''hynesim 2.0 workshop''
general overview

23-25 October 2012
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hynesim
hybrid network simulation

version 1.0 / hns 2.1.2 / 2012.10.22

- **General Overview**   Guillaume PRIGENT

- **Internal details**   Jean-Baptiste ROUAULT

- **Demonstration session : TOR topology**   Manuel VIVES

  Sylvain GERARD

- **Interactive session : suricata topology**   Manuel VIVES

  Sylvain GERARD

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Hands-on training

- **hynesim is an information system simulation platform.**

- **Thanks to its realistic and immersive aspects, hynesim is ideal for :**

  – Real experimentation on virtual infrastructure

  – Training in designing information systems architecture

  – Raising awareness about information systems security

  – Threat analysis using hybrid « honeypots/honeynets »

  – Testing and prototyping new architectures

Ergonomical infosec training platform !

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Easy to use

- **Designed to be ergonomical and accessible to novices and experts alike, the hynesim interface includes numerous features :**

  – Modeling and deploying a topology

  – Multi-user, multi-view

  – Virtual machine catalogue

  – Interactions, remote access

  – Import, export, save, pause

  – Data flows and activities monitoring

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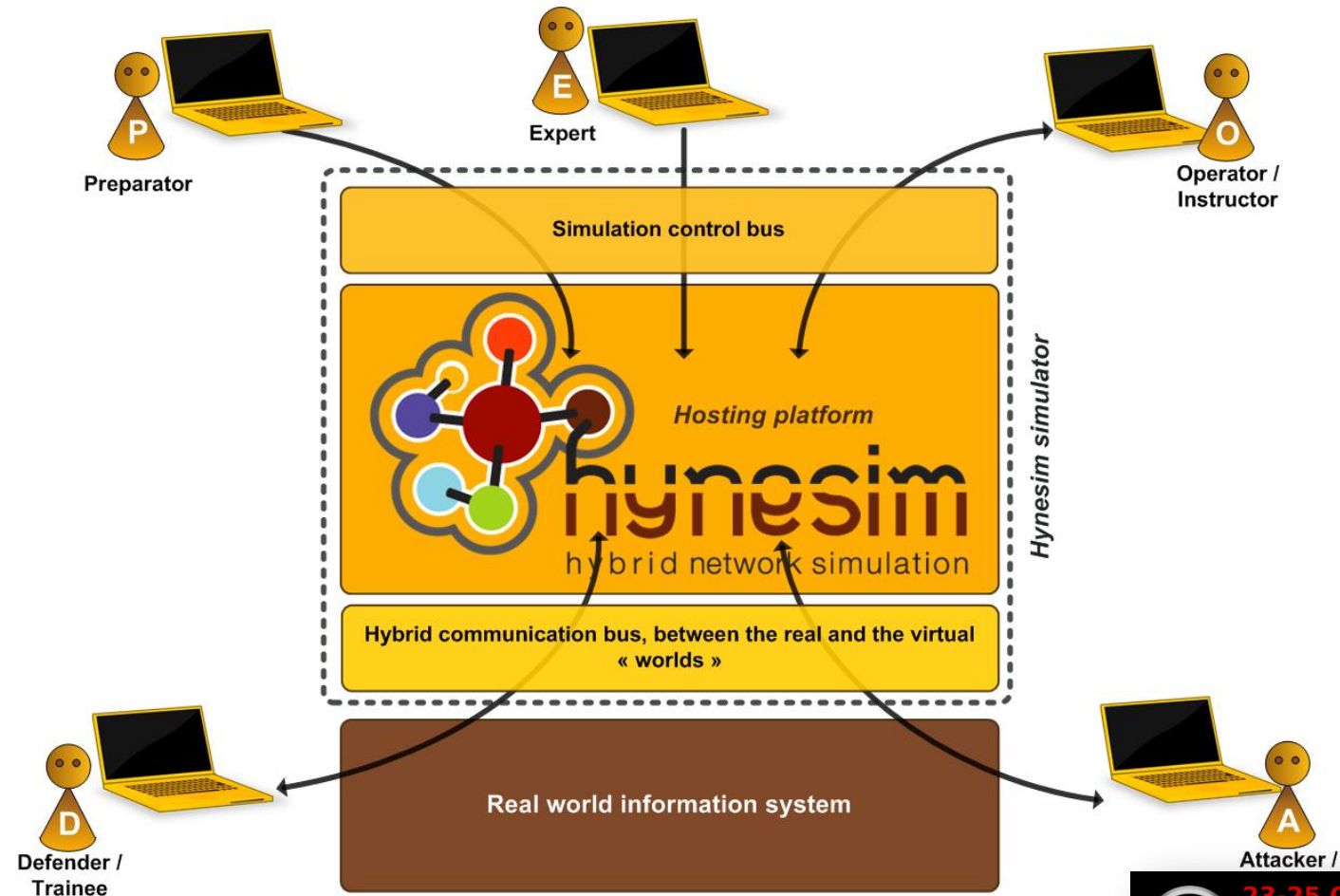# hynesim v2.0 workshop @HACK.LU2012

Distributed simulation

- **To be able to simulate large information systems, hynesim was designed from its inception with the ability to harness the power of a cluster of machines simultaneously.**

- **Depending on the simulation needs, hynesim can create virtual entities based on :**
  - Virtualisation
  - Emulation
  - Simulation
  - Container technologies

- **To manage those entities, hynesim integrates interaction channels with the virtual machines, as well as automatic data flows generation.**
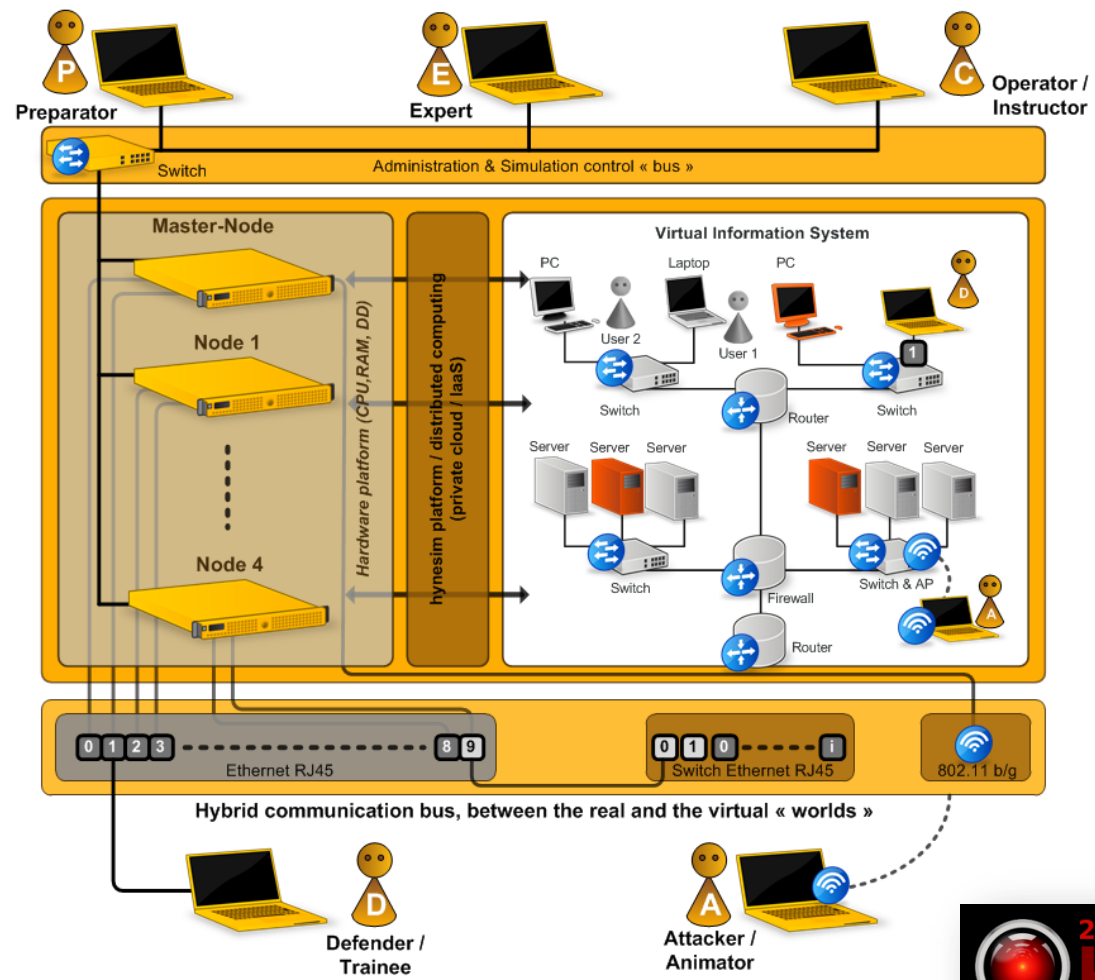
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General overview

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Fonctionnal overview

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hynesim

hybrid network simulation

hynesim « Master » design

hns master entity catalog (Directory)

hns master topology catalog (Directory)

hns master sgbd (SQLite)

hynesim v2.0 « Master » (hynesim component)

DiaMesh (diateam component)

Glacier (Ice component)

QtIce « Framework Qt / C++ »

Ice core « C & C++ »

hynesim v2.0 compliant « Hypervisor Host Operaring System » « Debian 6 stable – Squeeze » kernel 2.6.32

hynesim v2.0 compliant hardware platform (Ex. : DELL R410/R510)

Administration
eth0   eth1

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hynesim « Node » design

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hynesim « Master+Node » design

hynesim v2.0 - www.hynesim.org

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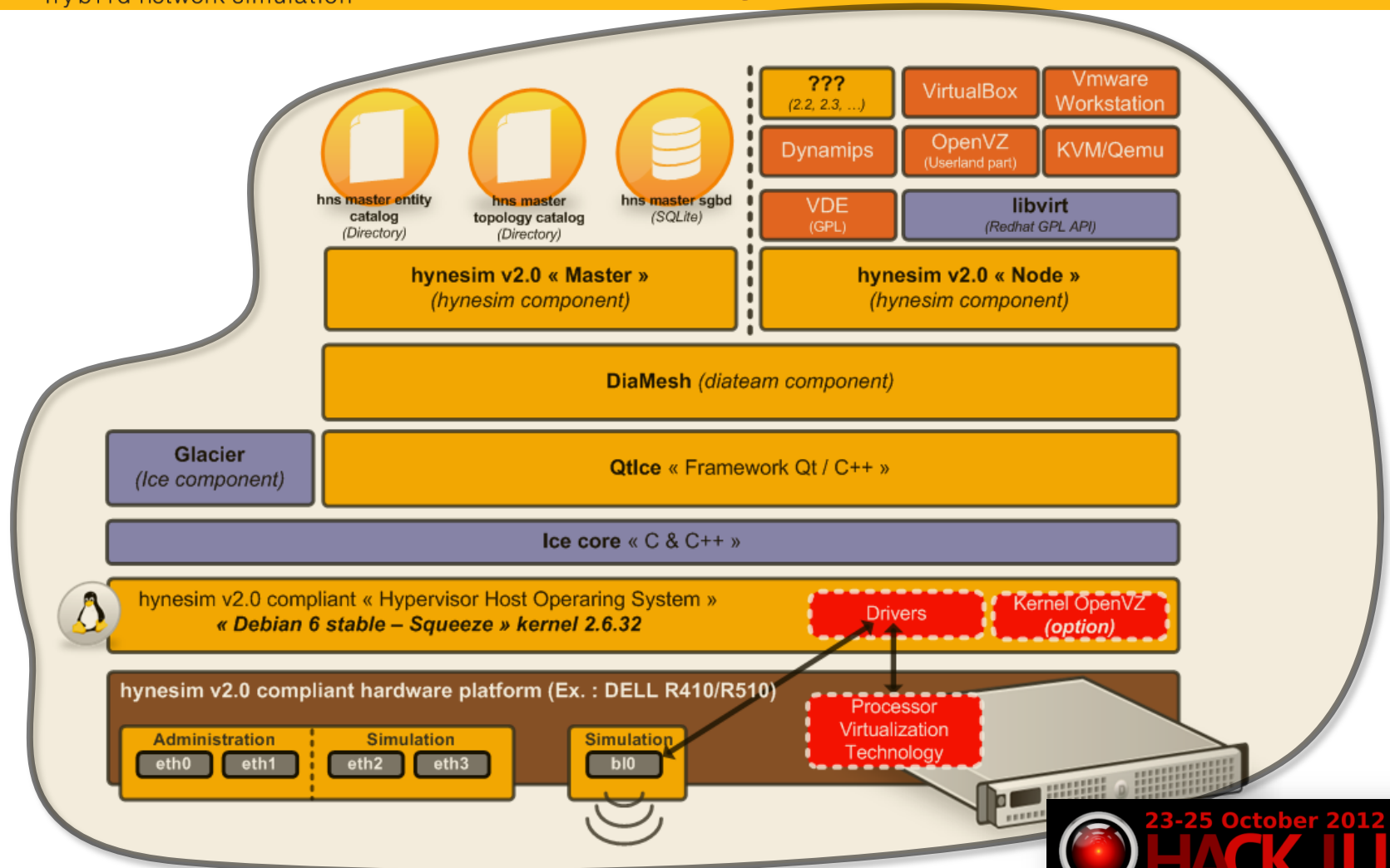
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Administration bus

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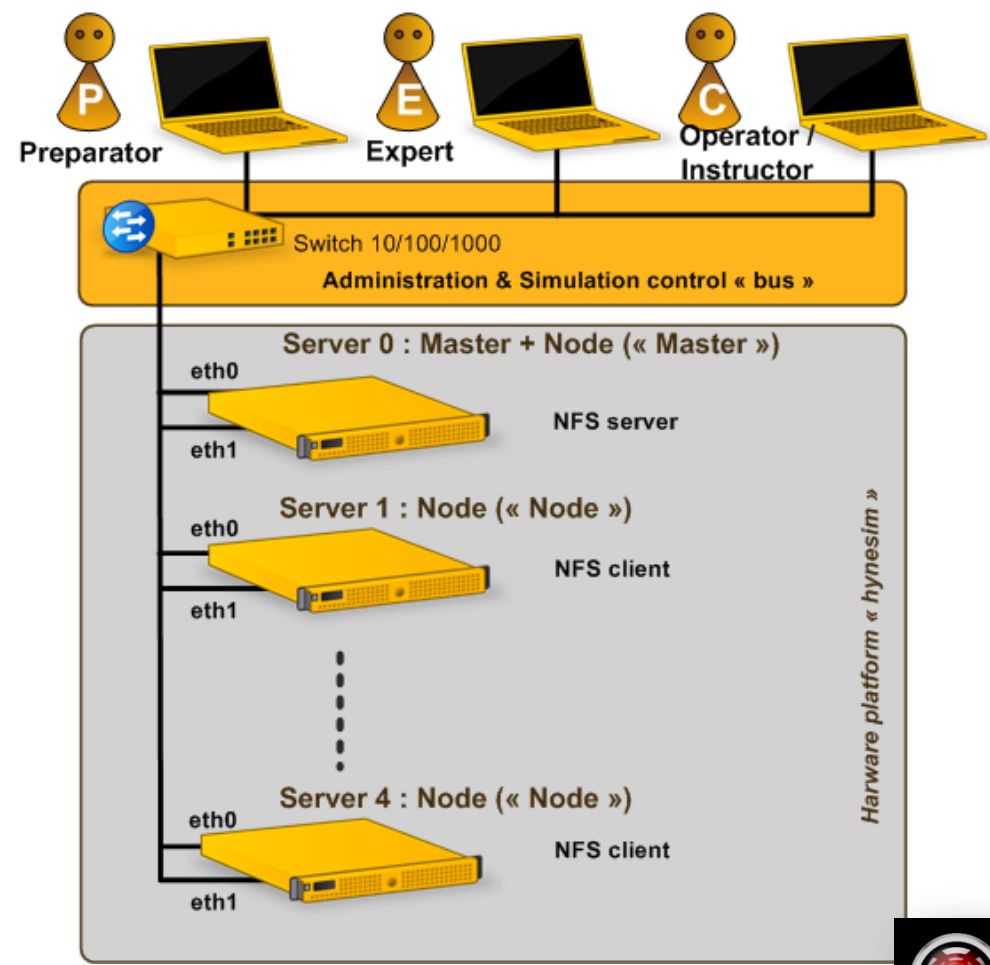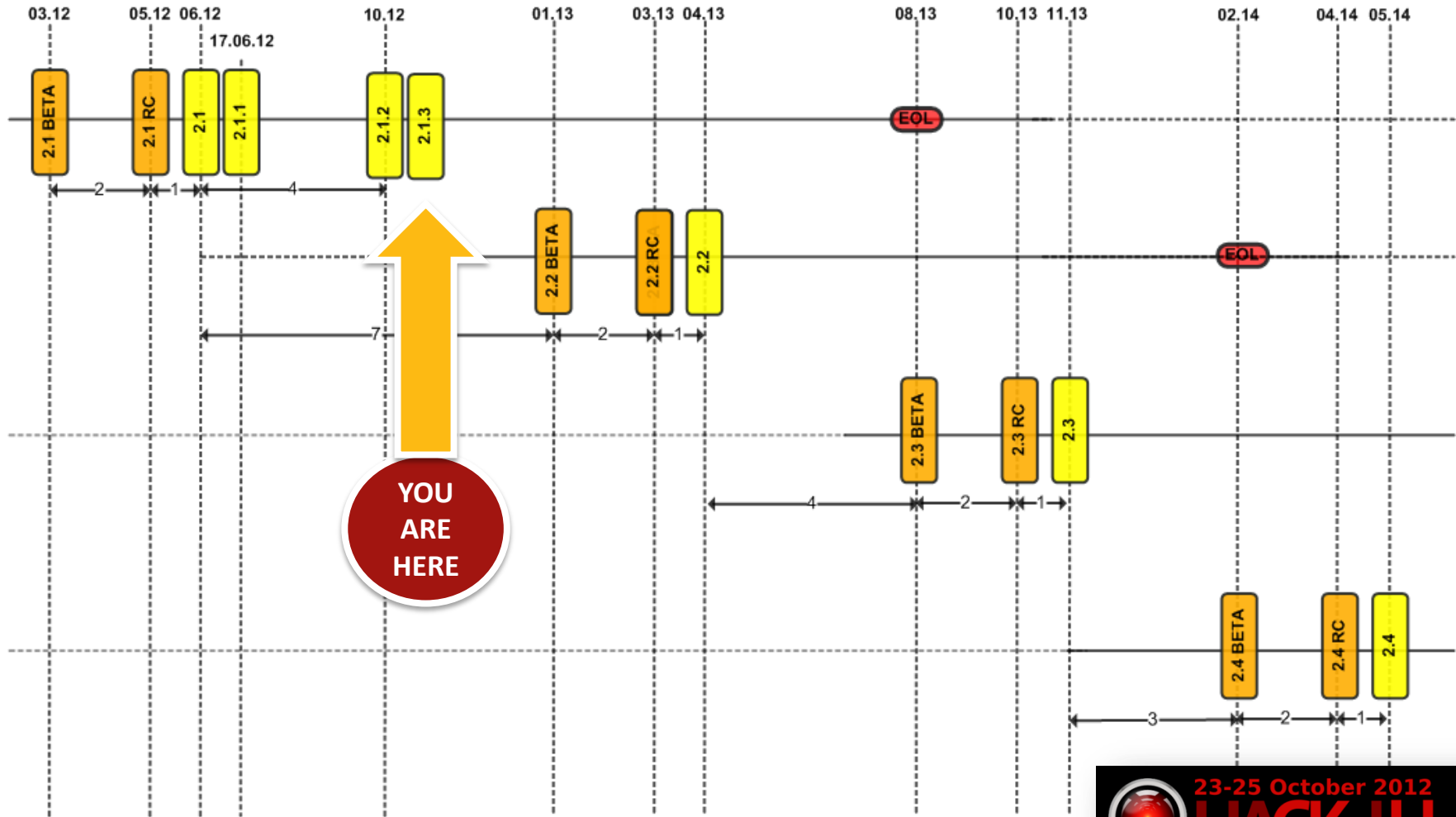
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Platforms in situation (hynesim 2.0 branch)

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Roadmap (actual)
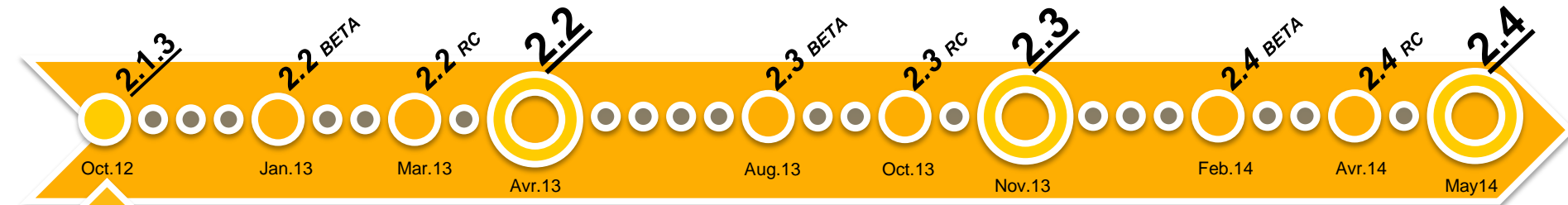
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Roadmap (actual)

2.1.3 — Oct.12
2.2 BETA — Jan.13
2.2 RC — Mar.13
2.2 — Avr.13
2.3 BETA — Aug.13
2.3 RC — Oct.13
2.3 — Nov.13
2.4 BETA — Feb.14
2.4 RC — Avr.14
**2.4** — May14

YOU ARE HERE

- **2.2**
  - Snapshot « cold »
  - Right management (user/group) v0.1
  - Platform Monitor v0.5
  - Remote Guest Viewer
  - …

- **2.3**
  - Snapshot « hot »
  - Open vSwitch & VDE
  - LXC container (namespaces)
  - Virtual user v0.5 / Action Manager
  - Right management (user/group) v0.5
  - Platform Monitor v1.0

- **2.4**
  - Virtual user v1.0 / Action Manager
  - Right management (user/group) v1.0
  - …

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v1.0

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hynesim in use : suricata topology
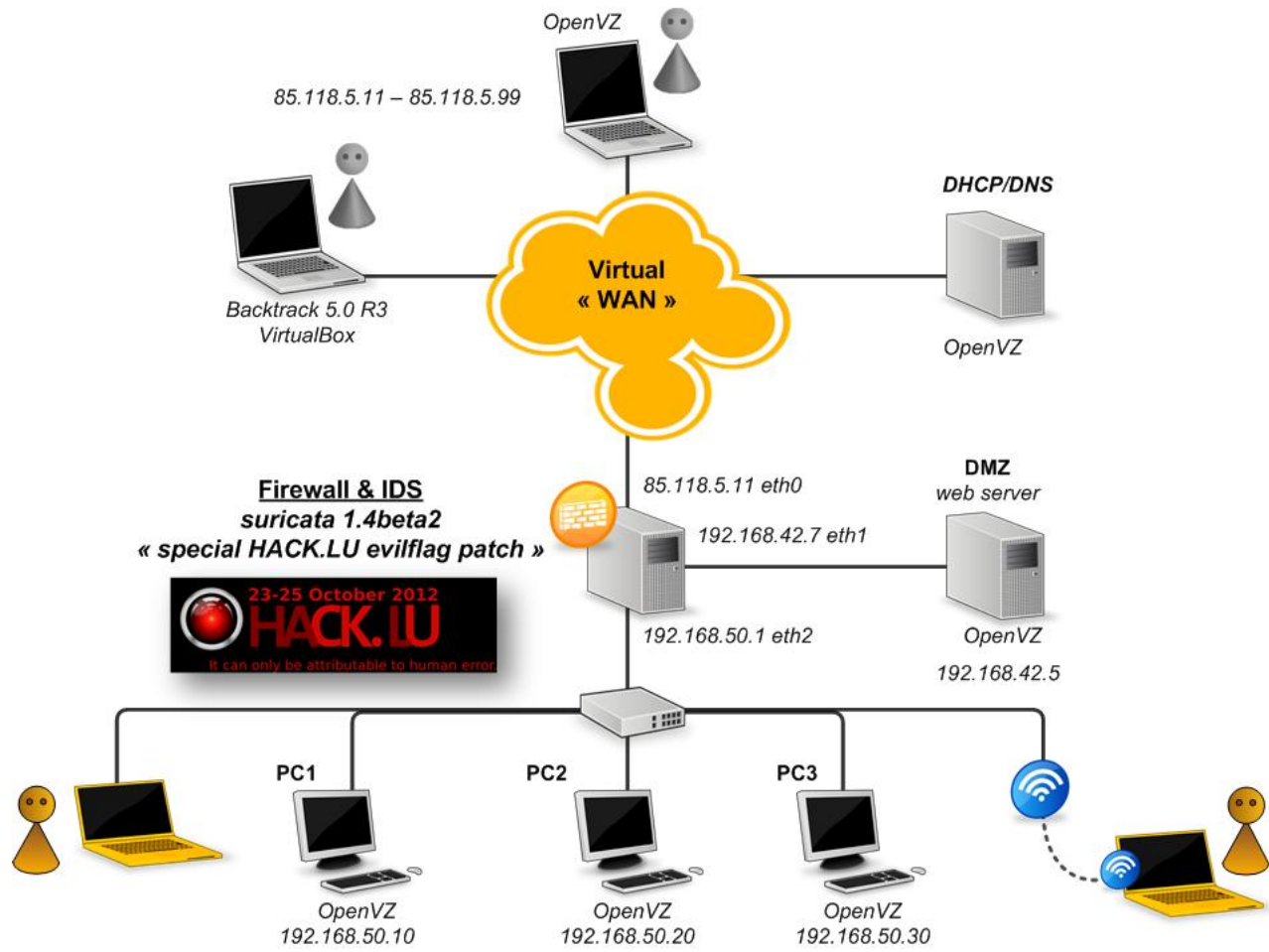
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**Thanks for your attention.
Any questions ?**