

SmartDomains

CERN openlab II quarterly review
21 November 2006

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SmartDomains: What is it?

- Traditional schema

hardware





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users
apps





SmartDomains: What is it?

- Switch to virtualization with Xen
 - Modified kernel

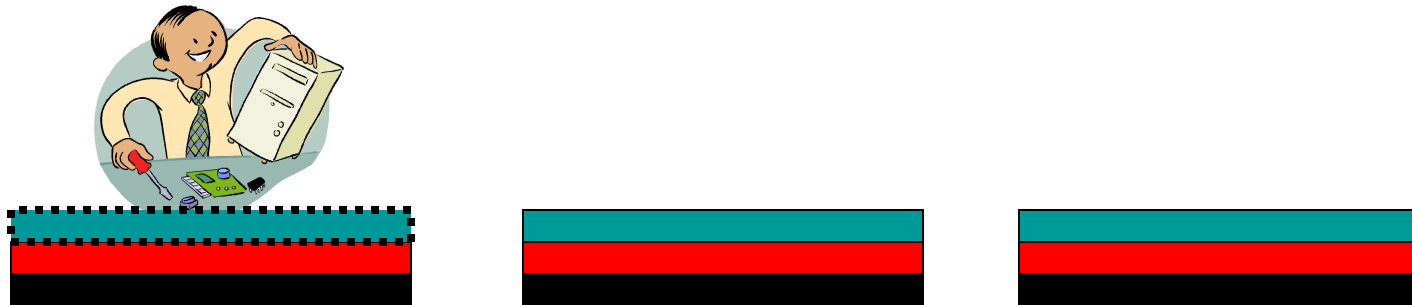


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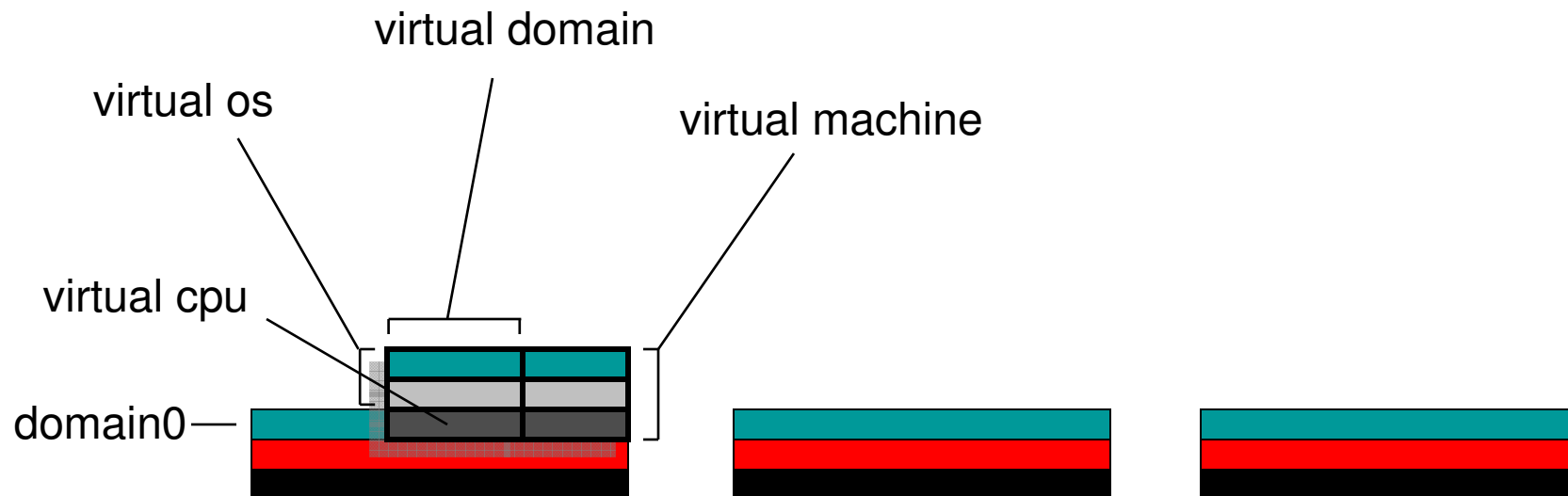


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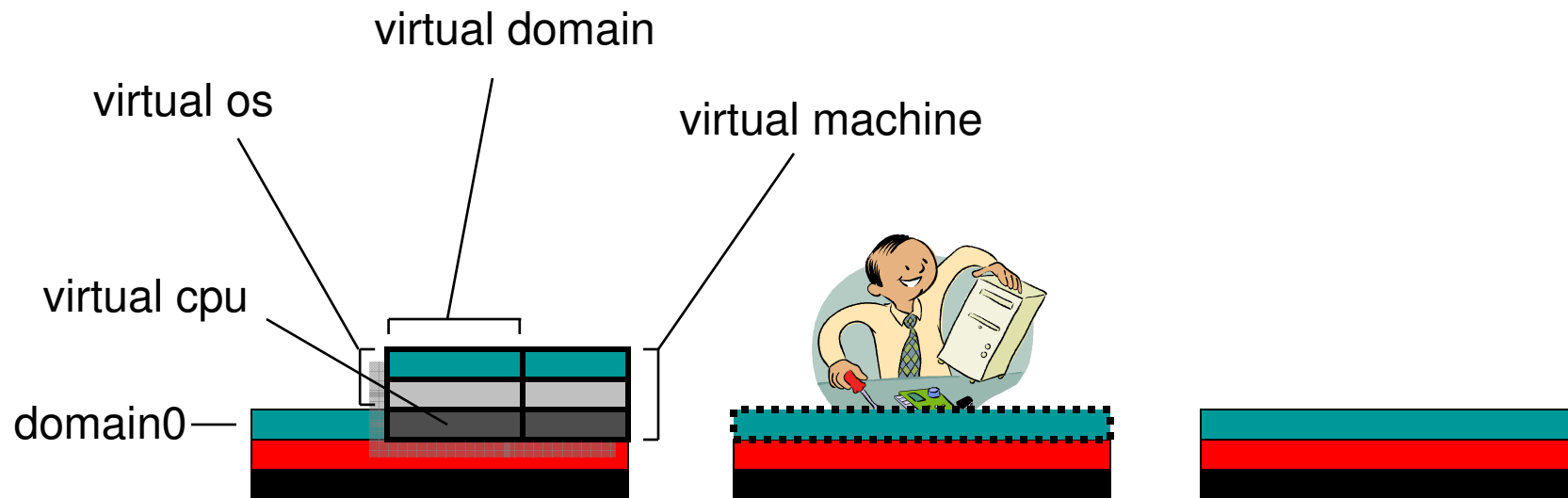
- Switch to virtualization with Xen
 - Manual setup of virtual domains



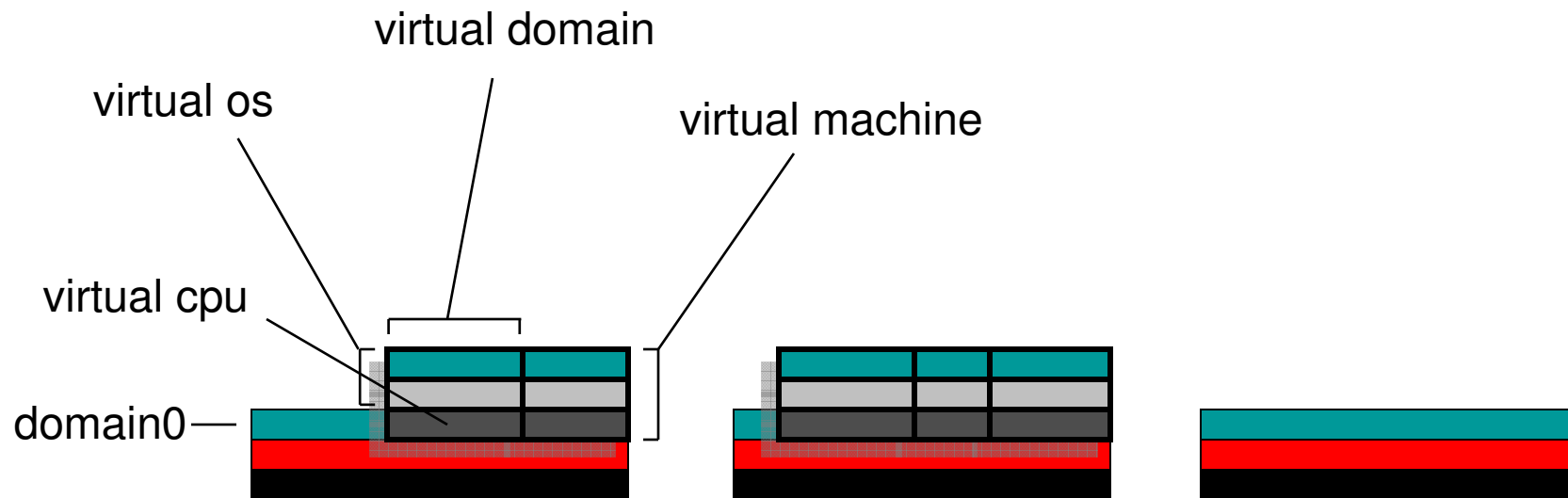
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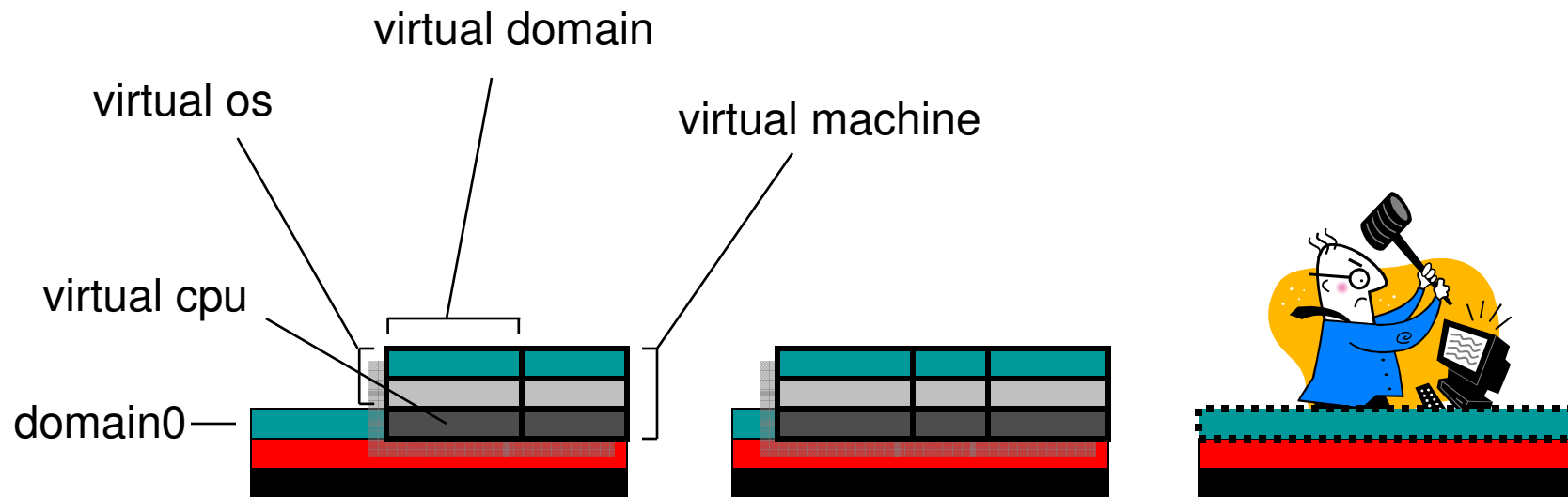


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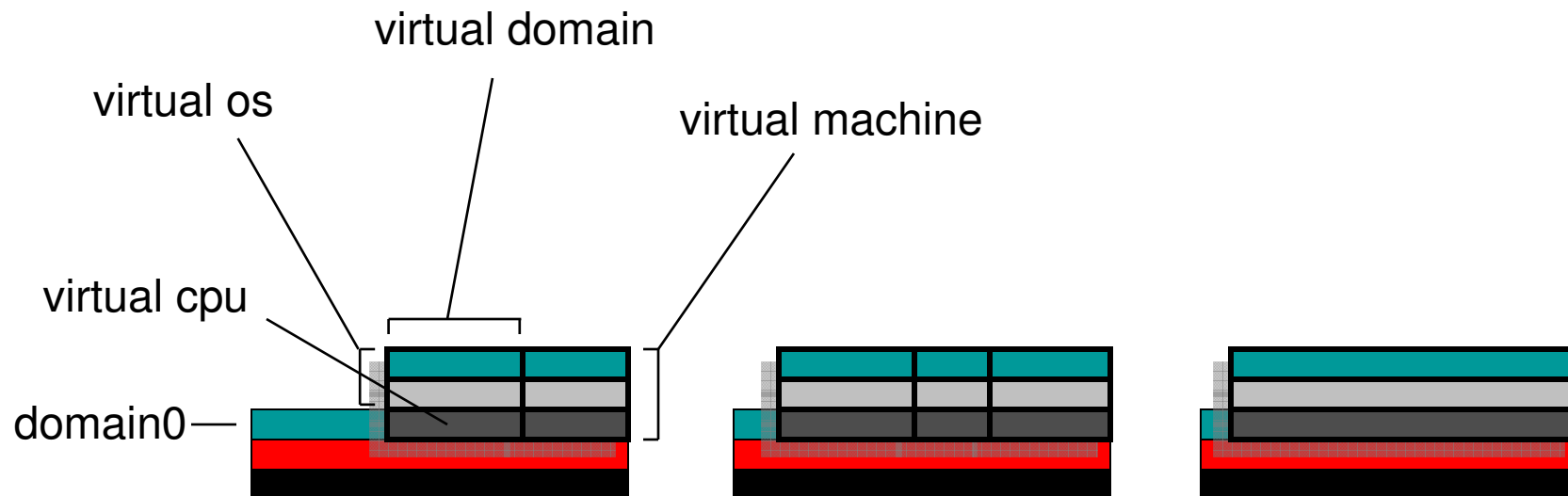


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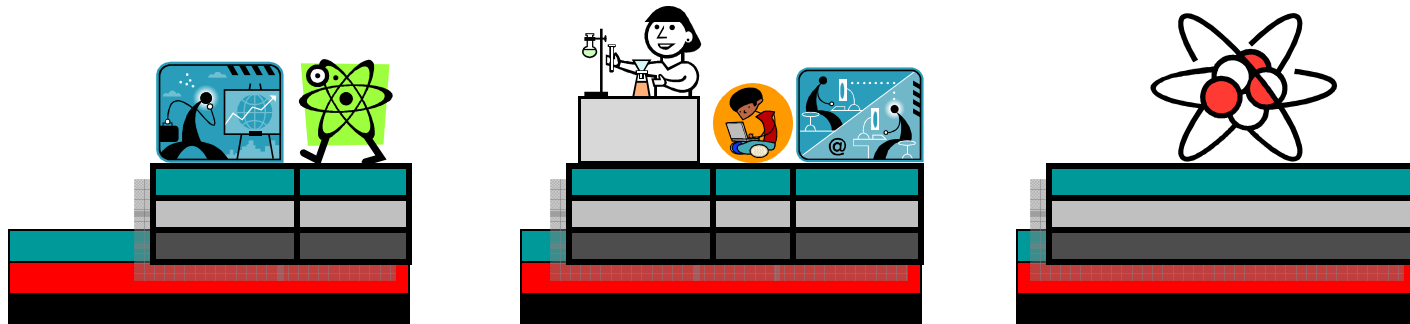


- Switch to virtualization with Xen
 - Physical servers shared in virtual domains



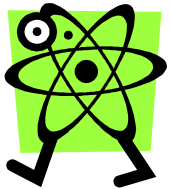
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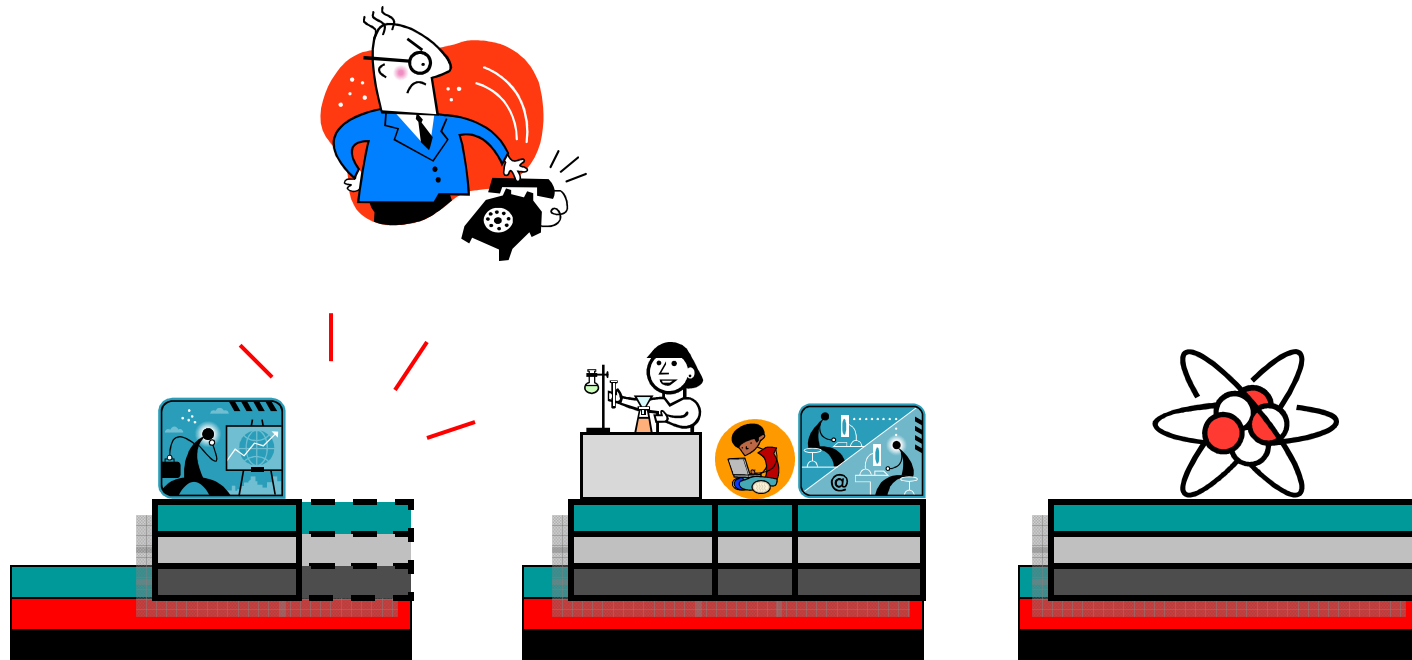
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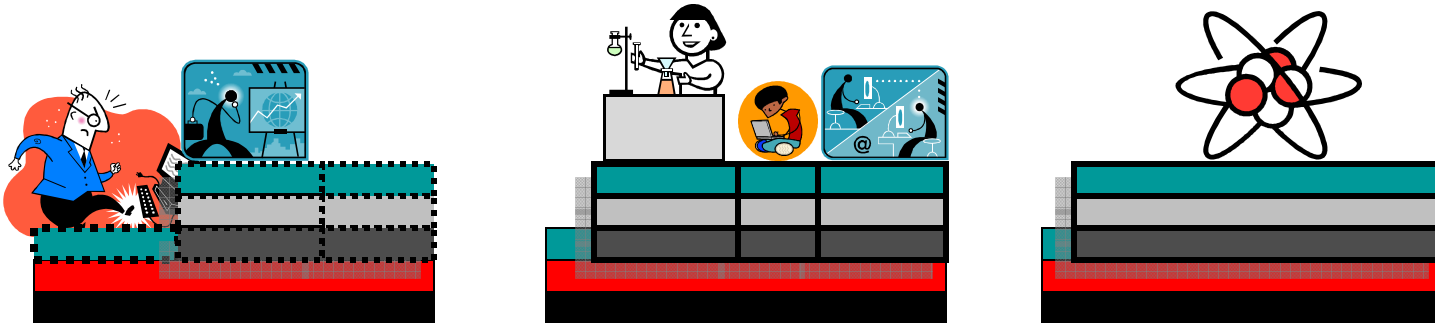
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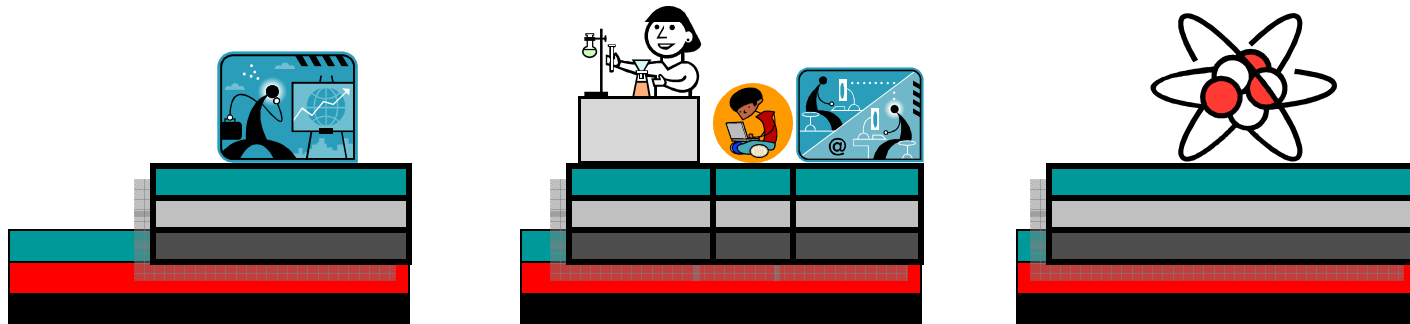
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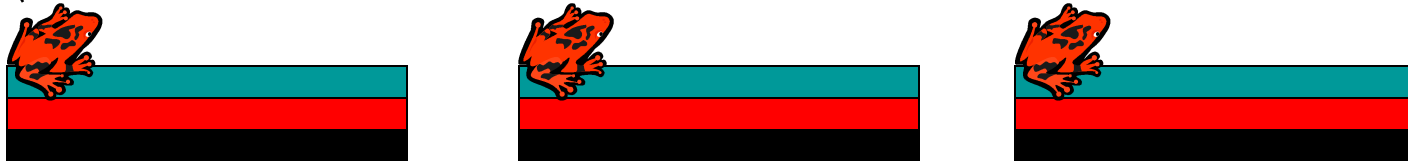
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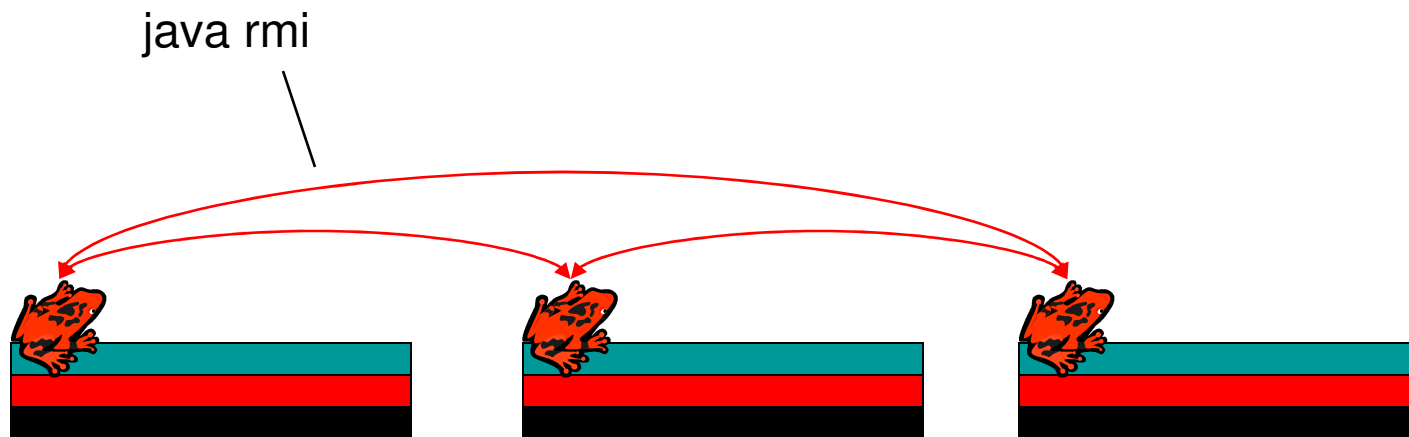


- Switch to automated virtual domains management with SmartDomains
 - Automated management with SmartFrog daemons

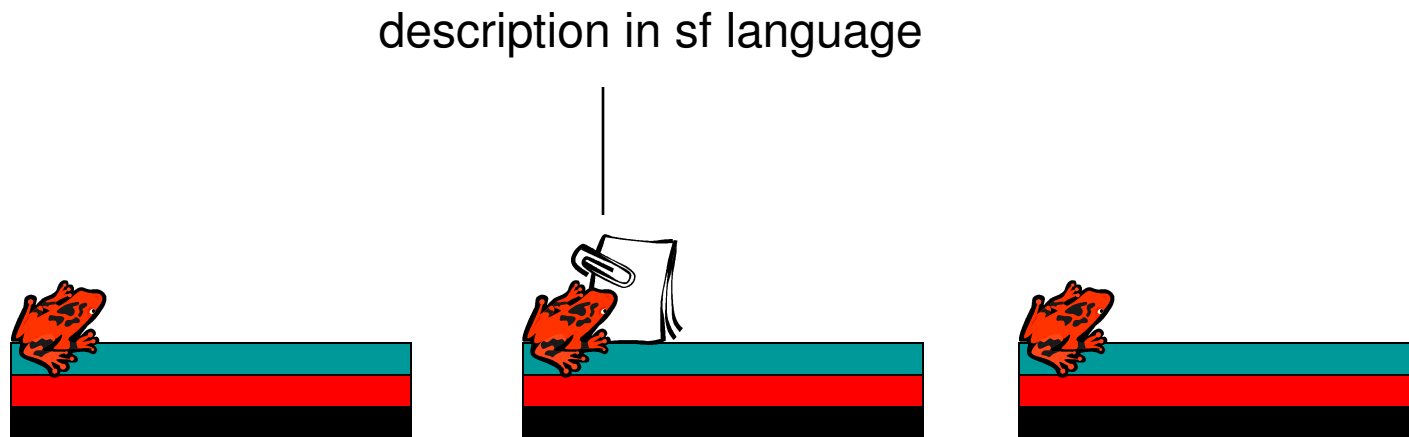
smartfrog
daemon



- Switch to automated virtual domains management with SmartDomains
 - Ubiquitous management with peer2peer communication

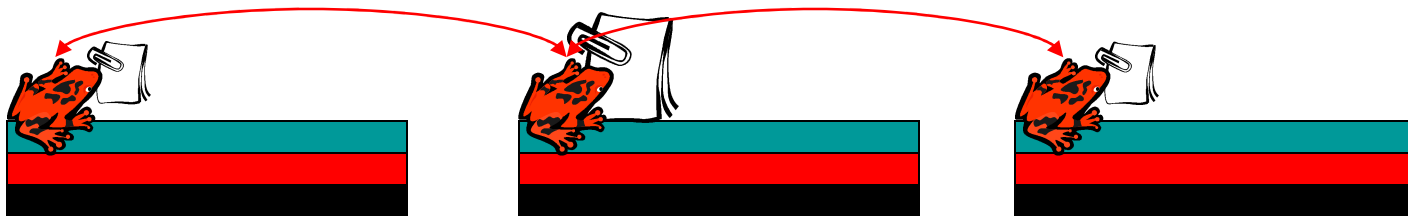


- Switch to automated virtual domains management with SmartDomains
 - Deployment



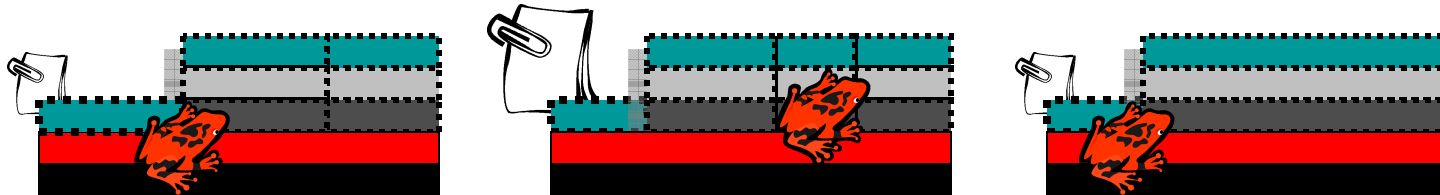
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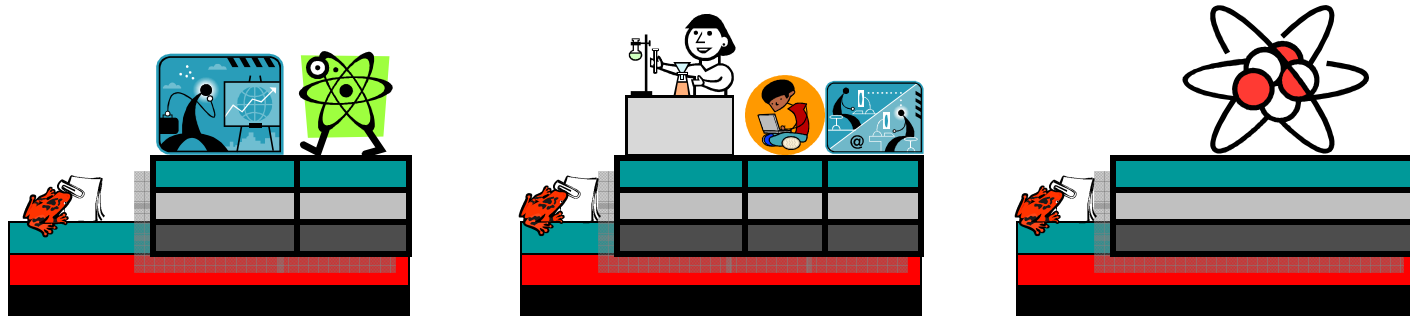
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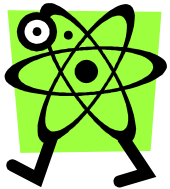
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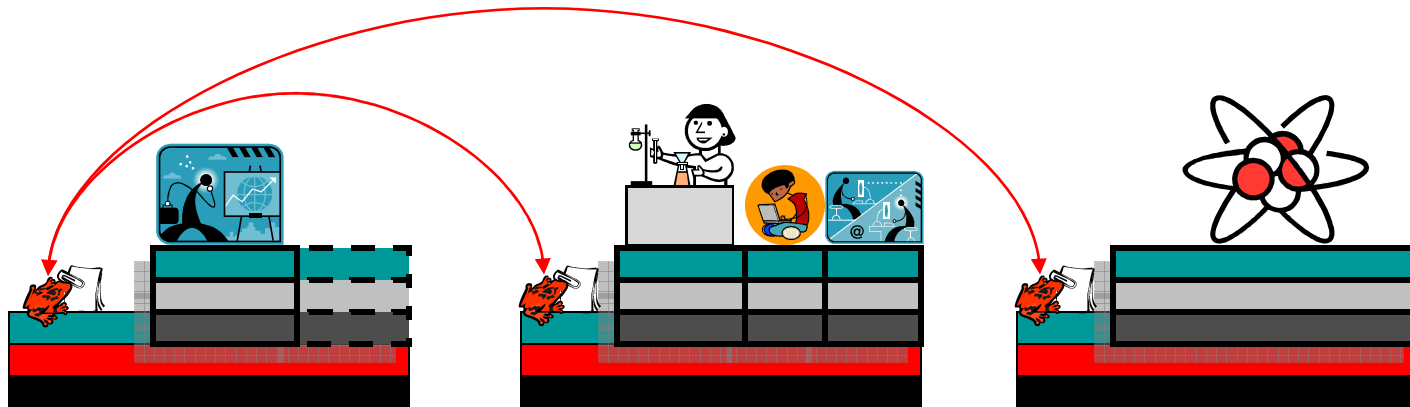
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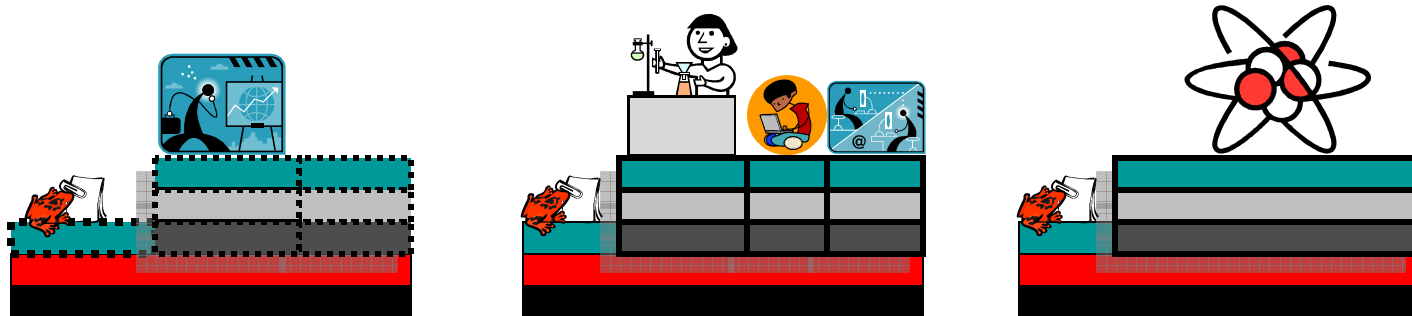
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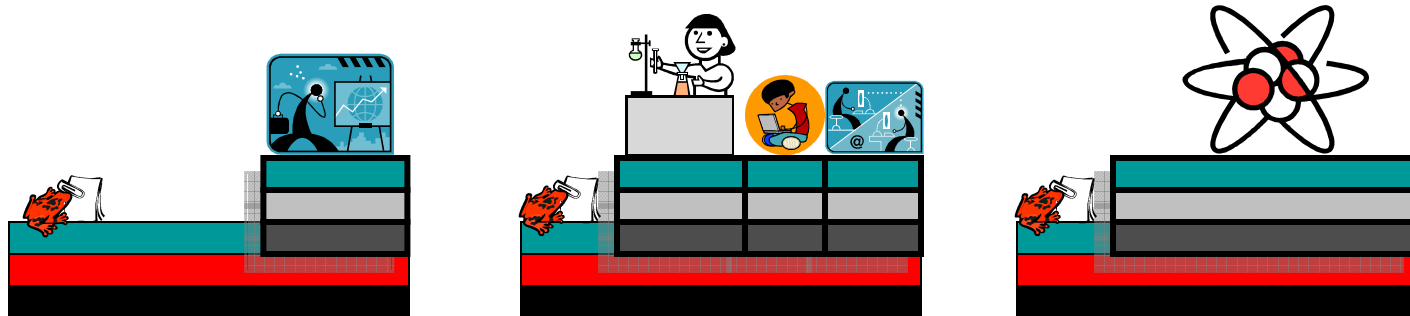
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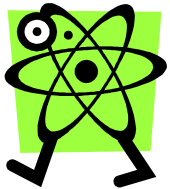
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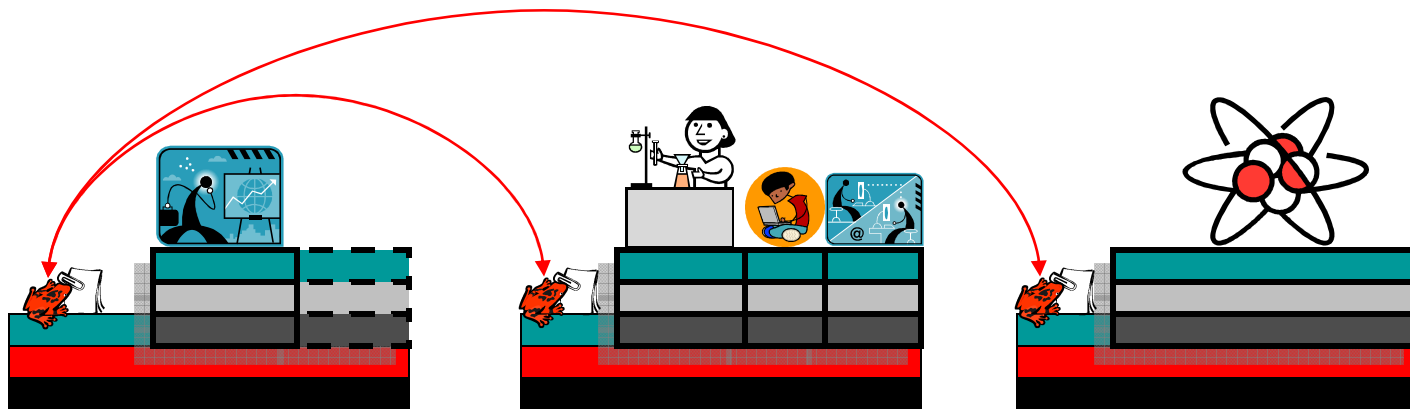
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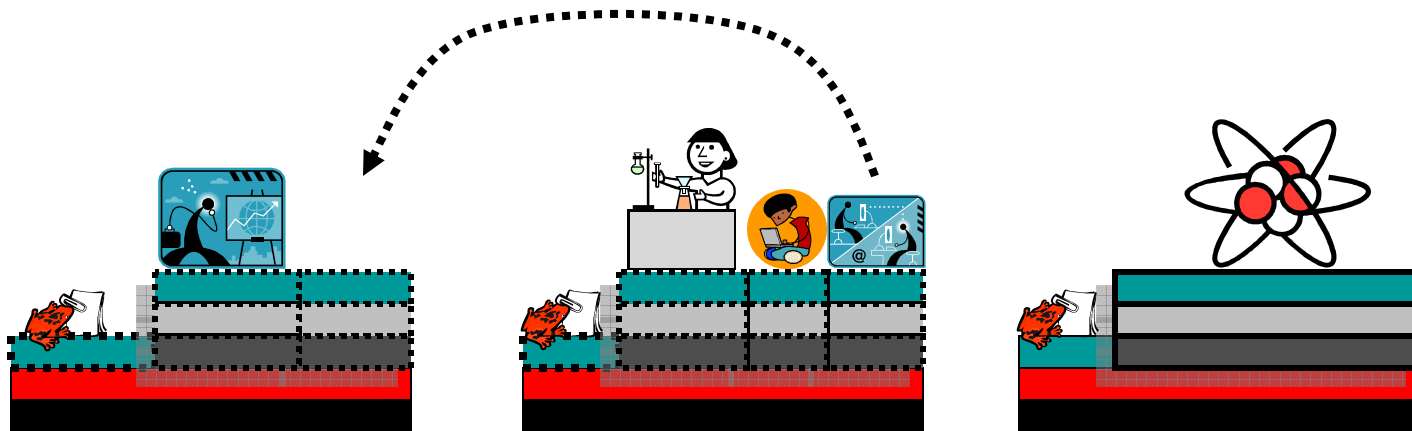
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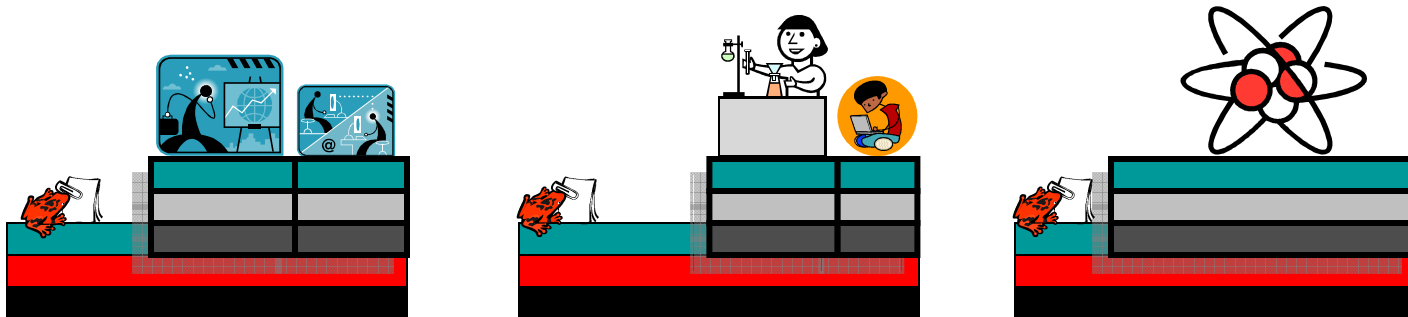
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- Starting point :
 - Convergence between HP Labs projects :
 - SmartFrog,
 - Concepts from Tycoon.
 - Need :
 - Andreas Unterkircher : launch remote VMs.
 - Tycoon-like system in the grid : manage outside a single node.

- Development :
 - Olivier Pernet as a summer student :
 - project core (July - August)
 - Still some contributions
 - Xavier Grehant :
 - prepare the way to take the best of SmartFrog (June),
 - supervise Olivier (July - August),
 - take over the development (since October),
 - Move the project to Sourceforge and make it usable.

- Yet another VM management tool ?
 - Peer2peer, Light
 - Extensible to higher-level virtual entities:
group VMs by dependencies and behaviors

- Project page
<http://sourceforge.net/projects/smartdomains/>
- Tutorial
<http://smartdomains.sourceforge.net/>