

## FlexNet Operations Update

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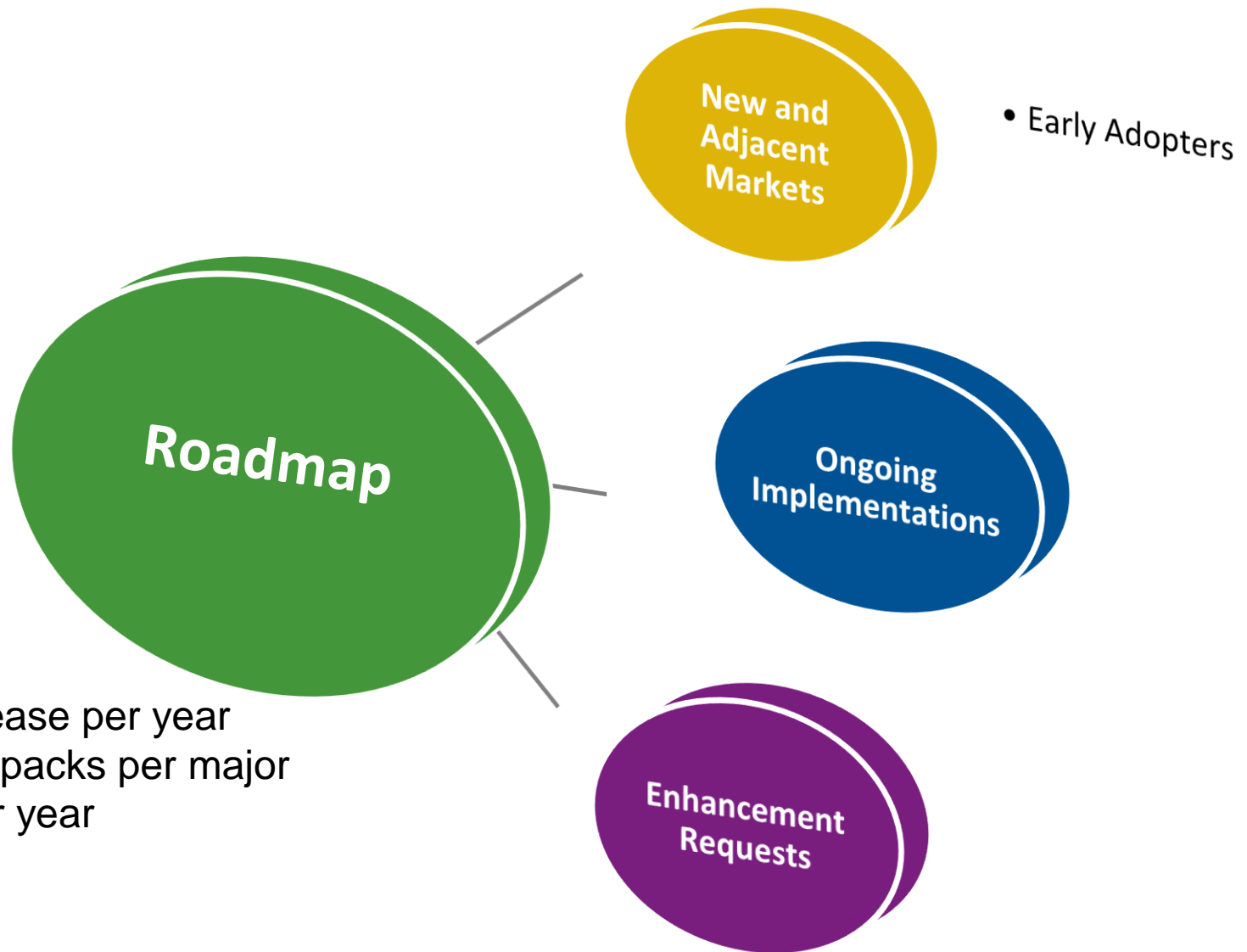
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# Agenda

- Requirements Process
- Roadmap Themes
- Recent & Upcoming Releases
- Roadmap
- Your Feedback
- Next Steps

# Requirements Process



- 1 major release per year
- 2-3 service packs per major release per year

# 2011-12 Themes

- Software Vendors
  - Protect and monetize Cloud-based products including Software-as-a-Service
- Intelligent Device Manufacturers
  - Protect and monetize hardware products through innovative business models
  - Automate device lifecycle processes
- Common Themes
  - Improve usability for admin and portal users
  - Enhance reporting
  - Security initiative

# FlexNet Operations 12.8 Overview – August 31, 2011 GA

## Business Challenges

Restrict visibility of entitlements and fulfillments for end users based on product categories

Monetize software in Amazon EC2 using existing and new license models

Monetize software in virtual environments

Transforming physical hardware to virtual appliances – Support business models based on virtual appliances

Streamline additional device lifecycle management processes

## FlexNet Operations 12.8

Filter entitlements and fulfillments based on product categories

Configure & enforce Amazon EC2 license models. *Note: Available only for FlexNet Publisher certificate-style licenses currently.*

Configure & enforce virtualization-aware FlexNet Publisher-TS license models for VMware and Hyper-V. *Note: FlexNet Publisher certificate-style licenses have had this since 2010.*

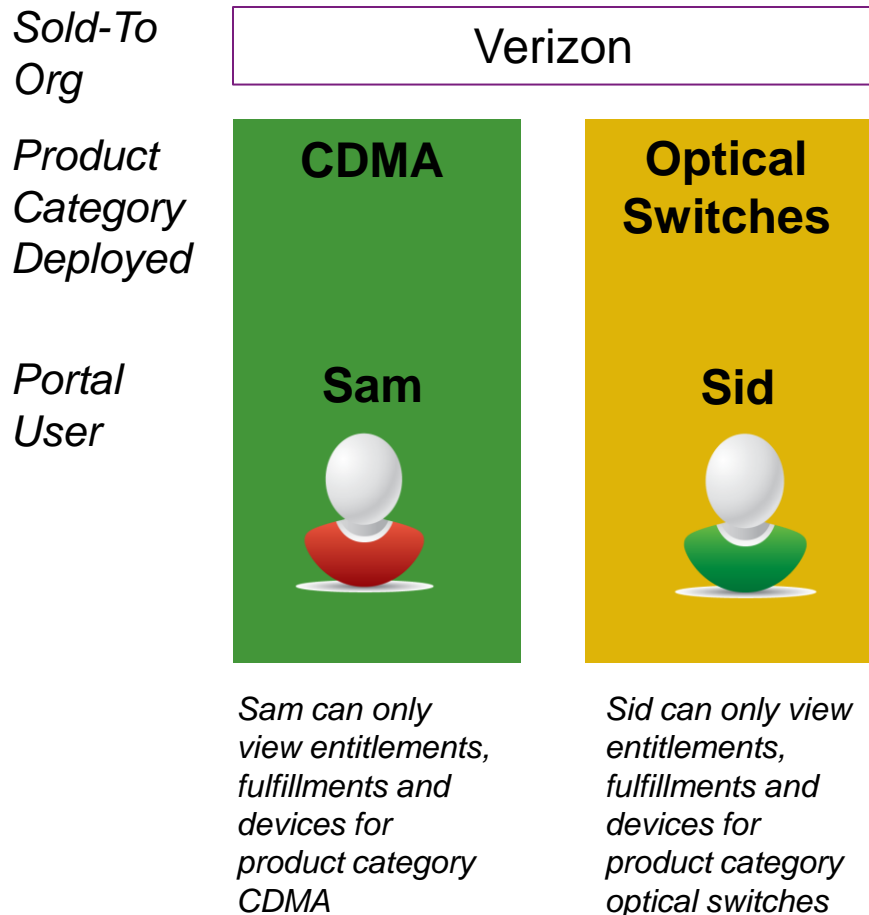
Configure & enforce virtualization-aware license models to support virtual appliances

Pluggable business logic for manufacturer-specific workflows  
Web services for device moves

PLUS: New platforms; customer-specific enhancements

# Filter Entitlements and Fulfillments Based on Product Categories in Self-service Portal

## EXAMPLE



## Features

- Assign one or more product categories to portal users
- Portal user can view or edit entitlements and fulfillments that pertain to products from his/her assigned categories
- Web services to assign or retrieve product categories for users

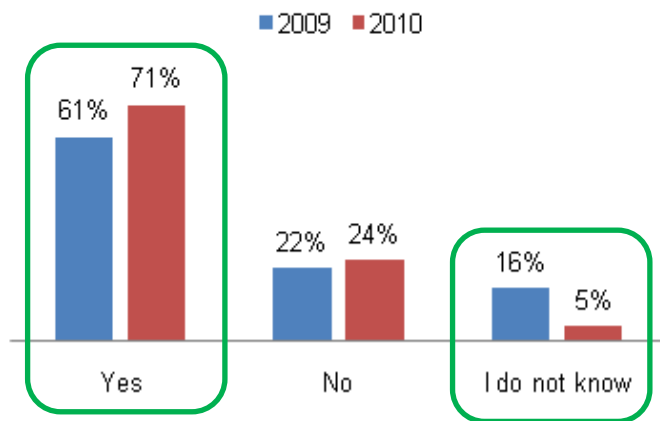
## Benefits

- Allow large end customers to streamline and segment management of entitlements and fulfillments based on product category expertise of users

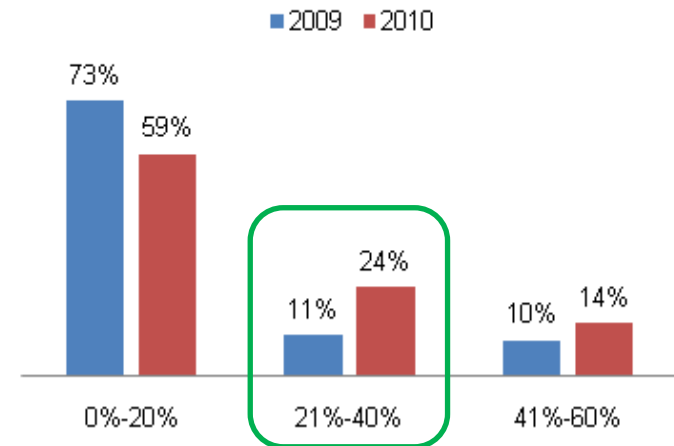


# Virtualization Is Nearly Ubiquitous

Do you believe your customers are running your applications in a virtualized environment?



If YES, what is your estimate (%) of customers doing so?



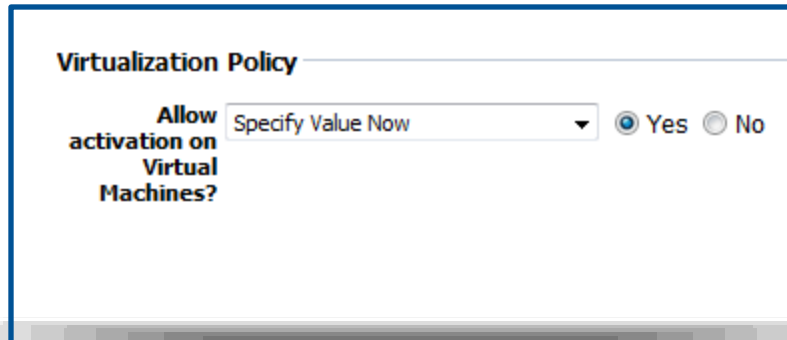
**More software producers think virtualization usage grew...very few are in doubt anymore**

Source: Flexera Software Virtualization and Cloud Computing Business Model Trends Survey, June 2010

# Virtualization-aware Trusted Storage License Models

Note: FlexNet Publisher Certificate Style has been supporting VMware and Hyper-V based models since 2010

## Set virtualization policy for license model



The screenshot shows a configuration window titled "Virtualization Policy". It contains a section "Allow activation on Virtual Machines?" with a dropdown menu set to "Specify Value Now" and two radio buttons: "Yes" (selected) and "No".

## Configure binding type to include VM UUID



The screenshot shows the "package products" configuration window, specifically the "Create a Transaction Key" section. It includes fields for "Name", "Description", "Publisher ID" (set to "256-demo"), "Transaction Key Seeds", and "Binding Type" (set to "Virtualization-aware Fingerprint"). A "Do you want to use Anchoring?" section is at the bottom with the "Yes" radio button selected.

## Features

- **Prerequisite: FlexNet Publisher 11.10 with Activation v2**
- Configure **trials** to be allowed/denied in virtual environments
- Configure **license model policy** to allow (or deny) activation of standalone products or license servers in virtualized environments
- Standalone software and license servers can be bound to a fingerprint that includes the virtual machine's UUID
- View activation requests denied due to virtualization policy in activation history
- Supported on VMware and Hyper-V

## Benefits

- Allow software producers to prevent revenue leak for products in a virtual environment

# Setting Up Virtualization-aware Trusted Storage Licensing

1. Configure the virtualization policy for the license model
2. Create a virtualization-aware transaction key: this specifies if virtualization-aware binding should be used on VMware and Hyper-V
3. Associate the transaction key with the product
4. Map license model to product (nothing new in this step)

# What Are Virtual Appliances in the IDM Market?

## VIRTUAL APPLIANCES

A virtual appliance is a software stack packaged as a virtual machine image.

The software stack replaces a physical device.

As a result, it can be:

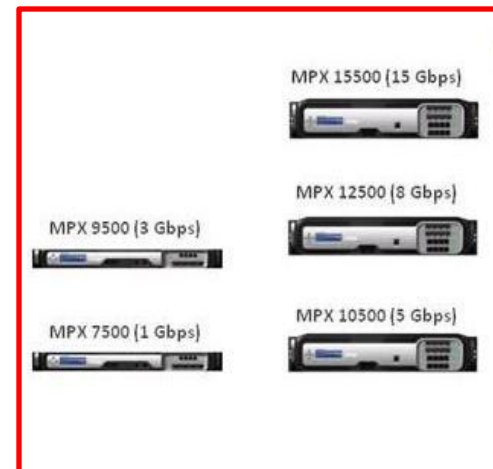
- Deployed on off-the-shelf hardware
- Upgraded for capability or capacity changes
- Consolidated using virtualization technologies

## EXAMPLE

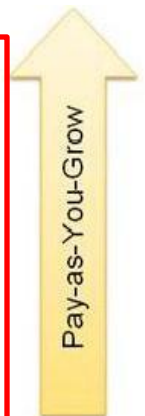
Virtual Appliances offer same functionality as physical devices



**Virtual Appliances**



**Physical Appliances**



Trend: 500+ virtual appliances in VMware's marketplace – also available as physical devices

# Support Virtual Appliance-based Business Models

package products - license models

**Set up Policies**

Name: Copy\_EC\_VM\_ENT

**License Lifecycle Policies**

Number of Extra Activations: Ignore Policy

How many extra seats (or activations) do you want to enable for each entitlement? Enter that value here.

**Virtualization Policy**

Allow activation on Virtual Machines? Specify Value At Entitlement Time

If you want to allow activations on a Virtual Machine click Yes, otherwise click No.

manage devices

**Create a Test Device**

Device ID: Cli\_New2

Alias:

Type: FLX\_CLIENT

ID Type: VM UUID

Publisher Identity: PID1

Status: Test

Description:

## Features

- Prerequisite: FlexNet Embedded 4.1
- Configure license model policy to allow (or deny) provisioning of devices or license servers in virtualized environments
- Devices and license servers can be bound to virtual machine UUID
- Search for devices based on:
  - Virtual vs. physical device
  - Brand of virtualization technology

## Benefits

- Support business models based on virtual appliances

# Search for Virtual Appliances by Virtualization Brand

devices advanced search

Device ID  Starts With ▾

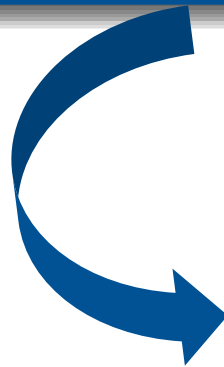
Alias  Starts With ▾

Machine Type  Virtual ▾

Virtual Machine Name  Starts With ▾

Status  ▾

Sold To  Starts With ▾



Devices

Clients Servers Served Clients

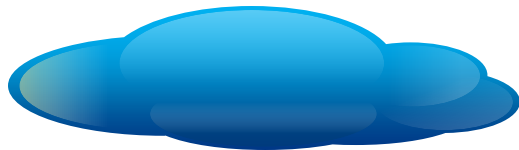
Add ▾ View ▾ Download Pre-Built License Change State ▾ Generate License Move Delete

Status	Device ID	Alias	Type	Sold To	Pre-Built Product	Add Ons
<input type="checkbox"/>	Client_VM_ENT1 Type: String	FLX_CLIENT	Customer1 Type: End Customer			ACT_Virt_Policy.. ASuit Requested Copies: 17 Consumed Copies: 17
<input type="checkbox"/>	Mukesh_Virt_Pol.. Type: String	FLX_CLIENT	Customer1 Type: End Customer			ACT_Parent_Yes APR1 Requested Copies: 12 Consumed Copies: 12
<input type="checkbox"/>	Test_Device Type: String	FLX_CLIENT	Customer1 Type: End Customer			Test_ACT1 APR1 Requested Copies: 9 Consumed Copies: 9 Test_ACT2 APR2 Requested Copies: 9 Consumed Copies: 9 Test_ACT3 ASuit Requested Copies: 9 Consumed Copies: 9
<input type="checkbox"/>	Cl3 Type: VM UUID	FLX_CLIENT	Ness1234 Type: End Customer			EE1 FNE_P1 Requested Copies: 4 Consumed Copies: 4

# Usage Summary to Detect Possible Over-licensing in Virtual Appliance Business Models

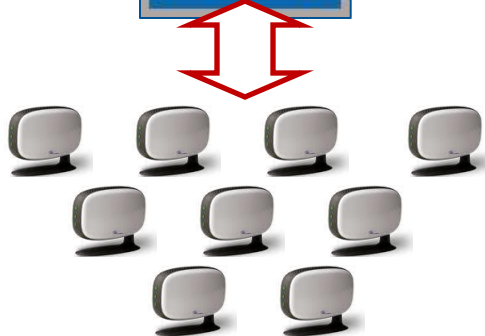
Note: Usage Summary has been available since FlexNet Operations 12.7.0.2 (March 2011)

**Manufacturer**



**Service Provider**

**License Server**



Manufacturer can view latest summary of usage

manage devices

**Sold To:** Ness1234

**Usage Summary Time:** 08/08/2011 01:02 PM

Search For

**Usage Summary**

Show Line Items:  Where Units Used > Units Provisioned  Where Units Used > Units Ordered  All

Entitlement Id	Activation Id	Product	Units Ordered	Units Provisioned	Units Used
ENT123445	EE1	FNE_P1 Ver 1.0, Qty/Copy	60	2	1
ENT1	E1	FNE_P1 Ver 1.0, Qty/Copy	58	4	1
ENT_12thJuly	A5	FNE_Suite1 Ver 1.0, Qty/Copy	60	2	1

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Total number of rows 3

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# Streamlining Additional Device Lifecycle Processes

- New web services for device moves and host transfers
- Pluggable business logic to invoke manufacturer-specific workflows
  - Framework for a manufacturer to insert plug-ins into FlexNet Operations that get invoked before an add-on is mapped to a device or when activation requests are received. Examples of workflows:
    - Ability to deny add-on changes based on user role
    - Look up warranty status of device before mapping add-on to device
    - Change number of units of add-ons from callout, including complete removal.
    - Allow reset of sold-to organization of device to allow rights IDs from a new sold-to to replace removed add-ons
    - Allow override of various parameters that control license generation, either per add-on or for all. Parameters that can be overridden include:
      - inclusion of start date and issued date properties
      - value of start date, expiration date, duration
      - number of copies
      - license model
      - license model attribute values
      - customer host attribute values
      - exclude features

# Latest 64-bit Platforms Supported

For FlexNet Operations Server:

- Microsoft Windows 2000 Professional SP4
- Microsoft Windows XP Professional Edition, SP2
- Microsoft Windows 2003 Server (32-bit and 64-bit)
- Microsoft Windows Server 2008 (32-bit and 64-bit)
- Red Hat Enterprise Linux 3, 4, or 5 (32-bit and 64-bit)
- Solaris 10
- VMware ESX Server 4.1

Databases:

- Oracle 10g or 11g Enterprise, Express or Standard Edition
- SQL Server 2005 or 2008 Enterprise, Express or Standard Edition

Web Browsers

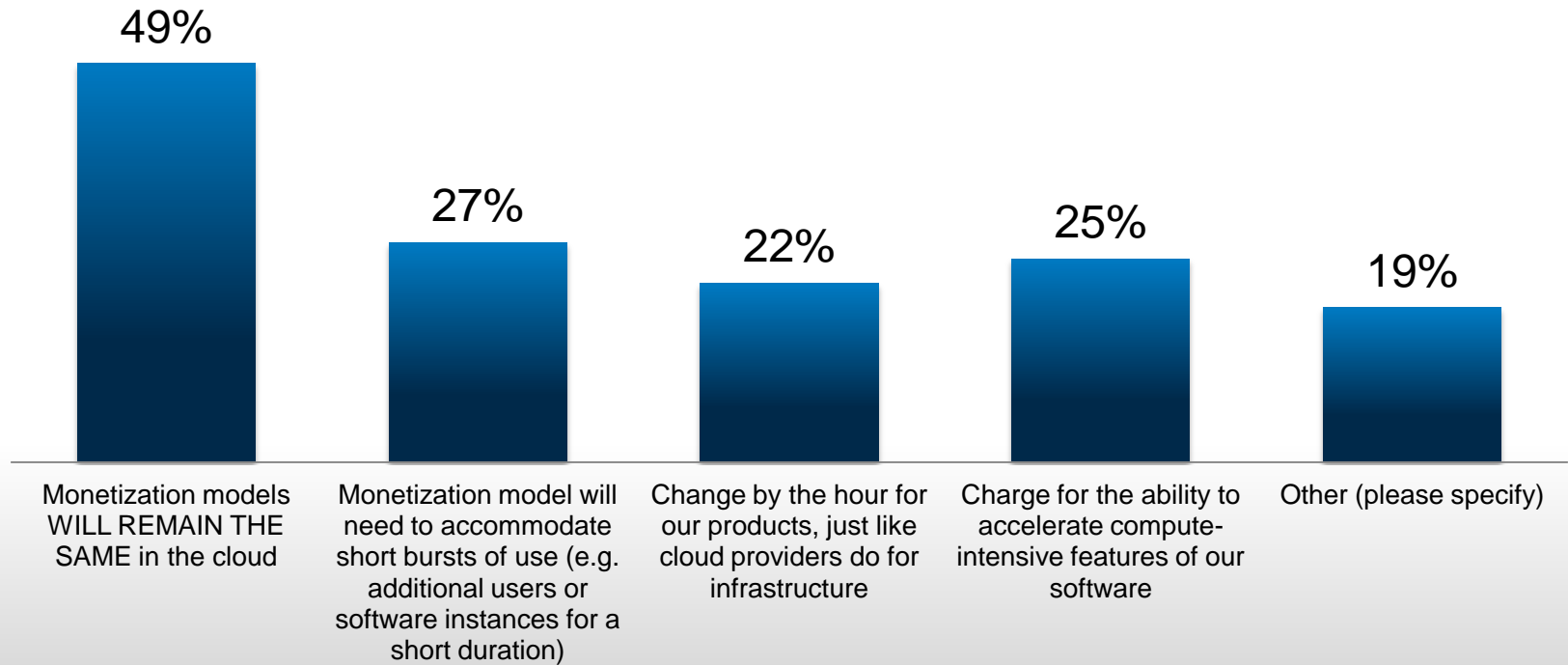
- Microsoft Internet Explorer 6 or later
- Mozilla Firefox 1.5 or later

Note: FlexNet Operations is now based on Java 6. Requires custom code to be recompiled using Java 6.

# Other Enhancements

- Allow merging FlexNet Operations organizations when target and source organization include same Host IDs
- Fixed merging organizations when users belong to source and target organizations
- Download License file option should use Custom FileName Generator in Custom Technologies if present
- Ability when doing license returns to support multiple selections
- Reinstall / New Activation using activateShortCode operation
- Add a license string substitution macro for soldTo name
- IOC-000086427 Access to product category attributes using public API
- IOC-000085937 Support for adding multiple organizations for LDAP users
- IOB-000060027 FlexNet Operations LDAP Groups / Change Organization

# Four Monetization Strategies for Software in the Cloud

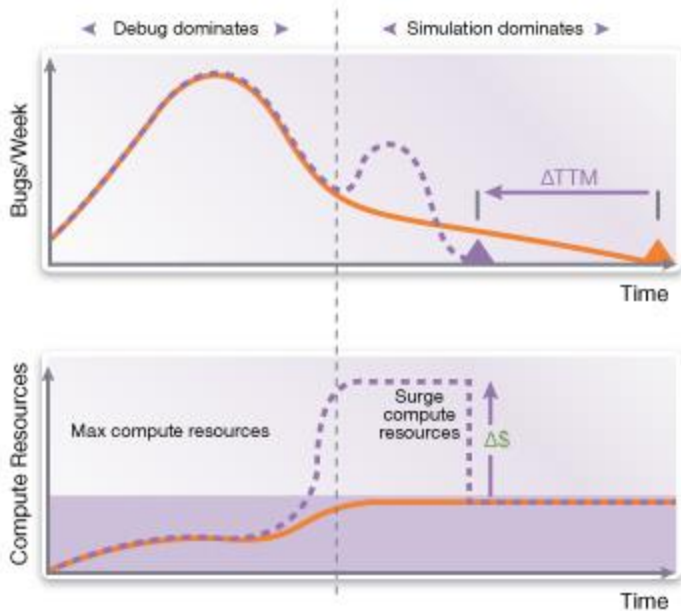


Source: Flexera Software Virtualization and Cloud Computing Business Model Trends Survey, June 2010

# Example: Synopsys Verification-on-Demand Solution on Amazon EC2



provides the flexibility to add compute resources to meet surge verification demands, as well as the flexibility to remove resources as verification demand drops



*“Today, the vast majority of customers have access to less than 100 simulation compute slots per day, and with our new VCS cloud offering, Synopsys can multiply this basic hardware/software resource with on-demand surge capacity. Thus, for example, an 8.5 day verification regression task that would cause a 7-day schedule miss could be brought back on track by purchasing a 5x surge of on-demand VCS cloud resources.”*

**“What Cloud Computing Offers the Electronic Design Community”, David Hsu, Director, Solutions Marketing, Synopsys, Inc., EE Times June 2011**

Source: <http://www.synopsys.com/Solutions/cloudcomputing/Pages/default.aspx>

# Amazon EC2 License Models

Available only for FlexNet Publisher–Certificate licenses currently

## License server based license models

The screenshot shows the 'Host ID Policies for Self-Service Portal' configuration page. At the top, there is a dropdown menu labeled 'Server host ID Policies' with the value 'Specify Value Now'. Below this is a blue text box explaining that this allows restricting server types and that AMZN\_EIP hostids require FNP 11.10. The main configuration area contains several checkboxes: 'AMZN Routable EIP Address', 'AMZN Routable EIP Address with wildcards', 'LMB Ethernet', 'LMB FLEX id', 'LMB Host', 'LMB Non-routable IP Address', 'LMB Non-routable IP Address with wildcards', 'LMB Routable IP Address', and 'LMB Routable IP Address with wildcards'.

## Standalone product license models

The screenshot shows the 'Host ID Policies for Self-Service Portal' configuration page for standalone product license models. It features a dropdown menu labeled 'Nodelocked Host ID Policies' with the value 'Specify Value Now'. A blue text box explains that this allows restricting nodelocked host IDs and that AMZN\_AMI and AMZN\_IID hostids require FNP 11.10. The configuration area includes checkboxes for 'AMZN AMI Template ID', 'AMZN IID Instance ID', and 'ANY'.

## Features

- Prerequisite: FlexNet Publisher 11.10
- **“Business as usual”** Amazon EC2 business models:
  - License server –based models
    - Bind to Amazon Elastic IP address (EIP)
    - Bind to LMBind (also works for other cloud providers)
  - Standalone software locked to Amazon Instance ID
- **Bursts of Use/Pay by the Hour-**
  - Bind virtual appliances to Amazon Machine Identifier (AMID). Requires Amazon DevPay for pay by use billing.
  - For feature-level usage tracking- FlexNet Manager-EA

## Benefits

- Allow software producers to grow revenues through existing and new license models in Amazon EC2