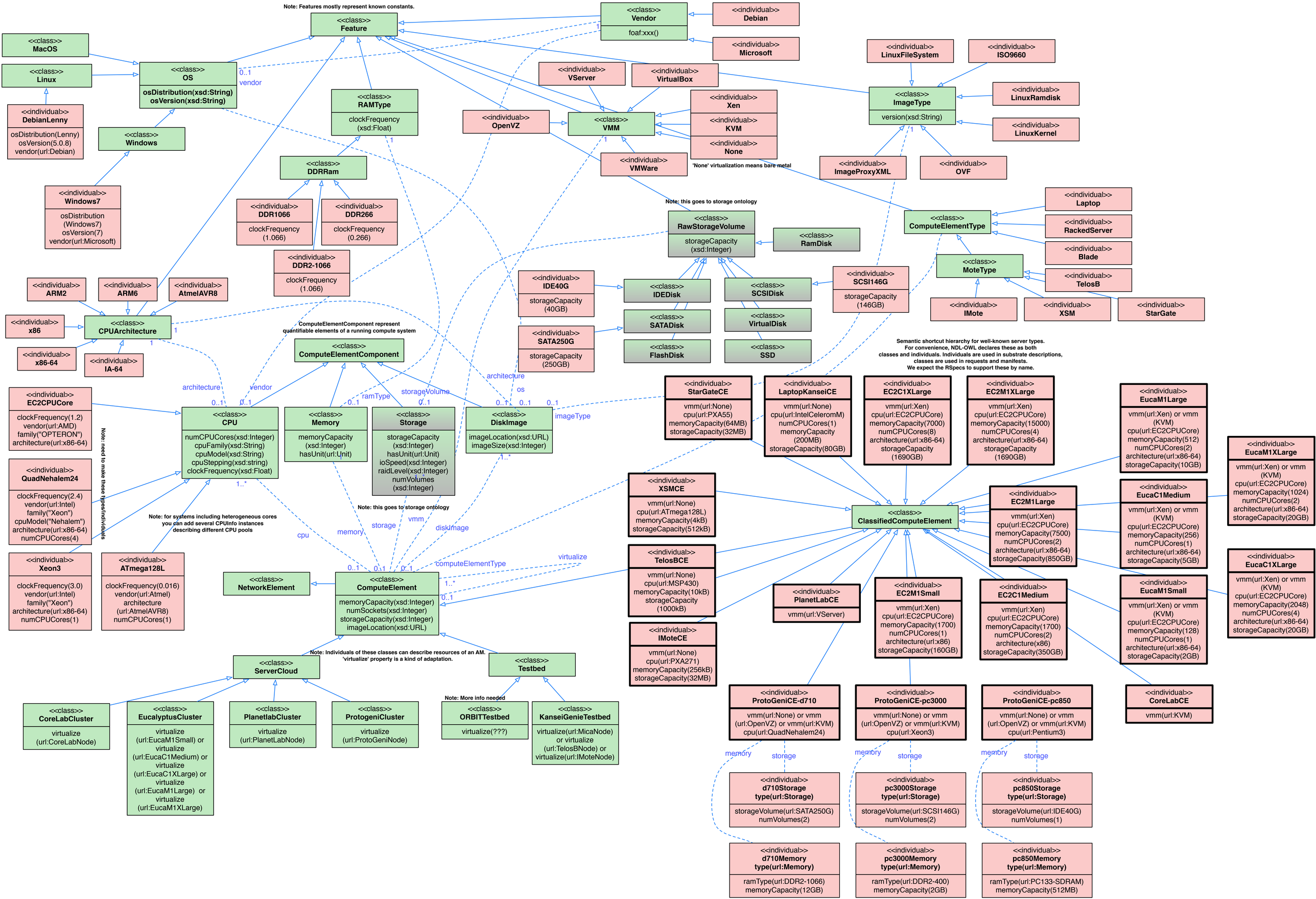
Note: Features mostly represent known constants.
<<class>> Feature
<<class>> Vendor
foaf:xxx()
<<individual>> Debian
<<individual>> Microsoft
<<class>> MacOS
<<class>> Linux
<<class>> OS
osDistribution(xsd:String)
osVersion(xsd:String)
0..1
vendor
<<individual>> DebianLenny
osDistribution(Lenny)
osVersion(5.0.8)
vendor(url:Debian)
<<class>> Windows
<<individual>> Windows7
osDistribution (Windows7)
osVersion(7)
vendor(url:Microsoft)
<<class>> RAMType
clockFrequency (xsd:Float)
<<class>> DDRRam
<<individual>> DDR1066
clockFrequency (1.066)
<<individual>> DDR266
clockFrequency (0.266)
<<individual>> DDR2-1066
clockFrequency (1.066)
<<individual>> VServer
<<individual>> VirtualBox
<<individual>> OpenVZ
<<class>> VMM
<<individual>> Xen
<<individual>> KVM
<<individual>> None
'None' virtualization means bare metal
<<individual>> VMWare
<<individual>> LinuxFileSystem
<<individual>> ISO9660
<<class>> ImageType
version(xsd:String)
<<individual>> LinuxRamdisk
<<individual>> LinuxKernel
<<individual>> ImageProxyXML
<<individual>> OVF
Note: this goes to storage ontology
<<class>> RawStorageVolume
storageCapacity (xsd:Integer)
<<class>> RamDisk
<<class>> ComputeElementType
<<individual>> Laptop
<<individual>> RackedServer
<<individual>> Blade
<<class>> MoteType
<<individual>> TelosB
<<individual>> IMote
<<individual>> XSM
<<individual>> StarGate
<<individual>> IDE40G
storageCapacity (40GB)
<<class>> IDEDisk
<<class>> SCSIDisk
<<individual>> SCSI146G
storageCapacity (146GB)
<<class>> SATADisk
<<class>> VirtualDisk
<<individual>> SATA250G
storageCapacity (250GB)
<<class>> FlashDisk
<<class>> SSD
<<individual>> ARM2
<<individual>> ARM6
<<individual>> AtmelAVR8
<<individual>> x86
<<class>> CPUArchitecture
<<individual>> x86-64
<<individual>> IA-64
ComputeElementComponent represent quantifiable elements of a running compute system
<<class>> ComputeElementComponent
architecture
vendor
ramType
storageVolume
os
imageType
<<individual>> EC2CPUCore
clockFrequency(1.2)
vendor(url:AMD)
family("OPTERON")
architecture(url:x86-64)
Note: need to make these types/individuals
<<individual>> QuadNehalem24
clockFrequency(2.4)
vendor(url:Intel)
family("Xeon")
cpuModel("Nehalem")
architecture(url:x86-64)
numCPUCores(4)
<<individual>> Xeon3
clockFrequency(3.0)
vendor(url:Intel)
family("Xeon")
architecture(url:x86-64)
numCPUCores(1)
<<individual>> ATmega128L
clockFrequency(0.016)
vendor(url:Atmel)
architecture (url:AtmelAVR8)
numCPUCores(1)
<<class>> CPU
numCPUCores(xsd:Integer)
cpuFamily(xsd:String)
cpuModel(xsd:String)
cpuStepping(xsd:string)
clockFrequency(xsd:Float)
Note: for systems including heterogeneous cores you can add several CPUInfo instances describing different CPU pools
<<class>> Memory
memoryCapacity (xsd:Integer)
hasUnit(url:Unit)
<<class>> Storage
storageCapacity (xsd:Integer)
hasUnit(url:Unit)
ioSpeed(xsd:Integer)
raidLevel(xsd:Integer)
numVolumes (xsd:Integer)
Note: this goes to storage ontology
<<class>> DiskImage
imageLocation(xsd:URL)
imageSize(xsd:Integer)
cpu
memory
storage
vmm
diskImage
computeElementType
virtualize
<<class>> NetworkElement
<<class>> ComputeElement
memoryCapacity(xsd:Integer)
numSockets(xsd:Integer)
storageCapacity(xsd:Integer)
imageLocation(xsd:URL)
Note: Individuals of these classes can describe resources of an AM. 'virtualize' property is a kind of adaptation.
<<class>> ServerCloud
<<class>> Testbed
Note: More info needed
<<class>> CoreLabCluster
virtualize (url:CoreLabNode)
<<class>> EucalyptusCluster
virtualize (url:EucaM1Small) or virtualize (url:EucaC1Medium) or virtualize (url:EucaC1XLarge) or virtualize (url:EucaM1Large) or virtualize (url:EucaM1XLarge)
<<class>> PlanetlabCluster
virtualize (url:PlanetLabNode)
<<class>> ProtogeniCluster
virtualize (url:ProtoGeniNode)
<<class>> ORBITTestbed
virtualize(???)
<<class>> KanseiGenieTestbed
virtualize(url:MicaNode) or virtualize (url:TelosBNode) or virtualize(url:IMoteNode)
Semantic shortcut hierarchy for well-known server types.
For convenience, NDL-OWL declares these as both classes and individuals. Individuals are used in substrate descriptions, classes are used in requests and manifests.
We expect the RSpecs to support these by name.
<<individual>> StarGateCE
vmm(url:None)
cpu(url:PXA55)
memoryCapacity(64MB)
storageCapacity(32MB)
<<individual>> LaptopKanseiCE
vmm(url:None)
cpu(url:IntelCeleromM)
numCPUCores(1)
memoryCapacity (200MB)
storageCapacity(80GB)
<<individual>> EC2C1XLarge
vmm(url:Xen)
cpu(url:EC2CPUCore)
memoryCapacity(7000)
numCPUCores(8)
architecture(url:x86-64)
storageCapacity (1690GB)
<<individual>> EC2M1XLarge
vmm(url:Xen)
cpu(url:EC2CPUCore)
memoryCapacity(15000)
numCPUCores(4)
architecture(url:x86-64)
storageCapacity (1690GB)
<<individual>> EucaM1Large
vmm(url:Xen) or vmm (KVM)
cpu(url:EC2CPUCore)
memoryCapacity(512)
numCPUCores(2)
architecture(url:x86-64)
storageCapacity(10GB)
<<individual>> EucaM1XLarge
vmm(url:Xen) or vmm (KVM)
cpu(url:EC2CPUCore)
memoryCapacity(1024)
numCPUCores(2)
architecture(url:x86-64)
storageCapacity(20GB)
<<individual>> XSMCE
vmm(url:None)
cpu(url:ATmega128L)
memoryCapacity(4kB)
storageCapacity(512kB)
<<class>> ClassifiedComputeElement
<<individual>> EC2M1Large
vmm(url:Xen)
cpu(url:EC2CPUCore)
memoryCapacity(7500)
numCPUCores(2)
architecture(url:x86-64)
storageCapacity(850GB)
<<individual>> EucaC1Medium
vmm(url:Xen) or vmm (KVM)
cpu(url:EC2CPUCore)
memoryCapacity(256)
numCPUCores(1)
architecture(url:x86-64)
storageCapacity(5GB)
<<individual>> TelosBCE
vmm(url:None)
cpu(url:MSP430)
memoryCapacity(10kB)
storageCapacity (1000kB)
<<individual>> EucaC1XLarge
vmm(url:Xen) or vmm (KVM)
cpu(url:EC2CPUCore)
memoryCapacity(2048)
numCPUCores(4)
architecture(url:x86-64)
storageCapacity(20GB)
<<individual>> PlanetLabCE
vmm(url:VServer)
<<individual>> EC2M1Small
vmm(url:Xen)
cpu(url:EC2CPUCore)
memoryCapacity(1700)
numCPUCores(1)
architecture(url:x86)
storageCapacity(160GB)
<<individual>> EC2C1Medium
vmm(url:Xen)
cpu(url:EC2CPUCore)
memoryCapacity(1700)
numCPUCores(2)
architecture(x86)
storageCapacity(350GB)
<<individual>> EucaM1Small
vmm(url:Xen) or vmm (KVM)
cpu(url:EC2CPUCore)
memoryCapacity(128)
numCPUCores(1)
architecture(url:x86-64)
storageCapacity(2GB)
<<individual>> IMoteCE
vmm(url:None)
cpu(url:PXA271)
memoryCapacity(256kB)
storageCapacity(32MB)
<<individual>> CoreLabCE
vmm(url:KVM)
<<individual>> ProtoGeniCE-d710
vmm(url:None) or vmm (url:OpenVZ) or vmm(url:KVM)
cpu(url:QuadNehalem24)
<<individual>> ProtoGeniCE-pc3000
vmm(url:None) or vmm (url:OpenVZ) or vmm(url:KVM)
cpu(url:Xeon3)
<<individual>> ProtoGeniCE-pc850
vmm(url:None) or vmm (url:OpenVZ) or vmm(url:KVM)
cpu(url:Pentium3)
memory
storage
<<individual>> d710Storage
type(url:Storage)
storageVolume(url:SATA250G)
numVolumes(2)
<<individual>> pc3000Storage
type(url:Storage)
storageVolume(url:SCSI146G)
numVolumes(2)
<<individual>> pc850Storage
type(url:Storage)
storageVolume(url:IDE40G)
numVolumes(1)
<<individual>> d710Memory
type(url:Memory)
ramType(url:DDR2-1066)
memoryCapacity(12GB)
<<individual>> pc3000Memory
type(url:Memory)
ramType(url:DDR2-400)
memoryCapacity(2GB)
<<individual>> pc850Memory
type(url:Memory)
ramType(url:PC133-SDRAM)
memoryCapacity(512MB)