PureSystems
Enable your applications for cloud computing with ICCT (Image Construction and Composition Tool)
Only 1 in 5 can allocate more than half their IT budget to innovation.

**Least efficient data centers**

*Use of new technology:*
- 43% first and fast technology adoption
- 1% move virtual machines to meet desired outcomes
- 21% use storage virtualization
- 3% use a storage service catalog (tiered storage)

**Results:**
- Maintaining existing infrastructure 65%

**Most efficient data centers**

*Use of new technology:*
- 86% first and fast technology adoption
- 58% move virtual machines to meet desired outcomes
- 93% use storage virtualization
- 87% use a storage service catalog (tiered storage)

**Results:**
- New projects 53%

Clients struggle to overcome barriers of time, cost and risk

Typical IT Project Time and Budget

<table>
<thead>
<tr>
<th>Phase</th>
<th>Time (days)</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify/design</td>
<td>73 - 96</td>
<td>14% - 16%</td>
</tr>
<tr>
<td>Procure</td>
<td>57 - 112</td>
<td>19% - 21%</td>
</tr>
<tr>
<td>Implement</td>
<td>74 – 93</td>
<td>12%</td>
</tr>
<tr>
<td>Configure/test</td>
<td>74 – 80</td>
<td>10% - 11%</td>
</tr>
<tr>
<td>Cluster &amp; HA</td>
<td>66 – 104</td>
<td>11% - 12%</td>
</tr>
<tr>
<td>Backup</td>
<td>44 – 108</td>
<td>10%</td>
</tr>
<tr>
<td>Tune</td>
<td>89 – 98</td>
<td>9% - 10%</td>
</tr>
<tr>
<td>Management</td>
<td>67 – 110</td>
<td>9 – 10%</td>
</tr>
</tbody>
</table>

Top Causes of Project Delays

**Hardware**

- Troubleshooting and tuning production environment: 45%
- Integration, configuration and testing of the infrastructure: 45%
- Installation, cabling and network access for the environment: 29%

**Software**

- Integration, configuration and testing of applications: 41%
- Integration, configuration and testing of middleware: 35%
- Configuration, build and deployment of applications: 34%

34% of new IT projects (US) deploy late

From a commissioned study conducted by Forrester Consulting on behalf of IBM.
IBM Systems built for cloud

IBM PureApplication & PureData Systems
20-30X faster deployment with application patterns expertise

IBM PureFlex System
Accelerate adoption of private clouds with built-in virtualization and superior automation
Types of Patterns Available

Virtual Application Patterns

- Built for the cloud environment
- Highly automated, policy based deployment
- Leverages elastic workload management services

Virtual Appliance

- Packaged for virtual environments
- Automated deployment of middleware topologies
- Traditional administration and management model

Workload Platform Services

Virtualized Middleware Services

Virtualized Infrastructure Services

Existing Software

- Standard software installation and configuration on OS
- Images created through extend/capture
- Traditional administration and management model

Value

Best TCO cloud applications

Improved TCO virtualized applications

Standard TCO existing applications

Best
Better
Good
IBM PureSystems Centre

- Optimized solutions from 100+ leading ISV partners
- Search by solution area, industry or system.
- Gain access to ISV application patterns for trial and production.

All of your existing AIX, IBM i, Linux and Windows applications will run on PureSystems

http://www-01.ibm.com/software/brandcatalog/puresystems/centre/
How to enable applications for IBM PureFlex System

IBM Virtual Appliance Factory
with Image Construction and Composition Tool

Capture once, deploy with consistency and ease

Traditional Workload Deployment Components

- Software application
- Environment Set up
- Middleware
- Operating system
- VM Config attributes

Build Base Virtual Image

Add bundles that contain product software and activators

- Application extensions
- Extensions Activator
- Software application
- Software Activator
- Middleware
- Middleware Activator

Capture

Store in Image Repository, ready to be deployed using VMControl, Flex System Manager, IBM SmartCloud Entry, etc.
Support for Multiple Cloud Providers

- IBM Smart Cloud Enterprise
- IBM Workload Deployer
- IBM PureApplication System
- IBM PureFlex System

Image Construction and Composition Tool

- Bundle Repository
- Image Repository

Bring your own hardware
Welcome to Image Construction and Composition Tool!

IBM Image Construction and Composition Tool is an application that simplifies and automates the creation of virtual images.

**Build virtual images**

**Build and manage images**
Create new images or extend existing ones. Build software stack by composing software bundles.

**Build and manage software bundles**
Software bundles are building blocks for image construction. Make your software product available for cloud environment.

**Manage ISO resources**
Import operating system distribution image (ISO). Manage existing ISO resources.

**Configure and administer the tool**

**Manage cloud providers**
Specify where to deploy a virtual machine for image construction.

**Change password**
Change application password.

**Download command line tool**
Download command line tool from the server.
**Images**

<table>
<thead>
<tr>
<th>Type search text...</th>
<th>Search</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search all these words</td>
<td></td>
</tr>
<tr>
<td>Search any of these words</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SLES11</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>The import image operation has started.; Image containing Suse Linux Enterprise Server 11.</td>
</tr>
<tr>
<td><strong>Universal ID:</strong></td>
<td>com.ibm.si.ic.SLES11</td>
</tr>
<tr>
<td><strong>Version:</strong></td>
<td>1.0.0.0</td>
</tr>
<tr>
<td><strong>Extends Image:</strong></td>
<td>1.0.0.0</td>
</tr>
<tr>
<td><strong>Image Status:</strong></td>
<td>Completed</td>
</tr>
<tr>
<td><strong>Created on:</strong></td>
<td>September 21, 2012 1:27:06 PM CEST</td>
</tr>
<tr>
<td><strong>Updated date:</strong></td>
<td>September 21, 2012 1:29:57 PM CEST</td>
</tr>
<tr>
<td><strong>Operating System:</strong></td>
<td>Type: Linux</td>
</tr>
<tr>
<td></td>
<td>Distribution: SUSE Linux Enterprise Server (SLES)</td>
</tr>
<tr>
<td></td>
<td>Version: 11</td>
</tr>
<tr>
<td></td>
<td>Activation Framework: Enablement Bundle SLES11 for KVM express</td>
</tr>
<tr>
<td><strong>Cloud Provider:</strong></td>
<td>KVM3650x</td>
</tr>
</tbody>
</table>

**Software Bundles:**

- SUSE Linux Enterprise Server (SLES) [11]
Create image

How do you want to create your image?

- Create image from an ISO image
- Create image from a running virtual machine

Proceed  Cancel
### Bundles

**Type search text...**

- **Search all these words**
- **Search any of these words**

- **Enablement Bundle RHEL6 for KVM exp...**
- **Enablement Bundle AIX6 for PowerVM ...**
- **icct-install [1.0.2.0]**
- **Enablement Bundle for VMware [1.0.0.8]**
- **Linux/AIX Enablement Bundle for IBM ...**
- **installksh [1.0.0.0]**
- **Enablement Bundle SLES11 for KVM ex...**
- **Enablement Bundle for IBM SmartClou...**
- **icct-install - Clone [1.0.1.0]**
- ** Enablement Bundle Linux for IBM SMA...**
- **icct-install [1.0.3.0]**

**moj prvi bundle**

**Files to Copy**

Files to be copied to the target machine:

<table>
<thead>
<tr>
<th>Source (URI or file name)</th>
<th>Executable</th>
</tr>
</thead>
<tbody>
<tr>
<td>None defined</td>
<td></td>
</tr>
</tbody>
</table>

**Command**

**Run Command:**

Select an executable script to run

**Run As:**

root

**Parameter Style:**

Short Space Style

**Arguments:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Label</th>
<th>Value</th>
<th>Hide Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>None defined</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A Virtual Application represents a collection of application components, behavioral policies and their relationships.

Core components of the pattern include web applications, databases, queues, connections to existing resources, business process models, batch jobs, mediations, etc.

Core policies of the pattern include high availability, SLAs, security, multi-tenancy, isolation, etc.

Initial instance = 3

WAS cluster configured with session replication
Consolidate through patterns

Virtual application patterns allow more dense:

- packing of applications in server space
  
  Due to shared services & smart placement algorithms

- allocation of applications to admins
  
  Due to improved efficiency in management
The New Era of Computing with

PureSystems

The world’s first family of expert integrated systems