers look to reduce their costs and establish predictability and availability, and as a result, over 50% of IaaS providers surveyed offer an alternative pricing method to conventional on-demand.
- A virtual machine does not an application make. Cloud applications incur charges for a range of IaaS services, which are less likely to be fully understood by the buyer when pricing up a potential solution. The consumer's control of some of these line items is limited, and may result in unexpected charges. VMs may aggregate many resources as a single chargeable bundle using one of three methods, or they may allow consumers to choose the specific size of their own VM. The cloud pricing taxonomy combines these line items into four common bundling methods.
- In planning a Digital Infrastructure strategy, it is crucial that consumers assess all the pricing methods available to them, and fully understand each model's benefits, risks and features. In doing so, consumers can produce a 'Digital Infrastructure playbook' that defines how the cloud – and its range of services, providers and models – can be fully utilized to deliver best value. The fact that only 64% of IaaS providers publish prices means that assessing options is a difficult task.

DECEMBER 2013

REPORT SNAPSHOT

TITLE	The Cloud Pricing Codex – 2013
ANALYST	Owen Rogers, Senior Analyst, Digital Economics
RELEASE DATE	December 2013
LENGTH	42 pages

ABOUT THIS REPORT

Cloud computing once promised simple, usage-based charging for resources, similar to other utilities such as electricity; unfortunately, the current reality is far from this ideal. Pricing methods for IaaS consumption vary hugely between providers, with each method having its own strengths and weaknesses for both consumer and provider. The 451 Research Cloud Pricing Codex represents the first step in understanding the true cost and value of IaaS offerings. The aim of the Codex is to simplify a complex economic landscape, so that informed strategies for the development and implementation of cloud services can be identified by providers, consumers and others.

Through the results of a provider survey, The 451 Research Cloud Pricing Codex defines a taxonomy of IaaS pricing methods, classifying all methods into one of eight categories. It also defines a taxonomy of bundling, billable attributes and associated usage metrics. Furthermore, the Codex shows the classification of pricing methods and bundles for a number of IaaS providers, and it also attempts to understand the prevalence of these methods in the market in order to identify overall trends.

TABLE OF CONTENTS

SECTION 1: EXECUTIVE SUMMARY	1
1.1 INTRODUCTION: WHY IS A CODEX NEEDED?	1
1.2 KEY FINDINGS.	2
 SECTION 2: TAXONOMY OF IAAS PRICING	 4
2.1 OVERVIEW	4
<i>Figure 1: Common Cloud Pricing Methods</i>	6
<i>Figure 2: Cloud Bundling Taxonomy</i>	7
2.2 THE CASE FOR DIFFERENT PRICING METHODS.	7
2.3 CHARACTERISTICS	9
<i>Figure 3. Provider and Consumers Pricing Preferences</i>	9
2.3.1 Payment Terms	9
2.3.2 Commitment	9
2.3.3 Metering.	10
2.3.4 Medium of Exchange	10
2.3.5 Unit Price Variability	10
2.4 VM PRICING METHODS	11
2.5 CASH PAY-AS-YOU-GO METHODS	12
2.5.1 On-Demand	12
2.5.2 Reserved Instance.	13
2.5.3 Spot Pricing	14
2.6 COMMITTED VM METHODS	16
2.6.1 Prepaid VM Access	16
2.6.2 Recurring Prepaid VM Access	17
2.7 RESOURCE POOLING	18
2.7.1 Recurring Resource Pooling	18
2.8 CREDIT PAY-AS-YOU-GO METHODS.	19
2.8.1 Prepaid Consumption	19
2.8.2 Recurring Prepaid Consumption.	21
2.9 VM BUNDLING AND BILLABLE ATTRIBUTES.	22
2.10 USAGE METRICS.	25
2.10.1 Contention	25

2.10.2 Virtual Machine Naming26
2.10.3 Data Transfer – GB and Concurrent Connections.26
2.10.4 Virtual Machine Storage – GB/t26
2.10.5 Virtual Machine Memory – GB/t26
2.10.6 Virtual Machine Processing – MHz, Cores and vCPUs26
2.10.7 Block and Object Storage Quantity – Average GB/month27
2.10.8 Block and Object Storage Performance – Transactions27
2.11 PER MINIMUM TIME UNIT	28
 SECTION 3: PRICING TRENDS	 30
3.1 METHODOLOGY	30
3.2 GENERAL TRENDS	30
<i>Figure 4: Popularity of Pricing Methods Among Providers</i>	<i>.30</i>
<i>Figure 5: On-Demand and Alternative Pricing Methods Offered by Providers</i>	<i>31</i>
<i>Figure 6: Prevalence of Bundling Offered by Providers</i>	<i>.32</i>
<i>Figure 7: Prevalence of Pricing Methods by Revenue Range.</i>	<i>.33</i>
<i>Figure 8: Prevalence of Online Pricing Methods by Revenue Range</i>	<i>.34</i>
3.3 LIMITATIONS	35
 SECTION 4: PROVIDER PRICING BREAKDOWN	 36
 SECTION 5: FUTURE CLOUD PRICING	 40

ABOUT 451 RESEARCH

451 Research is a leading global analyst and data company focused on the business of enterprise IT innovation. Clients of the company — at end-user, service-provider, vendor and investor organizations — rely on 451 Research's insight through a range of syndicated research and advisory services to support both strategic and tactical decision-making.

© 2013 451 Research, LLC and/or its Affiliates. All Rights Reserved. Reproduction and distribution of this publication, in whole or in part, in any form without prior written permission is forbidden. The terms of use regarding distribution, both internally and externally, shall be governed by the terms laid out in your Service Agreement with 451 Research and/or its Affiliates. The information contained herein has been obtained from sources believed to be reliable. 451 Research disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although 451 Research may discuss legal issues related to the information technology business, 451 Research does not provide legal advice or services and their research should not be construed or used as such. 451 Research shall have no liability for errors, omissions or inadequacies in the information contained herein or for interpretations thereof. The reader assumes sole responsibility for the selection of these materials to achieve its intended results. The opinions expressed herein are subject to change without notice.

