How to deploy, configure, and manage the connectivity of resources on ViNe IP overlays

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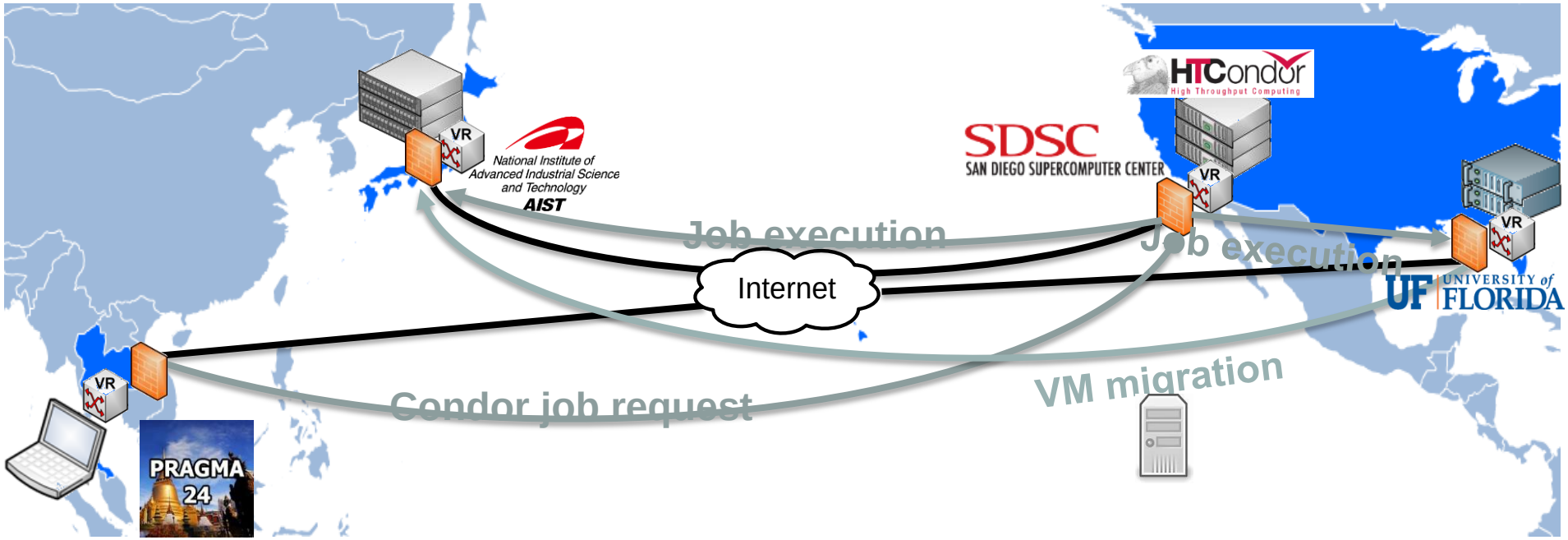
Quick ViNe Overview

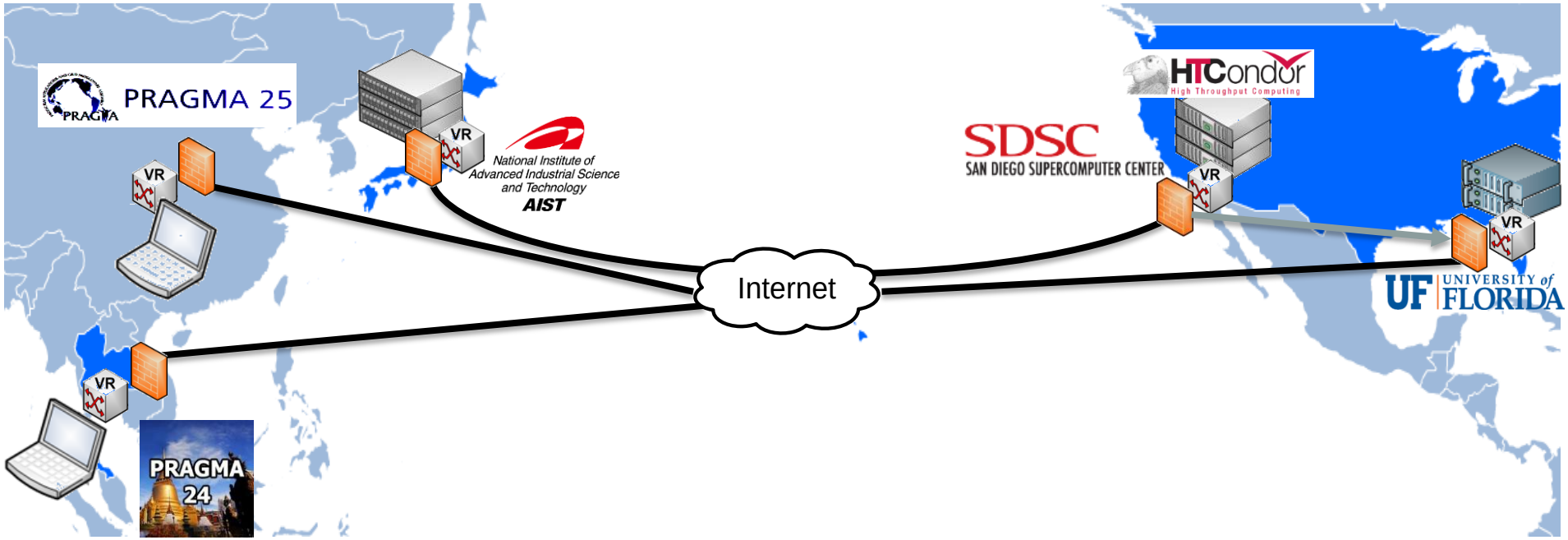
- ViNe implements routing and other communication mechanisms needed to deploy user-level software-defined IP overlays across WAN
- ViNe offers:
  - Full connectivity among machines (physical and virtual) on public and private networks – built-in firewall traversal
  - Multiple isolated overlays
  - Management APIs

Past Demos



- Connected physical machines on ViNe overlays to live-migrate VMs to/from UF and AIST
- Deployed a condor virtual cluster across AIST, SDSC, and UF. A VM running on a laptop in PRAGMA-24 (Thailand) was added to the overlay (and condor pool)

This Demo



- Deploy and configure a ViNe router in PRAGMA-25
- Enable laptops of PRAGMA-25 attendees to join ViNe overlays

ViNe deployment and management

- Install ViNe software
  - Requirements: Linux, java version 1.6 update 4 (or newer)
  - http://vine.acis.ufl.edu/vine/lib/vine2.tgz
  - Unpack
- Configure ViNe Router
  - $VINE_HOME/bin/cmds/update.sh
  - $VINE_HOME/bin/cmds/pragma-register.sh
  - Adjust parameters to CSTNET-PRAGMA Wi-Fi subnet: http://vine.acis.ufl.edu/ViNe/

ViNe Router Discovery

- Hosts (physical or virtual) needs to use ViNe routers as gateway to ViNe overlays.
- Adjustments to routing table needed.
- ViNe Router Discovery service automatically generates scripts that adjusts hosts to participate in ViNe overlays

- Goal: access 172.24.145.80

Linux

- wget -P /tmp http://vine.acis.ufl.edu/vine/lib/joinvine.sh
- . /tmp/joinvine.sh

Windows

- Download http://vine.acis.ufl.edu/vine/lib/vrd.win.zip
- Unpack
- Open cmd prompt (needs elevation)
- Execute joinvine.bat as adminstrator