

Database Schema

affiliation table

This table contains a list of affiliations that can access this VCL site.

id - id of entry
name - name of entry
shibname - for affiliations using shibboleth - the name of the shibboleth affiliation (the part after @ in eduPersonScopedAffiliation)
dataUpdateText - this will be displayed on the User Preferences->Personal Information page to provide information on how to update things other than Preferred Name in that box
sitewwwaddress - URL for login page for this affiliation; typically it is just the URL encoded parameters to index.php to have the authentication method already selected (i.e. <https://vcl.example.org/vcl/index.php?mode=selectauth&authtype=EXAMPLE%20LDAP>)
helpaddress - support email address for this affiliation
shibonly - 1 if this affiliation can only be authenticated via shibboleth, 0 if LDAP is also set up
theme - name of theme to be used when displaying the site for users of this affiliation; must match something under the themes directory in the web code

blockComputers table

This table tracks which computers have been allocated to individual block allocation time slots.

blockTimeid - reference to blockTimes.id
computerid - reference to computer.id
imageid - reference to image.id
reloadrequestid - reference to request.id - reload reservation for preloading this node

blockRequest table

This table contains all of the block allocations that have been requested and their current state.

id - id of entry
name - name of entry
imageid - reference to image.id
numMachines - number of machines to preload for this block allocation
groupid - reference to usergroup.id - user group that will have access to machines in this block allocation
repeating - enum field - weekly, monthly, or list - how this block allocation repeats
ownerid - reference to user.id - owner of the block allocation
managementnodeid - reference to managementnode.id - management node that is to process this block allocation
expireTime - last date and time of block allocation time slots
processing - flag used by vcl to determine if a vcl process is processing this block allocation
status - enum field - requested, accepted, completed, reject - current status of the block allocation
comments - any comments entered by the person that requested the block allocation

blockTimes table

This table contains all of the time slots associated with a block allocation that are active or have not yet been reached. Time slots are deleted after they are completed.

id - id of entry
blockRequestid - reference to blockRequest.id
start - start of block time
end - end of block time
processed - flag for vcl - 1 if block time has been processed by vcl, 0 if not
skip - flag for users to skip individual instances of repeating block allocations - 1 to skip, 0 to use

blockWebDate table

This table contains date related items associated with a block allocation so that they can more easily be retrieved when editing a block allocation.

blockRequestid - reference to blockRequest.id
start - start date of block allocation
end - end date of block allocation
days - for weekly repeating blocks, this is a bitmask of the selected days; for monthly repeating blocks, this is the day of the week; for lists, this is the order the item is in the set of dates
weeknum - only used for monthly repeating blocks - the selected week of the month

blockWebTime table

This table contains time related items associated with a block allocation so that they can more easily be retrieved when editing a block allocation.

blockRequestid - reference to blockRequest.id
starthour - start hour of block allocation
startminute - start minute of block allocation
startmeridian - start meridian of block allocation
endhour - end hour of block allocation
endminute - end minute of block allocation
endmeridian - end meridian of block allocation
order - for weekly and monthly repeating blocks, this is the sequential order of the time slot; for lists, it is the sequential order of the date/time

changelog table

This table logs changes made to reservations.

id - id of entry
logid - reference to log.id
userid - user that triggered this update to the reservation (needed for server reservations where someone other than the owner of the reservation can update it)
reservationid - id of the reservation entry that was updated
start - change to start time of reservation
end - change to end time of reservation
computerid - reference to computer.id - change to computer assigned to reservation
remoteIP - change to remote IP of reservation user
wasavailable - mostly deprecated - if submitted change to start/end time of reservation was available for use or not
timestamp - datetime entry was added
other -

clickThroughs table

This table logs click through agreements users must agree to when they create images.

userid - reference to user.id - user that clicked agreement
imageid - reference to image.id - image for which agreement was clicked
imagerevisionid - reference to imagerevision.id - image revision for which agreement was clicked
accepted - datetime agreement clicked
agreement - text of agreement at time it was clicked

computer table

This table contains all information about compute nodes and VMs that VCL controls. All bare metal computers, virtual hosts, and virtual machines must have an entry in this table.

id - id of entry
stateid - reference to state.id - current state of computer
ownerid - reference to owner.id - owner of computer
platformid - reference to platform.id - platform of computer
scheduleid - reference to schedule.id - schedule of computer
currentimageid - reference to image.id - image currently loaded on computer
nextimageid - reference to image.id - image to be loaded next on computer, only used under certain circumstances
imagerevisionid - reference to imagerevision.id - image revision currently loaded on computer (somewhat redundant with currentimageid)
RAM - amount of RAM physical computer has, or maximum amount of RAM that can be allocated to virtual computer
procnumber - number of processor cores physical computer has, or maximum number of processor cores that can be allocated to virtual computer
procspeed - speed of processor cores in MHz
network - speed of (public?) NIC(s) in Mbps
hostname - private hostname of computer
IPaddress - public IP address
privateIPaddress - private IP address
eth0macaddress - MAC address of private NIC
eth1macaddress - MAC address of public NIC
type - blade, lab, or virtualmachine - type of the computer
provisioningid - reference to provisioning.id - provisioning module/method to be used for computer
drivetype - hda or sda - type of drive in the computer (is this still used?)
deleted - flag to show if computer has been deleted - 1 if deleted, 0 if not
datedeleted - date computer was flagged as deleted
notes - any notes entered when computer placed into maintenance state
lastcheck - date stamp of last time the computer was checked through healthcheck.pl
location - physical location of node (Data Center 1, rack 1, etc)
dsa - Not being used. Was planned for storing host keys for ssh
dsapub - Not being used. Was planned for storing host keys for ssh
rsa - Not being used. Was planned for storing host keys for ssh
rsapub - Not being used. Was planned for storing host keys for ssh
host - Not being used. Was planned for storing host keys for ssh
hostpub - Not being used. Was planned for storing host keys for ssh
vmhostid - reference to vmhost.id - only used for virtual machines, this is the host computer of the VM
vmtypeid - reference to vmtype.id - only used for virtual machines, this is the type of the VM (vmware, xen, kvm, etc)
predictivemoduleid - id of predictive module to use for determining what to do with this node at the end of reservations for it

computerloadflow table

This table contains entries that establish a flow of states that are followed when a reservation is being deployed so that users can have feedback on the current reservations page about their reservations.

computerloadstateid - reference to computerloadstate.id

nextstateid - reference to computerloadstate.id - the computer load state that follows this one

type - type of load this sequence is for

computerloadlog table

This table contains actual log entries for each state processed when a reservation is being deployed so that users can have feedback on the current reservations page about their reservations.

id - id of entry

reservationid - reference to reservation.id - reservation this entry is for

computerid - reference to computer.id

loadstateid - reference to computerloadstate.id - state this entry is for

timestamp - date/time entry entered into log

additionalinfo - details about this entry

computerloadstate table

This table contains the load states that a reservation goes through when being deployed and their estimated time so that an estimate of how much longer the deploy will take can be generated.

id - id of entry

loadstatename - short name of state

prettyname - more descriptive name of state

est - estimated time for state in minutes

connectlog

This table contains records of when users connect to reservations and the IP addresses from which they connect.

id - id of entry

logid - reference to log.id

reservationid - reference to reservation.id

userid - reference to user.id

remoteIP - IP address of user's remote computer

verified -

timestamp - time at which user connected from remoteIP

connectmethod table

This table contains all of the connect methods available to be assigned to an image. Connect methods are things like RDP, ssh, VNC, etc.

id - id of entry

name - name of entry

description - description of connect method

connecttext - this text will be displayed on the Connect page, there are a few variable substitutions available to be used: #userid#, #password#, #connectIP#, and #connectport#

servicename - name of service to be started to enable connect method on provisioned node

startupscript - name of script to be run to enable connect method on provisioned node

connectmethodmap table

This table contains two types of information and can be somewhat confusing. It tracks which connect methods are mapped to which OS types, OSes, and image revisions. It also contains which methods can be assigned to which OS types and OSes. Entries that have autoprovisioned set to 0 or 1 are entries that tell whether or not the image can be assigned to that OS type or OS. Entries that have autoprovisioned set to NULL tell whether that method is enabled in addition to default methods for the image, or whether that method is a default one but disable for the image.

connectmethodid - reference to connectmethod.id

OStypeid - reference to OStype.id - OS type this entry applies to (can be NULL)

OSid - reference to OS.id - OS this entry applies to (can be NULL)

imagerevisionid - reference to imagerevision.id - image revision this entry applies to (can be NULL)

disabled - flag telling if method is enabled/disabled for combination of OStypeid, OSid, and imagerevisionid

autoprovisioned - NULL, 0, or 1 - flag to tell if this connect method can be autoprovisioned by vclid or if the image owner must install the software to enable it

connectmethodport

This table contains which ports are used by which connect methods.

id - id of entry
connectmethodid - reference to connectmethod.id
protocol - TCP or UDP
port - tcp or udp port number

continuations table

This table contains "continuations" which are basically saved states that can then be submitted by the web frontend to perform an action. Any entries in this table with an expiretime that is older than the current time can be deleted during periodic maintenance.

id - id of entry
userid - reference to user.id - who this entry belongs to
expiretime - date/time entry expires
frommode - mode transitioning from
tomode - mode transitioning to
data - serialized data saved with this continuation
multicall - flag to tell if this continuation can be called more than one time
parentid - reference to continuations.id - parent of this continuation for continuation chains (can be NULL)
deletefromid - reference to continuations.id - id in a continuation chain from which to start deleting the chain

documentation table

This table is deprecated. At one time, there was a built in documentation wiki like part of the site.

name - name of entry
title - title of documentation item
data - text of documentation item

image table

This table contains all information about the images available through VCL. It comes with a single required special image - "No image" that is used to signify when a computer is not loaded with anything.

id - id of entry
name - system name of image
prettyname - name of image that is displayed to users
ownerid - reference to user.id - owner of image
imagetypeid - reference to imagetype.id
platformid - reference to platform.id - platform of image
OSid - reference to OS.id - OS of image
imagemetaid - reference to imagemeta.id - NULL or id from imagemeta table where additional image information is stored
minram - minimum RAM required for this image in MB; for VM images, this is how much RAM to allocate to the VM - however, vcl controls the minimum that will be allocated to a VM
minprocnumber - minimum number of cores required by image
minprocspeed - minimum processor speed required by image in MHz
minnetwork - minimum (public?) network speed required by image in Mbps
maxconcurrent - maximum concurrent reservations that can be made for image
reloadtime - reload time for image - used by backend for knowing how long to wait during certain parts of deploying the image; only used by the frontend the first time the image is loaded, after which historical data is used to estimate loading time
deleted - flag to show if image has been deleted - 1 if deleted, 0 if not
test - flag to show if there is a test version of this image available (deprecated?)
lastupdate - date/time image was last updated
forcheckout - flag to tell if the image should show up in the list of images on the new reservations page - this is designed to be used for subimages in clusters where the subimages should not be directly reserved
maxinitialtime - maximum initial time the image can be reserved
project - vcl, hpc, or vclhpc - string used to control some network configuration?
size - size of the image in MB?
architecture - x86 or x86_64 - architecture of image
description - description of image displayed on new reservations page
usage - notes on how to use image displayed on Connect page
basedoffrevisionid - reference to imagerevision.id - image revision this image was based off of

imagemeta table

This table contains additional information about some images. It was added so that the extra information would not needed to be recorded for every image when most of them would not need it.

id - id of entry
checkuser - flag to tell if reservations for image should be timed out if user is disconnect for > 15 minutes - 0 not to do timeout, 1 to do timeout
subimages - flag to tell if subimages are associated with image
sysprep - flag to tell if sysprep should be used on this image (bare metal images only, sysprep is always disabled for VMs)
postoption - ??
architecture - ??
rootaccess - flag to tell if users should have root access on reservations for image - 1 to have it, 0 not to
sethostname - flag to tell if the hostname of the computer should be set to match the name of the reserved computer

imagerevision table

This table contains an entry for every revision (including the initial one) of each image.

id - id of entry
imageid - reference to image.id
revision - number of this revision
userid - reference to user.id - user that created the revision
datecreated - date/time revision was created
deleted - flag to tell if revision has been deleted - 1 for deleted, 0 otherwise
datedeleted - date/time revision was set to deleted
production - flag to tell if this revision is the production one - 1 for production, 0 otherwise
comments - comments entered when revision was created for keeping track of what was done to the image
imagename - system name of revision
autocaptured - flag to tell if this was an auto-captured revision - 1 if it was, 0 otherwise

imagerevisioninfo

This table is used for ...

imagerevisionid -
usernames -
firewallenabled -
timestamp -

imagetype

This table is used for ...

id - id of entry
name - name of entry

IMtype table

This table never really got used. The idea was the people could be notified via IM in addition to or instead of via email.

id - id of entry
name - name of entry

localauth table

This table contains password hashes for local accounts.

userid - reference to user.id
passhash - sha1 hash of password and salt
salt - 8 character salt to be hashed with the password
lastupdated - date/time entry was last updated
lockedout - (unused) flag to tell if this account is locked out - 1 if locked out, 0 otherwise

log table

This table contains an entry for every reservation made in VCL except for those made by the special account 'vclreload'.

id - id of entry
userid - reference to user.id
nowfuture - now or future - whether the reservation was for 'now' or a future date/time
start - start time of the reservation
loaded - date/time the image was ready for user connection
initialend - scheduled end time of reservation
finalend - date/time reservation actually ended
wasavailable - flag to tell if requested reservation was actually available - somewhat deprecated because users get feedback that a selection is not available without actually submitting it
ending - deleted, released, failed, failedtest, noack, nologin, timeout, EOR, or none - how the reservation ended
requestid - reference to request.id - useful for looking through vclid logs
computerid - reference to computer.id
remotelP - IP address of user's machine
imageid - reference to image.id
size - ??

loginlog table

This table contains a log of every authentication attempt.

user - user id entered on login page
authmech - authentication method selected
affiliationid - affiliation used to authenticate user
timestamp - date/time authentication attempt occurred
passfail - 0 for fail, 1 for pass
remotelP - IP address of user's machine
code - used to record additional information about entry; enum field that can be either "none" or "invalid credentials" ("invalid credentials" is recorded when an LDAP server responds that the submitted credentials were invalid)

managementnode table

This table contains information about each management node.

id - id of entry
IPaddress - IP of management node
hostname - hostname of management node
ownerid - reference to user.id - owner of management node
stateid - reference to state.id - current state of management node
lastcheckin - date/time of last check in by management node
checkininterval - how often in seconds the management node should be checking in
installpath - path to root of image library
imagelibenable - 1 to enable sharing images among management nodes, 0 otherwise
imagelibgroupid - reference to resourcegroup.id - resource group that contains other management nodes from which this one can get images
imagelibuser - user to use when fetching images from other management nodes
imagelibkey - ssh identity key to use when fetching images from other management nodes
keys - comma delimited list of ssh identity keys to use when sshing to compute nodes
sshport - ssh port to listen on
publicIPconfiguration - how compute nodes managed by this node obtain their public IP
publicSubnetMask - if publicIPconfiguration is 'static', enter the subnet mask to be used when configuring the compute nodes addresses
publicDefaultGateway - if publicIPconfiguration is 'static', enter the gateway to be used when configuring the compute nodes addresses
publicDNSserver - if publicIPconfiguration is 'static', enter the DNS server to be used when configuring the compute nodes addresses
sysadminEmailAddress - email address to use when sending problem reports
sharedMailBox - email address to use for sending shadow emails of user emails
NOT_STANDALONE - comma delimited list of affiliations (matching affiliation.name) for which federated authentication is configured within Linux images; this prevents vclid from setting passwords for users of Linux images for these affiliations and causes the web frontend to display "(use your campus password)" where the password is normally displayed in the Connect dialog for the reservations
availablenetworks - list of IP addresses with associated netmasks from which a management node can assign static addresses for server reservations

module table

This table contains information about the various perl modules that are part of vclid.

id - id of module
name - name of module
prettyname - more descriptive name of module
description - description of module
perlpackage - string to use when including this module in perl scripts

nathost

This table tracks which management nodes and computers are configured to function as NAT hosts.

id - id of entry
resourceid - reference to resource.id matching management node or computer
publicIPaddress - public IP address of the NAT host; this is the node's IP address on the public Internet
internalIPaddress - internal IP address of NAT host; this is the node's IP address on the internal network over which the NAT host can communicate with the compute nodes

nathostcomputermap

This table tracks which compute nodes are assigned to which NAT hosts.

nathostid - reference to nathost.id
computerid - reference to computer.id

natlog

This table logs information about the NAT configuration used by each reservation.

sublogid - reference to sublog.id
nathostresourceid - reference to resource.id corresponding to resource.id of management node or computer that was acting as the NAT host for the reservation
publicIPAddress - public IP address of the NAT host during the time of the reservation
publicport - port on public IP address that was forwarded to the compute node during the reservation
internalIPAddress - internal IP address of compute node during the reservation
internalport - port on compute node to which traffic was forwarded during the reservation
protocol - protocol (TCP or UDP) of the port that was being forwarded
timestamp - time at which the port forwarding was set up

natport

This table tracks which public ports are currently being forwarded by the NAT hosts to the compute nodes.

reservationid - reference to reservation.id
nathostid - reference to nathost.id
publicport - public port being forwarded
connectmethodportid - reference to connectmethodport.id

openstackcomputermap

This table tracks which OpenStack instance ids correspond to which computer ids.

instanceid - OpenStack instance id
computerid - reference to computer.id

openstackimagerevision

This table records additional information about image revisions related to OpenStack.

imagerevisionid - reference to imagerevision.id
imagedetails - additional OpenStack image details
flavordetails - additional OpenStack flavor details

OS table

This table contains information about OSes VCL knows about.

id - id of entry
name - name of entry
prettyname - more descriptive name of OS
type - reference to OStype.name - windows, linux, unix, etc
installtype - reference to OSinstalltype.name - none, partimage, kickstart, etc
minram - minimum RAM required by the OS; nodes provisioned with images based on this OS will at least have this amount of RAM
[sourcepath - ??](#)
moduleid - reference to module.id - module that handles this OS

OSinstalltype table

This table is a list of the ways an image can be installed.

id - id of entry
name - name of entry

OStype table

This table contains a list of OS types VCL knows about - linux, unix, windows, etc.

id - id of entry
name - name of entry

platform table

This table contains a list of platforms VCL knows about - i386, i386_lab (special case for lab machines), and ultrasparc.

id - id of entry
name - name of entry

privnode table

This table contains all of the nodes that make up the Privilege Tree on the Privileges page.

id - id of entry
parent - reference to privnode.id - parent of this node
name - name of entry

provisioning table

This table contains all of the provisioning modules that are part of vclid.

id - id of entry
name - name of entry
prettyname - more descriptive name of provisioning method
moduleid - reference to module.id - id of module that handles this provisioning method

provisioningOSinstalltype table

This table is a mapping of which provisioning methods can handle which OS install types.

provisioningid - reference to provisioning.id
OSinstalltypeid - reference to OSinstalltype.id

querylog table

This table contains an entry for every query performed by the frontend that modifies the database (i.e. everything but SELECT statements).

userid - reference to user.id
timestamp - date/time of query
mode - mode of site when query performed
query - string of query

request table

This table contains information about every current or future reservation. Only a single entry exists in this table for cluster reservations.

id - id of entry
stateid - reference to state.id - current state of reservation
userid - reference to user.id
laststateid - reference to state.id - last state of reservation
logid - reference to log.id - log entry for reservation
forimaging - 0 for normal reservation, 1 for imaging
test - ??
preload - ??
start - date/time for start of reservation
end - date/time for end of reservation
daterequested - date/time reservation submitted
datemodified - date/time reservation modified
checkuser - flag to tell if reservation should be timed out if user is disconnect for > 15 minutes - 0 not to do timeout, 1 to do timeout

reservation table

This table contains information about every current or future reservation. There will be one entry in this table corresponding to each entry in the request table for normal reservations, and multiple entries (one for each node) in this one for each entry in the request table for cluster reservations.

id - id of entry
requestid - reference to request.id - corresponding entry in request table
computerid - reference to computer.id - computer assigned to this reservation
imageid - reference to image.id - image deployed on computer
imagerevisionid - reference to imagerevision.id - image revision to be deployed on computer
managementnodeid - reference to managementnode.id - management node handling this reservation
remotelP - IP address of user's machine
lastcheck - date/time reservation last checked by vclid
pw - user's password for reservation - leave empty to signify user should use enterprise authentication password
connectIP - (unused)
connectport - (unused)

reservationaccounts table

This table contains userids and passwords for additional accounts for server reservations. There is not an entry for the owner of the reservation. These correspond to the admin and login user groups.

reservationid - reference to reservation.id
userid - reference to user.id
password - user's password for this reservation

resource table

This table contains an entry for every resource VCL knows about. Every resource has a unique id from this table, and a sub id from a resource specific table (computer, image, management node, etc).

id - id of entry

resourcetypeid - reference to resourcetype.id - type of this resource

subid - reference to id from specific resource table (computer.id, image.id, managementnode.id, etc)

resourcegroup table

This table contains all of the resource groups.

id - id of entry

name - name of entry

ownerusergroupid - reference to usergroup.id - user group that owns this resource group

resourcetypeid - reference to resourcetype.id - type of this resource group

resourcegroupmembers table

This table contains a list of which resources are in which resource groups.

resourceid - reference to resource.id

resourcegroupid - reference to resourcegroup.id

resourcemap table

This table contains which resource groups map to other resource groups.

resourcegroupid1 - reference to resourcegroup.id

resourcetypeid1 - reference to resourcetype.id

resourcegroupid2 - reference to resourcegroup.id

resourcetypeid2 - reference to resourcetype.id

resourcepriv table

This table contains the attributes that can be granted to resource groups.

id - id of entry

resourcegroupid - reference to resourcegroup.id - resource group being assigned attribute

privnodeid - reference to privnode.id - node where attribute being assigned

type - block, cascade, available, administer, manageGroup, or manageMapping - attribute being assigned at node

resourcetype table

This table contains a list of all the resource types.

id - id of entry

name - name of entry

schedule table

This table contains all of the schedules available.

id - id of entry

name - name of entry

ownerid - reference to user.id - owner of schedule

scheduletimes table

This table contains all of the starts/ends of the time slots for each schedule. Schedules are what times during a week that computers are available. They run from midnight Sunday morning (0) to midnight Sunday morning one week later (10080).

scheduleid - reference to schedule.id

start - start of time slot in minutes since midnight Sunday morning

end - end of time slot in minutes since midnight Sunday morning

semaphore

This table is used by the web frontend to create semaphore locks on computers being considered to assign to reservations. Entries in this table typically are removed within less than a second of being added. This table was introduced in 2.4.2 to allow multiple web servers to be used in an active/active configuration.

computerid - reference to computer.id
imageid - reference to image.id
imagerevisionid - reference to imagerevision.id
managementnodeid - reference to management.id
expires - time at which this semaphore will expire
procid - unique identifier for each web server process

serverprofile table

This table contains all of the server profiles.

id - id of entry
name - name of entry
description - info about profile
imageid - reference to image.id
ownerid - reference to user.id - owner of this profile
ending - specified or indefinite - how reservations for this profile will typically end
fixedIP - IP address reservations for this profile will typically use
fixedMAC - MAC address reservations for this profile will typically use
admingroupid - reference to usergroup.id
loggingroupid - reference to usergroup.id
monitored - (unused) the intention of this field was to flag if reservations for this profile should be integrated in to a monitoring system

serverrequest table

This table contains an entry for each server reservation.

id - id of entry
name - name of the server reservation
serverprofileid - reference to serverprofile.id - 0 if no profile used or too many items changed from profile
requestid - reference to request.id - main request entry associated with this server reservation
fixedIP - IP address to use on deployed machine
fixedMAC - MAC address to use on deployed machine
admingroupid - reference to usergroup.id - user group containing users that should be able to control this reservation and have admin access to the machine
loggingroupid - reference to usergroup.id - user group containing users that should be only be able to log in to this machine (will see reservation, but only the Connect button)
monitored - (unused) 1 to have this reservation monitored, 0 otherwise

shibauth table

This table contains authentication information related to shibboleth logins.

id - id of entry
userid - reference to user.id - user entry associated with
ts - date/time entry was inserted
sessid - shib session id
data - various shibboleth related data passed in from httpd

sitemaintenance table

This table contains an entry for any active or upcoming scheduled site maintenance windows.

id - id of entry
start - date/time for start of maintenance window
end - date/time for end of maintenance window
ownerid - reference to user.id - owner of this entry
created - date/time entry created
reason - info about why maintenance is scheduled
usermessage - message that will be displayed to users about the maintenance
informhoursahead - hours before the start time that a warning should be displayed on the VCL site about upcoming maintenance
allowreservations - 1 to allow reservations to be scheduled ahead of time that overlap with the window, 0 to keep overlapping future reservations from being scheduled

state table

This table contains all of the states used in VCL. Not all states are used any place where states are used. For example, there are states used in the request table that are not used in the computer table.

id - id of entry
name - name of entry

statgraphcache table

This table contains cached values for the stat graphs. Some of the data points take enough computation time that it is prohibitive to calculate them for really long periods of time. This table allows historical points to be computed once and then saved forever.

graphtype - totalres, concurre, concurlblade, or concurvm - type of graph for this entry
statdate - date for this entry
affiliationid - affiliation for this entry
value - data point value for this entry
provisioningid - reference to provisioning.id

subimages table

This table contains a list of sub images associated with any clusters.

imagemetaid - reference to imagemeta.id
imageid - reference to image.id - subimage associated with imagemetaid

sublog table

This table contains an entry for each computer that was part of a log table entry. For normal reservations, this is a single entry; for cluster reservations, it is one entry for each subimage.

id - id of entry
logid - reference to log.id - corresponding entry in log table
imageid - reference to image.id - image deployed for this reservation
imagerevisionid - reference to imagerevision.id - image revision deployed for this reservation
computerid - reference to computer.id - computer deployed for this reservation
IPaddress - IP address of computer during this deploy
managementnodeid - reference to managementnode.id - management node that handled this deploy
predictivemoduleid - reference to module.id - prediction module used to load image when this reservation finished
hostcomputerid - reference to computer.id - for VMs, this was the host the VM was deployed to
blockRequestid - reference to blockRequest.id - NULL if this was not part of a block request
blockStart - start time of the blockTimes entry for the block request
blockEnd - end time of the blockTimes entry for the block request

user table

This table contains an entry for every user that has ever logged in to VCL.

id - id of entry
uid - numeric id of user for accounts on deployed reservations
unityid - normal user id for user
affiliationid - reference to affiliation.id - affiliation of user
firstname - first name of user
lastname - last name of user
preferredname - preferred name of user
email - email address of user
emailnotices - 1 to get email notices, 0 otherwise
IMtypeid - reference to IMtype.id - type of IM address in IMid
IMid - IM account for user
adminlevelid - reference to adminlevel.id - deprecated
width - screen width for RDP files
height - screen height for RDP files
bpp - color depth for RDP files
audiomode - audio mode for RDP files
mapdrives - drive mapping status for RDP files
mapprinters - printer mapping status for RDP files
mapserial - serial mapping status for RDP files
rdpport - user's preferred RDP port
showallgroups - 1 to show user groups from all affiliations where user groups can be selected, 0 to only show user groups matching user's affiliation
lastupdated - date/time user's info was last updated
validated - 1 if the user is part of the Local affiliation or if the user has been validated by a login or by being looked up via LDAP; 0 if the user is part of a Shibboleth only authenticated affiliation and the user has never logged in
usepublickeys - flag to tell if ssh public key authentication should be used for logging in to Linux reservations
sshpublickeys - list of ssh public keys to set up for user within the user's reservations

usergroup table

This table contains all of the user groups.

id - id of entry
name - name of entry
affiliationid - reference to affiliation.id - affiliation of user group
ownerid - reference to user.id - owner of user group
editusergroupid - reference to usergroup.id - user group that can edit membership of this one
custom - 1 for groups created on user groups page, 0 otherwise
courseroll - 1 for user group created by courseroll scripts, 0 otherwise
initialmaxtime - max time allowed for initial reservation creation for user group
totalmaxtime - total time allowed for reservations created by users in this group
maxextendtime - max time allowed per extension for users in this group
overlapResCount - number of allowed overlapping reservations for users in this group (note that 1 is invalid as it doesn't make sense)

usergroupmembers table

This table tracks which users are members of which user groups.

userid - reference to user.id
usergroupid - reference to usergroup.id

usergrouppriv table

This table is a list of which additional user group privileges have been assigned to which user groups.

usergroupid - reference to usergroup.id
userprivtypeid - reference to usergroupprivtype.id - it probably should have been named usergroupprivtypeid

usergroupprivtype table

This table contains additional privileges that can be associated with user groups that don't make sense to have at any particular privilege node.

id - id of entry
name - name of entry
help - explanation of privilege type

userpriv table

This table contains the user and user group privileges assigned in the privilege tree.

id - id of entry
userid - reference to user.id
usergroupid - reference to usergroup.id
privnodeid - reference to privnode.id - node where user privilege being granted
userprivtypeid - reference to userprivtype.id - user privilege being granted

userprivtype table

This table contains all of the available user privileges.

id - id of entry
name - name of entry

variable table

This table is a place to store any generic data. It can be settings that stay around forever, or things that only need to be temporarily stored. It also provides for a place for the frontend and backend to share less structured information that what is in other tables.

id - id of entry
name - name of entry
serialization - serialization method used for storing data
value - data stored
setby - what set the entry - perl module, web code, etc
timestamp - date/time entry set

vmhost table

This table contains an entry for each virtual host.

id - id of entry
computerid - reference to computer.id - physical machine entry refers to
vmlimit - max number of VMs that can be on this host
vmprofileid - reference to vmprofile.id - profile being used on this host

vmprofile table

This table contains an entry for each virtual host profile.

id - id of entry
profilename - name of the profile
imageid - reference to image.id - image deployed on host
resourcepath -
folderpath -
repositorypath - ??
repositoryimagetypeid -
datastorepath - ??
datastoreimagetypeid -
vmopath - ??
virtualswitch0 - name of virtual switch0
virtualswitch1 - name of virtual switch1
virtualswitch2 - name of virtual switch2
virtualswitch3 - name of virtual switch3
vmdisk - **localdisk or networkdisk** - ??
username - username to use when accessing hosts with this profile
password - password to use when accessing hosts with this profile
eth0generated - 1 to generate eth0 MAC for VMs on hosts with this profile, 0 to use MAC from computer table
eth1generated - 1 to generate eth1 MAC for VMs on hosts with this profile, 0 to use MAC from computer table
rsapub -
rsakey -
encryptedpasswd -

vmtype table

This table contains all of the virtual machine types.

id - id of entry
name - name of entry

winKMS table

This table contains Windows KMS licensing information.

affiliationid - reference to affiliation.id
address - IP address of KMS server
port - port KMS server is listening on

winProductKey table

This table contains Windows product key information.

affiliationid - reference to affiliation.id
productname - ??
productkey - ??

xmlrpcLog table

This table logs each XML RPC API call.

xmlrpcKeyid - reference to user.id - user that made API call (originally, every user got their own key, and this was a reference to another table)
timestamp - date/time API call was made
IPAddress - IP address from which API call was made
method - function called through API
apiversion - API version used
comments - serialization of arguments passed to API method