



Virtualization in UNICORE

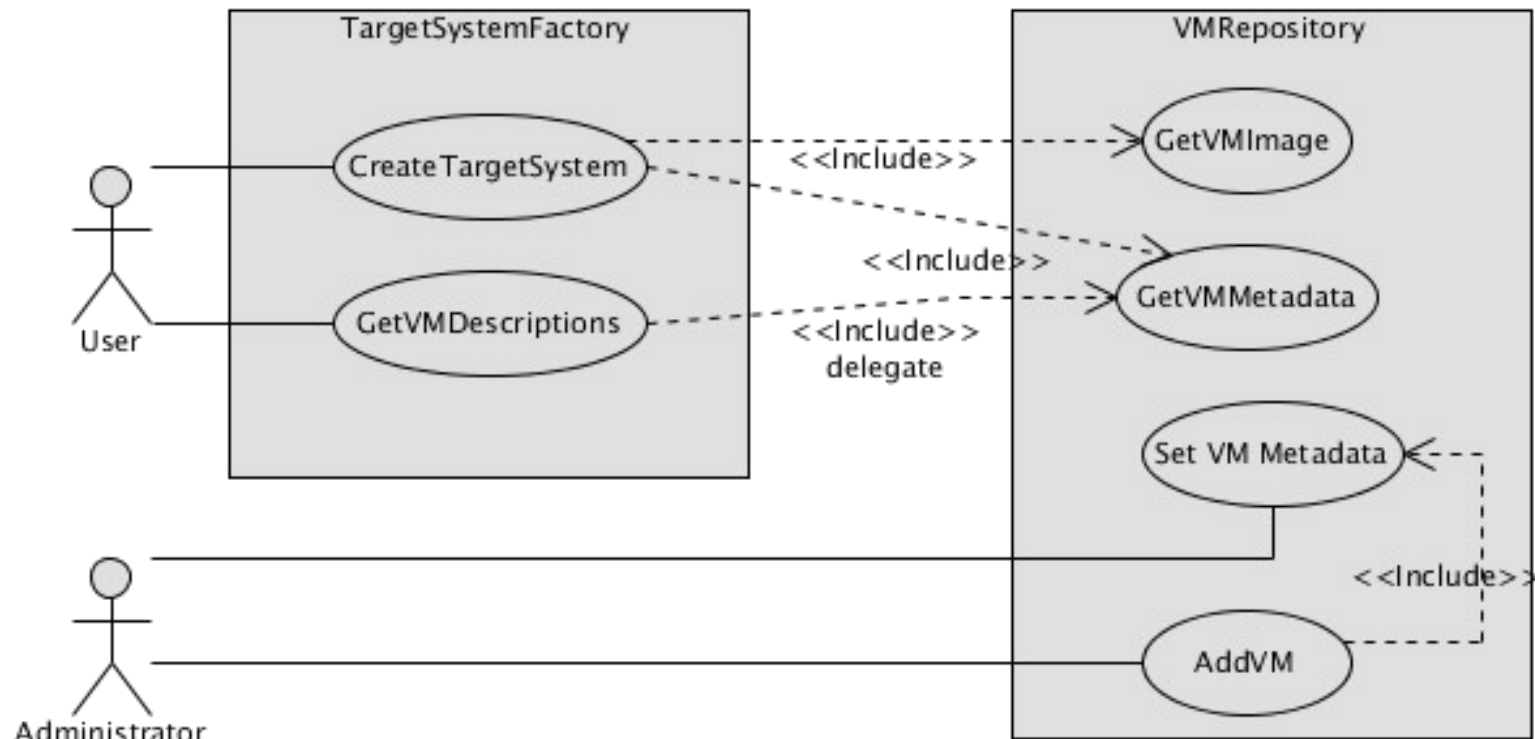
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TF Virtualization and Clouds

Outline

- Use Case
- Implementation

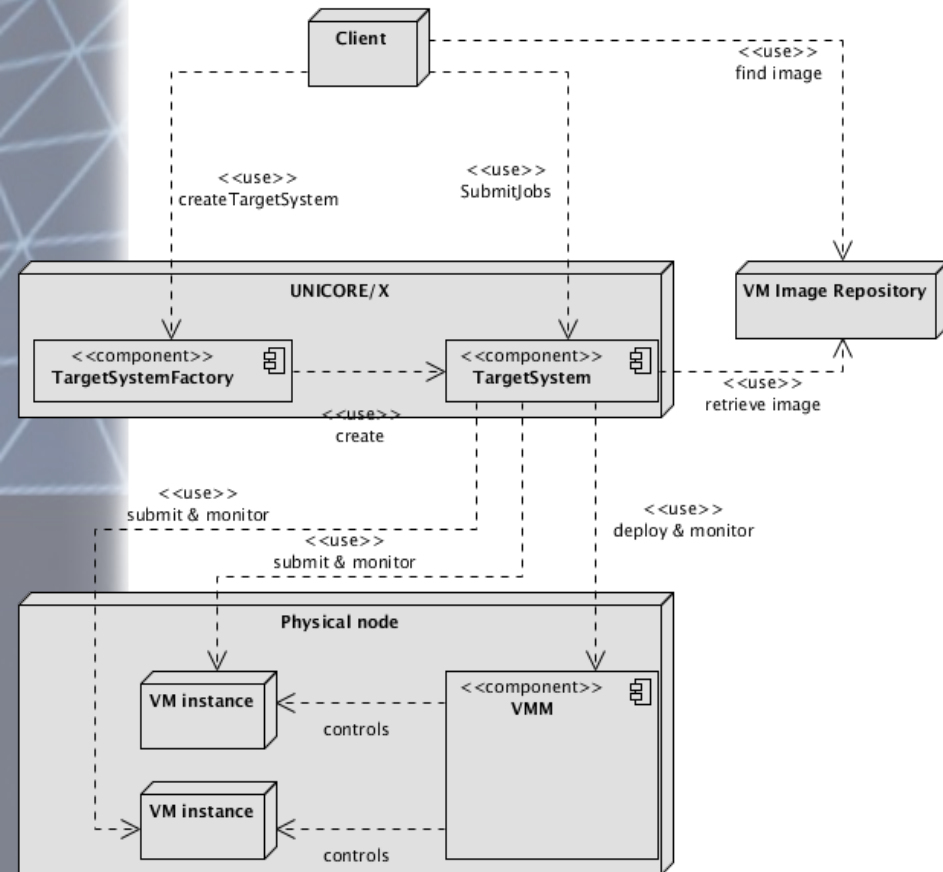
Use Case

- User defined execution environment
 - VM images provided by domain/application experts or the user



Architecture

- Few architectural changes
- Fits well with current UNICORE model
- UNICORE TSI in each VM instance



Some details

- Changes required
 - TargetSystemFactory
 - TargetSystem
 - [TSI]
- VMM controlled through abstract interface
 - libvirt

HPC

- SMP nodes will be possible easily
 - Up to physical node limits
- Clusters more difficult, but possible
 - 10,000 cores - <http://bit.ly/gouqdi>
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Time frame

- Has been a long standing issue for UNICORE
 - First attempt of implementation dates back to 2006, but was abandoned
- Master thesis due in fall 2011



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