

## I D C T O P L I N E

# Software Defined Vision 2020: Impact of Server Virtualization in Thailand Through 2020

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In 2013, IDC was approached by VMware to build a hypothetical model that measures the impact of virtualization in the x86 server world. In 2014, this project has expanded to examine the impacts of server virtualization on storage and networking, the capex and opex models of businesses, and how adoption of such technologies could lead to greater business agility.

In collaboration with the same global IDC team as last year, including key storage and networking analysts, IDC Asia/Pacific created what is referred to as the Datacenter Economies Index. This model examines the impact of server virtualization on the server, storage and networking industries by creating a hypothetical view of these markets in a world where server virtualization never existed and comparing that to a the current IDC forecast data for these markets out to 2020. The data points collated fall into the four categories of the associated costs of datacenter space, power and cooling, and admin costs linked to the additional hardware avoided due to virtualization. The DEI includes modeled data for 11 countries in the Asia/Pacific region, including Thailand. The overall regional data is available in the IDC White Paper, *Empowering Organizations in a Software Defined World*, sponsored by VMware (#AP14993X).

## Introduction

The datacenter of the future will be a very different animal from the datacenter of the past. The very nature of business is changing rapidly and the datacenter, long seen as the custodian of information and process, must now step up to become a valuable contributor to the top line income stream of a wide range of organizations. Cloud computing, mobility and Big Data are changing traditional business overnight, with new competitors and new revenue stream emerging. Having the right datacenter architecture is critical to being able to grab these opportunities or defend from the disruptors, and here lies the challenge. IDC believes that a highly virtualized datacenter environment, with high degrees of automation and the ability to seamlessly move between and on- and off-premise infrastructure is the optimal architecture for the future. This is the essence of what many are calling the software defined datacenter (SDDC), but it all starts with server virtualization. More recently, technologies that can offer similar types of services to the storage and networking layers have been emerging and these too, over time, will contribute to the overall datacenter environment

But still, we are only scratching the surface of the opportunity. Based on the IDC Asia/Pacific Virtualization Tracker, the rates of virtualization across the region remain low and in many markets less than 20% virtualization. While the DEI does forecast a growth in this rate of virtualization, even at the highest, it remains only just above 41%.

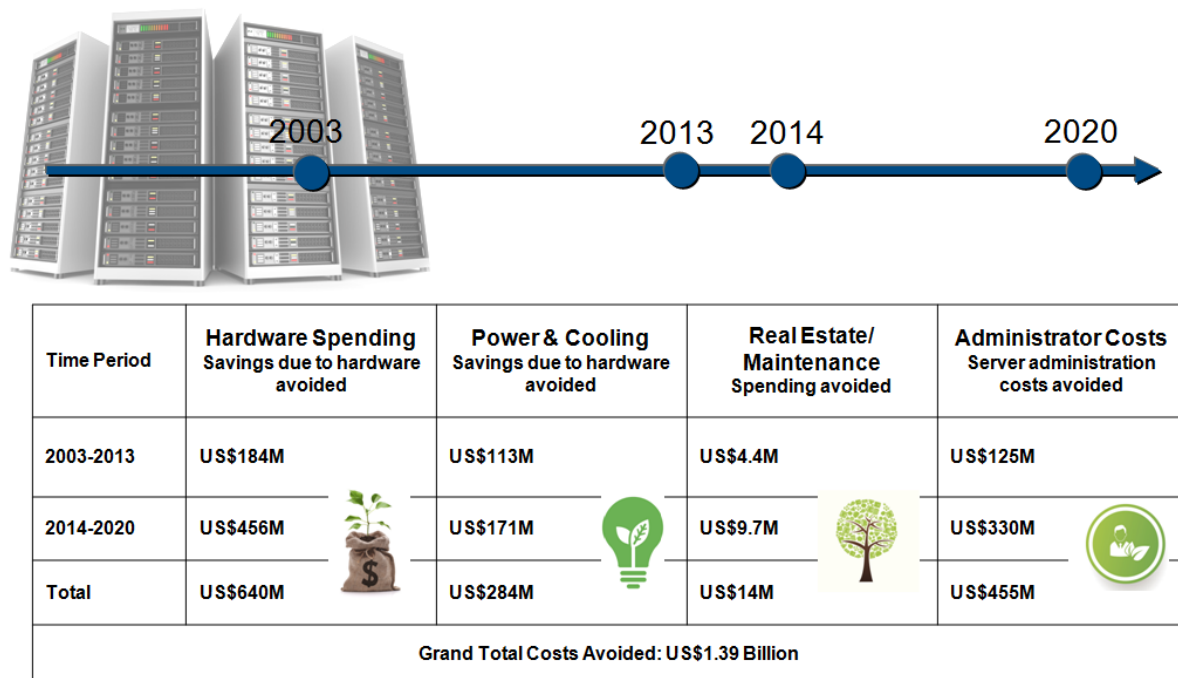
## Datacenter Economies in Thailand

- The 2013 Server Economies Index details much of the methodology that was used to identify the fiscal values below, and since this has not changed, there is no need to replicate it here.
- The 2014 model does take into account how server virtualization has impacted the storage and networking markets. In the storage environment, there is an assumption that virtualization has driven greater efficiency, in terms of deduplication of similar server images, although it has also resulted in an increase in bandwidth and ports required for the virtualized hardware environment. So while the model shows savings across the three main technologies, by far the biggest saving is still within the server footprint.
- As more of the SDDC technologies become adopted, IDC would expect to see the savings in storage and networking begin to increase exponentially, making this economic impact number below still quite a conservative estimate.

Based on IDC's hypothetical modeled data for Thailand, the IDC Datacenter Economies Index estimates the positive economic impact that server virtualization is likely to have by the year 2020 at about US\$1.39 billion (see Figure 1).

**Figure 1**

A Hypothetical View of the Impact of Virtualization in Thailand (2003-2020)



Source: IDC Datacenter Economies Index 2014, Sponsored by VMware

The potential economic impact of US\$1.39 billion for Thailand comprises savings in a few key areas:

- **US\$640 million in hardware spending savings due to servers avoided.** Hardware spending refers to the customer revenue generated from the sale of physical hardware.

- **US\$284 million in power and cooling savings due to servers avoided.** This refers to cost of energy to power and cool a physical hardware in the datacenter.
- **US\$14 million in real estate and maintenance fees avoided.** This refers to the land or construction and maintenance cost associated in housing a physical hardware.
- **US\$455 million in hardware admin costs avoided.** This refers to hardware admin costs avoided and includes IDC's estimate of the cost of people and overheads needed to manage each physical hardware component.

Clearly, when creating a hypothetical view of an alternate universe, there are multiple variables that can be taken into consideration. IDC has based as much of these data points on existing established data as possible and at the same time has given some consideration to any likely changes in the industry and markets that would impact a purely statistical model.

*Note: The overall regional data is available in the IDC White Paper, Empowering Organizations in a Software Defined World, sponsored by VMware (#AP14993X).*

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