



EPOCHÉ & ESPRI

Duality of Virtualization ...

... and its impact in CC evaluations

The screenshot shows the website's navigation menu with links for 'EPOCHÉ & ESPRI', 'OUR SERVICES', 'SOLUTIONS', 'JOIN US', and 'CONTACT US'. The main banner features a globe and the text 'Your best companion to CC certification!' and 'WELCOME TO EPOCHÉ & ESPRI! Evaluation of IT security'. A search bar with a 'GO' button is present. Below the banner, there are three columns of content: a news item about IT product security evaluation, a list of services including 'CC and FIPS 140-2 training', 'Evaluation and testing', and 'Development best practices', and a 'Request a free consultation!' button. At the bottom, there are four icons with links: 'Our services', 'Solutions', 'Join us', and a circular logo for 'FIPS 140-2'.

Content



E P O C H E & E S P R I

- Introduction
 - Virtualized VS non-virtualized

- Deployment issues
 - Delivery and operation

- Evaluation issues
 - Reception and analysis

- Conclusions

Virtualized VS Non-Virtualized



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Virtualization?

Of course!

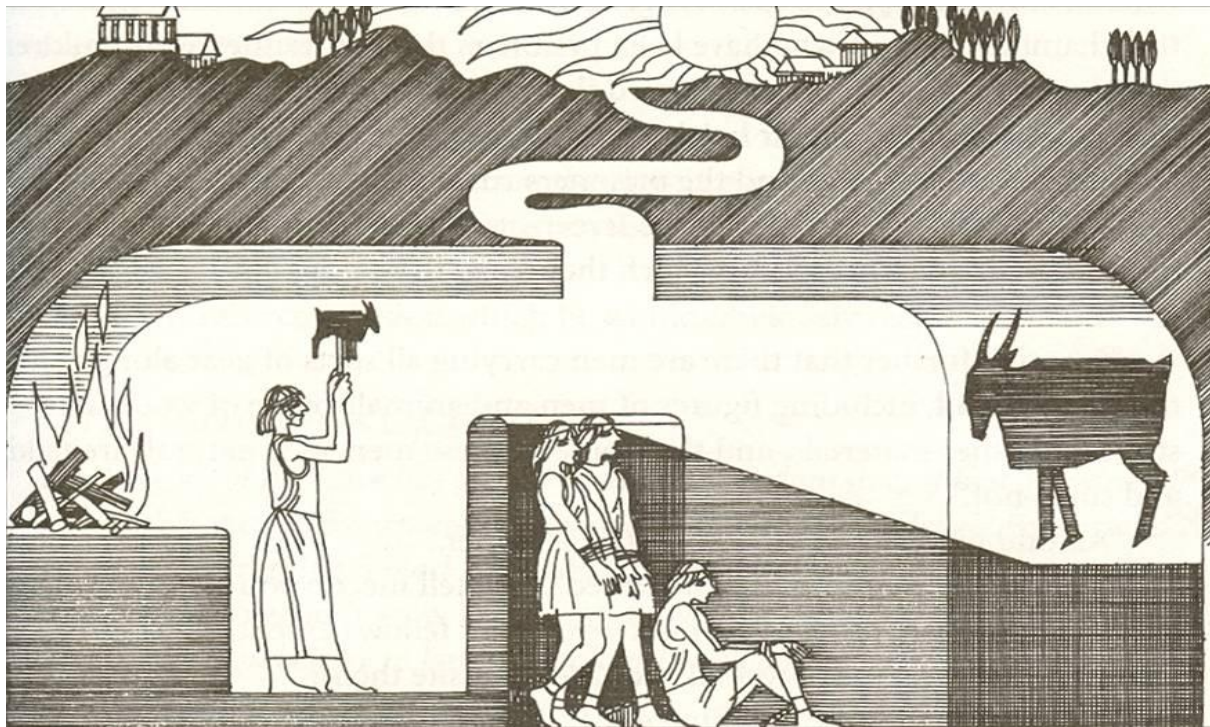


Virtualized VS Non-Virtualized



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- But
 - Environment control
 - Time response
 - Specific Hardware
 - Security

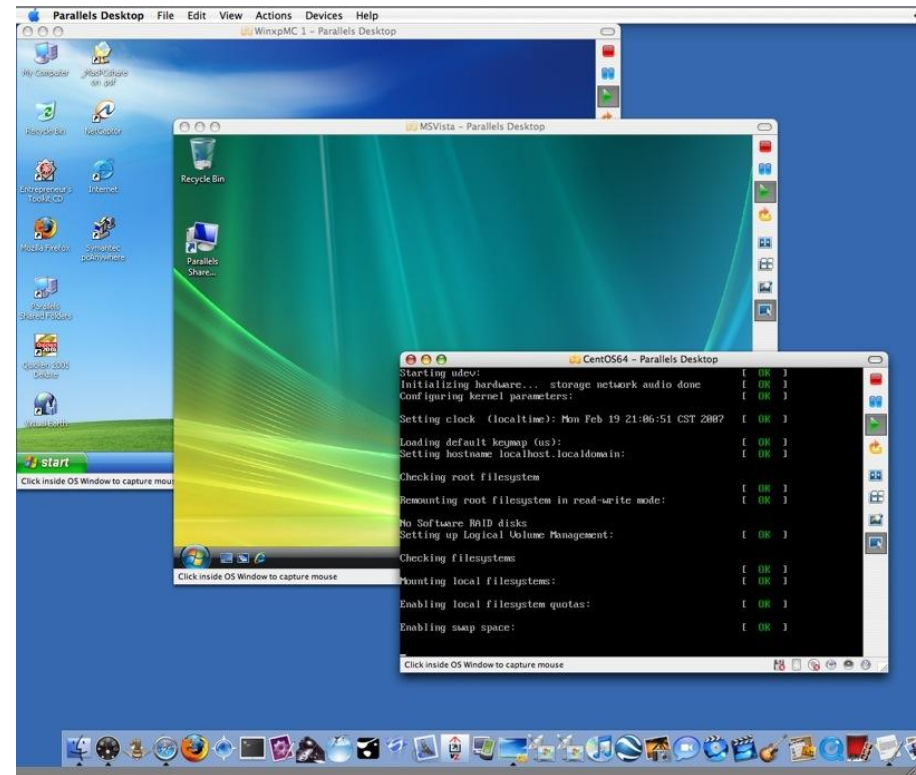


Virtualized VS Non-Virtualized



E P O C H E & E S P R I

- Virtualized product
 - Environment control
 - Isolation
 - Compatibility
 - Unknown exterior



Virtualized VS Non-Virtualized



E P O C H E & E S P R I

- Non-Virtualized product
 - Usual products
 - Environment control
 - Specific hardware



Deployment



E P O C H E & E S P R I

- Non-virtualized
 - Virtualization can make your life easier!



Delivery



Configuration



Deployment



E P O C H E & E S P R I

- Non-virtualized. Delivery
 - Usually several elements are necessary
 - Complicated
 - Expensive
 - Hard to verify

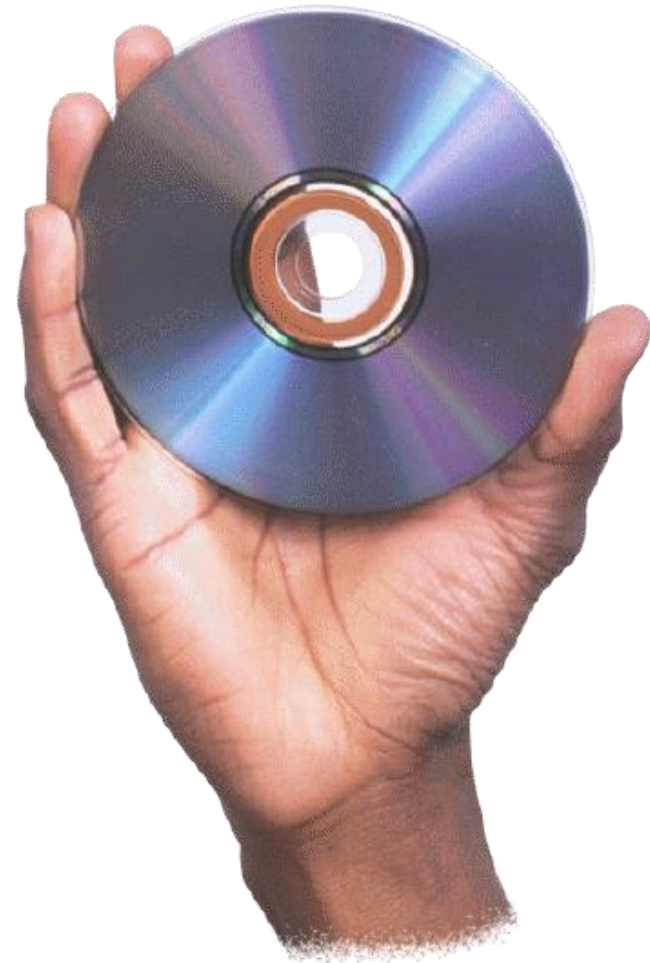


Deployment



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- Virtualized. Delivery
 - Virtual machines are handier
 - One storage device is all you need
 - Integrity check
 - Host OS limitation disappears

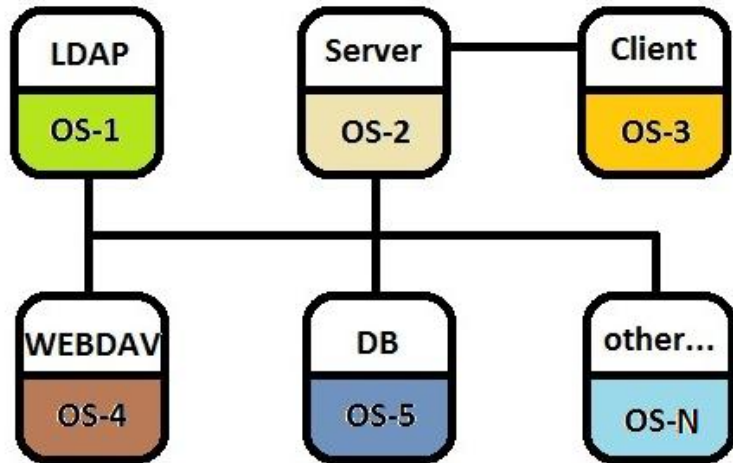


Deployment



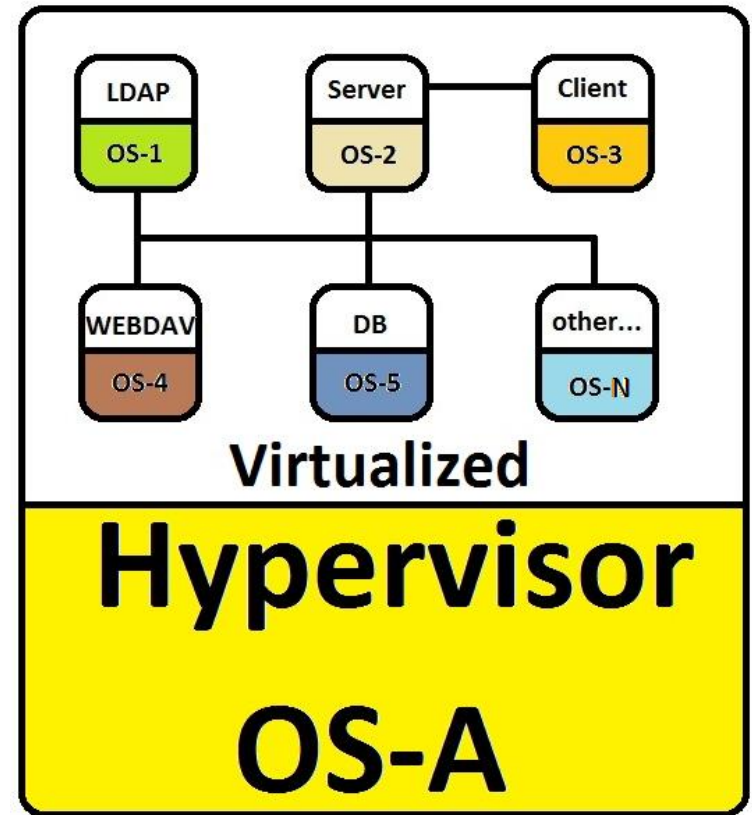
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- Configuration



Non-Virtualized

VS



Deployment

A photograph of a server room with rows of server racks. The racks are long and narrow, and they are filled with various components. The room is brightly lit, and the racks are arranged in a grid pattern. The perspective is from a low angle, looking down the length of the racks.

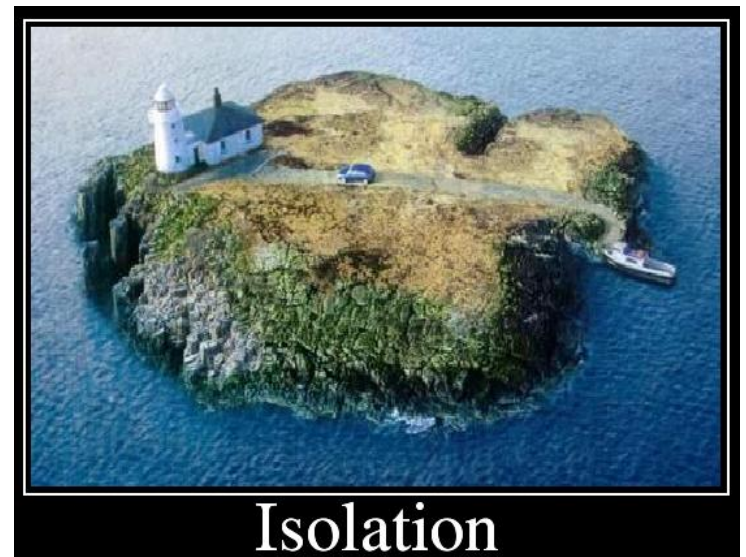
- Maintenance issues
 - Number of computers
 - Access to machines
 - Resources location

Deployment



E P O C H E & E S P R I

- Virtualized. Security
- Cons
 - Resources available
 - **Forensic analysis**
 - **Public vulnerabilities**
 - Update required!
- Pros
 - Domain separation
 - Resources control



Evaluation



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- Virtualization clearly makes our life easier!



Evaluation



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- Installation
 - Simply reception procedure
 - Storage device (e.g.)
 - Computers costs low
 - One powerful enough computer
 - No hardware specific problems
 - No installation needed
 - Load & Run



Evaluation



E P O C H E & E S P R I

- Environment configuration
 - Simple configuration procedure
 - Compliance warranty
 - Faster vendor tests repetition



Evaluation



E P O C H E & E S P R I

- Concurrency
 - Benefits
 - Computer availability
 - Organization
 - Costs saving

 - However...
 - Incompatibility between TOEs
 - Interconnection schema



Evaluation



E P O C H E & E S P R I

- Vulnerability analysis
 - Resources available
 - Controlled environment
 - Easy attack configuration
- Attack paths
 - Virtual machines
 - Hosting computers
- Public information



Evaluation



E P O C H E & E S P R I

- Sample
 - Virtualized product
 - Assets protected with AES
- Attack

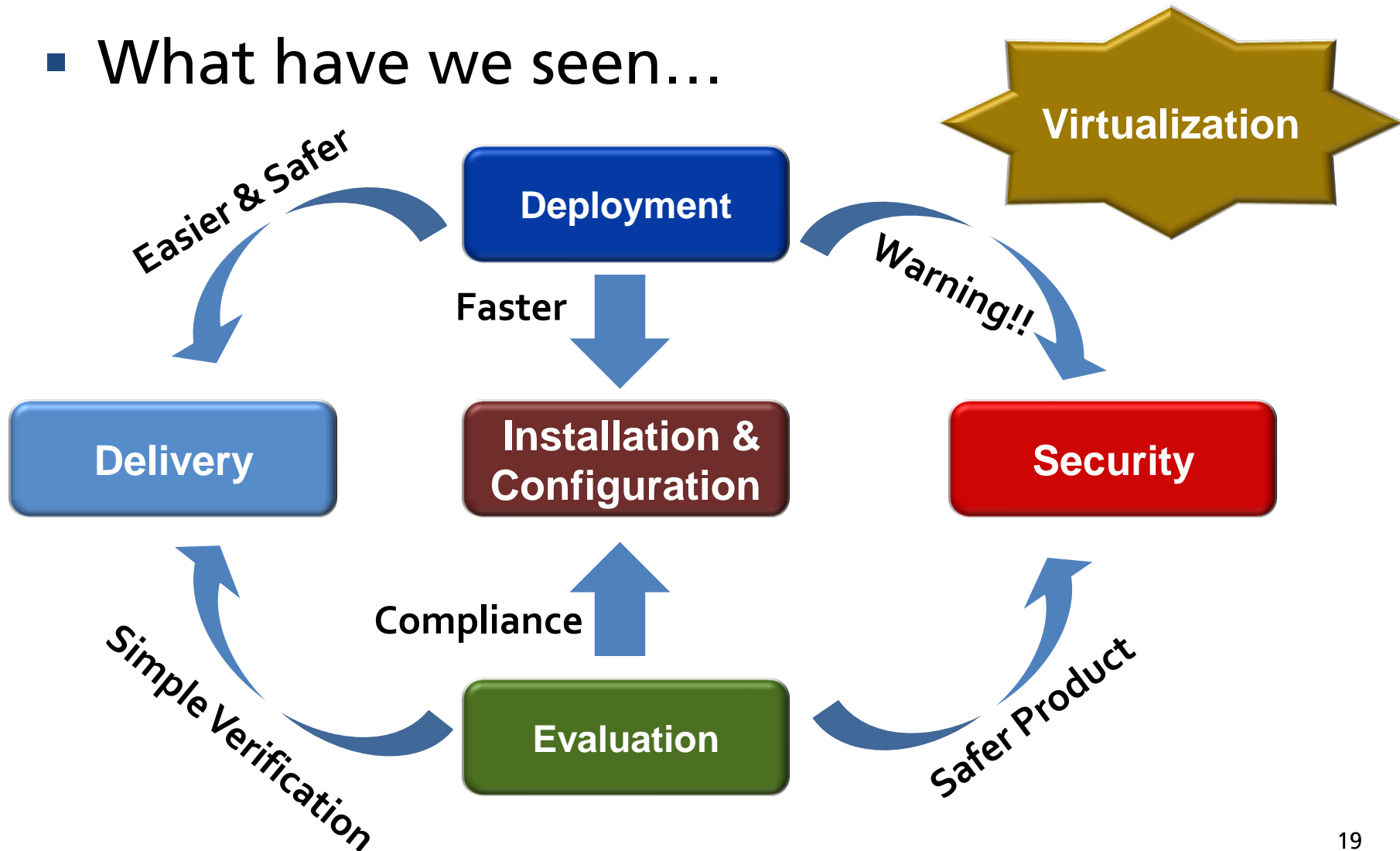


Conclusions



E P O C H E & E S P R I

- What have we seen...



The end...



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Thanks! Questions?

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