DevDB

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What is DevDB?

- Web interface to a database of devices on the RMHAM network
  - Structured to minimize data entry errors
  - Encourages consistency
  - Avoids duplicate subnet or IP address issues
- DevDB manages tools and services
  - DNS
  - SmokePing
  - Observium
  - Network Inventory and Graph

Using DevDB

- Login using radius username/password
- Actions added from nav bar
  - *Update* changes depending on element shown
  - *Configure* pushes changes
- Click on entries to navigate to the element
- Click on headers to sort tables
- *Update> Edit* or *Update > Change XXXX* required to change elements

Naming convention

- Devices: *device.site.club*
  - radius.thorodin.rmham
  - 12v.squaw.rmham
  - dmr.akron.rmham
  - router.cheyennemtn.cra
  - radio-saddleback.ac0kq.qth
- Ports: *neighbor.device.site.club*
  - devilshead.router.squaw.rmham
  - squaw.router.devilshead.rmham
  - vpn.router.thorodin.rmham

IP Address Space

- All subnets are /24

- 10. address space
  - TLD .rmham, .cra, .csu, .ncarc, etc.
  - RMHAM sites mostly 10.30
  - RMHAM links mostly 10.20

- 192.168 address space
  - TLD .qth

- 172.16 address space
  - VPNs

DevDB Elements

- TLD – *club*
- Site – Unique subnet and *site.club*
- Link – Unique subnet, devices named by site
- Device – Unique IP and *device.site.club*
- Port - Unique IP and *neighbor.device.site.club*
- Alias – Unique FQDN for a device or port

Sites

Domain	Title	Subnet	Location
ac0kq.qth	AC0KQ-QTH	192.168.11.0/24	Willem's House
ac0kq.rmham	AC0KQ-RPT	10.30.31.0/24	
ae5ji.qth	AE5JI-QTH	192.168.71.0/24	Rick Naething House
ae5ji.rmham	AE5JI-RMHAM	10.40.10.0/24	
akron.rmham	Akron	10.30.28.0/24	
almagre.rmham	Almagre	10.30.120.0/24	
auroramkt.rmham	Aurora Marketing	0.1.2.0/24	
badger.rmham	Badger	10.30.60.0/24	
blackforest.rmham	Black Forest	10.0.10.0/24	
bragalone.rmham	Bragalone	0.1.3.0/24	
baldy.rmham	Breckenridge	10.30.27.0/24	
buckhorn.ncarc	Buckhorn	10.16.2.0/24	Buckhorn Mountain
budweiser.ncarc	Budweiser	10.16.3.0/24	Budweiser Events Center
caviness.rmham	Caviness	10.30.24.0/24	
cedarwood.rmham	Cedarwood	10.0.11.0/24	
cheyennemtn.rmham	Cheyenne Mountain	10.30.70.0/24	
cheyennewy.rmham	Cheyenne WY	10.30.110.0/24	
cheyenneeoc.rmham	Cheyenne WY EOC	10.35.0.0/24	
conifer.cra	Conifer CRA	10.30.12.0/24	
conifer.rmham	Conifer RMHAM	10.30.130.0/24	

Devices

IP	Hostname	Site	Title	Type	Observium	Smokeping				Remarks
						Thorodin	cBridge	Canon	CRA	
10.30.31.189	1wire	AC0KQ-RPT	AC0KQ 1wire	Computer	No	No	No	No	No	
10.30.31.190	adsb	AC0KQ-RPT	AC0KQ ADSB Receiver	Computer	No	No	No	No	Alert	
10.30.31.180	pi29571	AC0KQ-RPT	AC0KQ AllStar 447.850	AllStar Repeater	No	No	No	No	Alert	rPi AllStar Node 29571 447.850
10.30.31.188	ctnpi	AC0KQ-RPT	AC0KQ Computer	Packet	No	No	No	No	Alert	
10.30.31.5	12v	AC0KQ-RPT	AC0KQ DC Power Control	DC Power Control	No	No	No	No	No	
192.168.11.81	argon	AC0KQ-QTH	AC0KQ Desktop	Computer	No	No	No	No	No	
192.168.11.2	helium	AC0KQ-QTH	AC0KQ DNS Server	Computer	No	No	No	No	No	
192.168.11.1	router	AC0KQ-QTH	AC0KQ QTH Router	Router	Yes	No	No	No	Alert	
10.30.31.1	router	AC0KQ-RPT	AC0KQ RPT Router	Router	Yes	No	No	No	Alert	
10.30.32.100	kpc	Saddleback	AC0KQ-1 KPC3+	Packet	No	No	No	No	No	
10.20.22.4	radio-saddleback	AC0KQ-QTH	AC0KQ-QTH Radio to Saddleback	Radio	Yes	No	No	No	No	
10.45.1.4	radio-sandia	AE5JI-QTH	AE5JI Radio to Sandia	Radio	No	No	No	No	No	
10.40.10.50	radius	AE5JI-RMHAM	AE5JI Radius	Computer	Yes	No	No	No	No	
192.168.71.1	router	AE5JI-QTH	AE5JI Router	Router	Yes	No	No	No	No	

Ports

IP	Hostname	Site	Observium	Smokeping				Remarks
				Thorodin	cBridge	Canon	CRA	
10.20.13.1	ac0kq.router.squaw.rmham	Squaw	No	No	No	No	No	
10.20.22.1	ac0kq-qth.router.saddleback.rmham	Saddleback	No	No	No	No	No	
10.20.17.1	ac0kq-rpt.router.saddleback.rmham	Saddleback	No	No	No	No	No	
10.45.1.1	ae5ji-qth.router.sandia.rmham	Sandia Peak	No	No	No	No	No	
10.20.7.2	almagre.router.cheyennemtn.rmham	Cheyenne Mountain	No	No	No	No	No	
10.20.8.2	almagre.router.fremont.rmham	Fremont Peak	No	Yes	Yes	No	No	
10.20.10.1	almagre24.router.devilshead.rmham	Devilshead	No	No	No	No	No	
10.20.6.1	almagre58.router.devilshead.rmham	Devilshead	No	No	No	No	No	
10.20.11.2	badger.router.cripplecreek.rmham	Cripple Creek	No	No	No	No	No	
10.20.14.1	badger.router.devilshead.rmham	Devilshead	No	No	No	No	No	
10.15.2.1	buckhorn.router.unc.ncarc	UNC	No	No	No	No	No	
10.15.5.1	buckhorn.router.horsetooth.ncarc	Horsetooth-North	No	No	No	No	No	
10.15.3.1	budweiser.router.csu.csu	CSU	No	No	No	No	No	
10.5.1.128	cedarwood.router.kd0mbl.rmham	KD0MBL	No	No	No	No	No	
10.5.1.2	cedarwood.router.pueblo.rmham	Pueblo	No	No	No	No	No	
10.5.1.254	cedarwood.router.pueblowest.rmham	Pueblo West	No	No	No	No	No	
10.5.2.1	cedarwood.router.fremont.rmham	Fremont Peak	No	No	No	No	No	
10.20.7.1	cheyennemtn.router.almagre.rmham	Almagre	No	No	No	No	No	
10.20.11.1	cripplecreek.router.badger.rmham	Badger	No	No	No	No	No	
10.5.4.2	cripplecreek.router.fremont.rmham	Fremont Peak	No	No	No	No	No	
10.15.1.2	csu.router.horsetooth.ncarc	Horsetooth-North	No	No	No	No	No	
10.15.3.2	csu.router.budweiser.ncarc	Budweiser	No	No	No	No	No	

VPN Ports

IP	Hostname	Site	Observium	Smokeping				Remarks
				Thorodin	cBridge	Canon	CRA	
172.16.11.1	vpn.router.ac0kq.qth	AC0KQ-QTH	No	No	No	No	No	
172.16.11.192	vpn.router.principia.qth	Principia	No	No	No	No	No	
172.16.20.1	vpn.router.thorodin.rmham	Thorodin	No	No	No	No	No	
172.16.20.10	vpn.router.storage.qth	Storage	No	No	No	No	No	
172.16.20.12	vpn.router.cheyenneeoc.rmham	Cheyenne WY EOC	No	No	No	No	No	
172.16.20.13	vpn.router.fortmorgan.rmham	Fort Morgan	No	No	No	No	No	
172.16.20.15	vpn.router.eldorado.rmham	Eldorado RMHAM	No	No	No	No	No	
172.16.20.18	vpn.router.almagre.rmham	Almagre	No	No	No	No	No	
172.16.20.26	vpn.router.conifer.rmham	Conifer RMHAM	No	No	No	No	No	
172.16.20.28	vpn.router.trailer.rmham	Trailer	No	No	No	No	No	
172.16.20.35	vpn.router.wa1jhk.cra	WA1JHK	No	No	No	No	No	
172.16.20.37	vpn.router.n5zgt.qth	N5ZGT	No	No	No	No	No	
172.16.20.39	vpn.router.caviness.rmham	Caviness	No	No	No	No	No	
172.16.20.42	vpn.router.mill.rmham	Mill	No	No	No	No	No	
172.16.20.43	vpn.router.cheyennewy.rmham	Cheyenne WY	No	No	No	No	No	
172.16.20.45	vpn.router.durango.rmham	Durango	No	No	No	No	No	
172.16.20.46	vpn.router.qrv2.rmham	QRV2	No	No	No	No	No	
172.16.20.49	vpn.router.n0hap.qth	N0HAP	No	No	No	No	No	
172.16.20.51	vpn.router.conifer.cra	Conifer CRA	No	No	No	No	No	
172.16.20.52	vpn.router.akron.rmham	Akron	No	No	No	No	No	
172.16.20.55	vpn.router.genoa.rmham	Genoa	No	No	No	No	No	
172.16.20.56	vpn.router.baldy.rmham	Breckenridge	No	No	No	No	No	

Aliases

IP	Hostname	Remarks
10.30.20.7	dns.thorodin.rmham	
10.30.20.7	observium.rmham	

Links

Title	Subnet	Site1	Site2	Remarks
Almagre<->Cheyenne Mountain	10.20.7.0/24	Almagre	Cheyenne Mountain	
Almagre<->Fremont Peak	10.20.8.0/24	Almagre	Fremont Peak	
Badger <-> Cripple Creek	10.20.11.0/24	Badger	Cripple Creek	
Cedarwood Multilink	10.5.1.0/24	Cedarwood	Pueblo Pueblo West KD0MBL	PtMP link
Cripple Creek <-> Fremont Peak	10.5.4.0/24	Cripple Creek	Fremont Peak	
CSU <-> Budweiser	10.15.3.0/24	CSU	Budweiser	
CSU <-> Horsetooth-North	10.15.1.0/24	CSU	Horsetooth-North	
CSUDUR-CSUUSC	10.15.6.0/24	CSU	CSU-USC	
Devils Head to Westcreek	10.20.16.0/24	Devilshead	Westcreek	
Devilshead<->Almagre	10.20.10.0/24	Devilshead	Almagre	
Devilshead<->Almagre	10.20.6.0/24	Devilshead	Almagre	
Devilshead<->Badger	10.20.14.0/24	Devilshead	Badger	
Eldorado RMHAM <-> Eldorado CRA	10.20.23.0/24	Eldorado RMHAM	Eldorado CRA	
FireFred	10.20.0.0/24	K2AD	Aurora Marketing Bragalone	
Firestone<->Horsetooth	10.20.4.0/24	Firestone	Horsetooth	
Firestone<->Lee Hill	10.20.1.0/24	Firestone	Lee Hill	
Fremont Peak <-> Cedarwood	10.5.2.0/24	Fremont Peak	Cedarwood	

DNS Nameservers

IP	Hostname	Remarks
10.1.2.213	radius.k0jsc.rmham	South Network DNS
10.18.0.9	radius.csu.csu	Northern Colorado DNS
10.30.20.6	radius.thorodin.rmham	North Network DNS
10.40.10.50	radius.ae5ji.rmham	New Mexico DNS

Site Elements

- Title
  - Used in displays
- Domain
  - Use unique site name with TLD
- Subnet
  - Every subnet is a different site to DevDB
  - 0.0.x.x are *don't know, don't graph*
  - 0.1.x.x are *don't know, do graph*
- Location
  - Not currently populated
- Remarks
- Status

Saddleback

Site

Domain	saddleback.rmham
Subnet	10.30.32.0/24
Location	
Remarks	
Status	Active

Devices

IP	Hostname	Title	Type	Remarks
10.30.32.1	router	Saddleback Router	Router	RB2011
10.30.32.100	kpc	AC0KQ-1 KPC3+	Packet	

Links

Title	Subnet	Neighbor	Remarks
Saddleback <-> AC0KQ-QTH	10.20.22.0/24	AC0KQ-QTH	
Saddleback <-> AC0KQ-RPT	10.20.17.0/24	AC0KQ-RPT	This is a 360 foot fiber link between the sites.
Squaw <-> Saddleback	10.20.13.0/24	Squaw	
Thorodin <-> Saddleback	10.20.3.0/24	Thorodin	

Device Elements

- Title – used in displays and as graph title
- IP – first three octets defined by site
- Site – where the device is located
- Hostname – unique name, domain from site
- Type – type of device (e.g. radio, router)
- Observium or Smokeping device monitoring
- Remarks
- Status

AC0KQ AllStar 447.850

Device

IP	10.30.31.180	
Site	AC0KQ-RPT	
Hostname	pi29571.ac0kq.rmham	
Title	AC0KQ AllStar 447.850	
Type	AllStar Repeater	
Status	Active	
Observium	No	
Smokeping	Thorodin	No
	cBridge	No
	Canon	No
	CRA	Alert
Remarks	rPi AllStar Node 29571 447.850	

Budweiser Router

Device

IP	10.16.3.1	
Site	Budweiser	
Hostname	router.budweiser.ncarc	
Title	Budweiser Router	
Type	Router	
Status	Active	
Observium	No	
Smokeping	Thorodin	No
	cBridge	No
	Canon	No
	CRA	No
Remarks	Mikrotik Router hEX	

Links

Subnet	Link
10.15.3.0/24	CSU <-> Budweiser

Ports

IP	Hostname	Remarks
10.15.3.2	csu.router.budweiser.ncarc	

Device Types

Type	Text
ac	AC Power Control
asl	AllStar Repeater
cam	Web Cam
dc	DC Power Control
dmr	DMR Repeater
irlp	IRLP
mesh	Mesh Node
node	Computer
packet	Packet
phone	Phone
ping	Smokeping Target
radio	Radio
repeater	Analog Repeater
router	Router
rtcm	RTCM
wifi	Wifi Access Point

Port Elements

- IP – link or external address
- Site – Defined by device
- Router – device name of router
- Observium or Smokeping port monitoring
- Status
- Remark

badger.router.cripplecreek.rmham

Port

IP	10.20.11.2	
Site	Cripple Creek	
Router	router.cripplecreek.rmham	
Observium	No	
Smokeping	Thorodin	No
	cBridge	No
	Canon	No
	CRA	No
Status	Active	
Remarks		

Link

- Subnet connecting sites
- Link types
    - Point to point
    - Point to Multipoint
    - Multi-hop link (point to point to point)
    - Distributed subnet

Link Elements

- Title – used in graphs (made if omitted)
- Subnet uniquely defines link
- Each site connected to the link
- Port connecting router to link
- Radios connecting sites
- Remarks
- Status

Almagre<->Fremont Peak

Link

Subnet	10.20.8.0/24
Site 1	Almagre
Site 2	Fremont Peak
Remarks	
Status	Active

Ports

IP	Hostname	Remarks
10.20.8.1	fremont.router.almagre.rmham	
10.20.8.2	almagre.router.fremont.rmham	

Devices

IP	Hostname	Title	Type	Remarks
10.20.8.3	radio-fremont.almagre.rmham	Almagre Radio	Radio	
10.20.8.4	radio-almagre.fremont.rmham	Fremont Peak Radio	Radio	

Cedarwood Multilink

Link

Subnet	10.5.1.0/24
Site 1	Cedarwood
Site 2	Pueblo
Site 3	Pueblo West
Site 4	KD0MBL
Remarks	PtMP link
Status	Active

Ports

IP	Hostname	Remarks
10.5.1.1	ptmp.router.cedarwood.rmham	
10.5.1.2	cedarwood.router.pueblo.rmham	
10.5.1.128	cedarwood.router.kd0mbl.rmham	
10.5.1.254	cedarwood.router.pueblowest.rmham	

Devices

IP	Hostname	Title	Type	Remarks
10.5.1.3	radio-cedarwood.pueblo.rmham	Pueblo Radio to Cedarwood	Radio	UBNT Rocket M5
10.5.1.4	ap.cedarwood.rmham	Cedarwood Access Point	Radio	
10.5.1.10	radio-cedarwood.pueblowest.rmham	Pueblo West Radio to Cedarwood	Radio	
10.5.1.15	radio-cedarwood.kd0mbl.rmham	KD0MBL Radio to Cedarwood	Radio	UBNT Rocket M5

Fremont Peak <-> KC0MDQ <-> K0ONV

Link

Subnet	10.0.5.0/24
Site 1	Fremont Peak
Site 2	K0ONV
Remarks	This link uses KC0MDQ as an intermediate hop. This site has two back to back radios and no local network.
Status	Active

Ports

IP	Hostname	Remarks
10.0.5.1	kc0mdq.router.fremont.rmham	
10.0.5.2	fremont.router.k0onv.rmham	

Devices

IP	Hostname	Title	Type	Remarks
10.0.5.3	radio-kc0mdq.fremont.rmham	Fremont Peak Radio to KC0MDQ	Radio	
10.0.5.4	radio-fremont.kc0mdq.rmham	KC0MDQ Radio to Fremont	Radio	
10.0.5.5	radio-k0onv.kc0mdq.rmham	KD0MDQ Radio to K0ONV	Radio	
10.0.5.6	radio-kc0mdq.k0onv.rmham	K0ONV Radio to KC0MDQ	Radio	UBNT Nanobridge

Adding a site

- Add the site
- Add router and devices on site subnet
- Add link
- Add ports to routers
- Add link radios

New site

Top Level Domain	Rocky Mountain Ham Radio ⌄
Domain	[ ] .rmham
Title	[ ]
Subnet	[ ] .0/24
Location	[ ]
Remarks	[ ]

[Submit] [Cancel]

New device

To add a device to a link, select the link and then do Update>New device

Site	Almagre	
IP 10.30.120.		
Hostname		.almagre.rmham
Title		
Type	Radio	
Observium	No	
Smokeping	Thorodin	No
	cBridge	No
	Canon	No
	CRA	No
Remarks		

Submit   Cancel

New device

To add a device to a link, select the link and then do Update>New device

Site	*External* ⌄	
IP		
Hostname	.	
Title		
Type	Smokeping Target ⌄	
Observium	No ⌄	
Smokeping	Thorodin	No ⌄
	cBridge	No ⌄
	Canon	No ⌄
	CRA	No ⌄
Remarks		

Submit   Cancel

New link

Title	
Site 1	Almagre ⌄
Site 2	Buckhorn ⌄
Subnet	.0/24
Remarks	

Submit   Cancel

New port

To add a port for a link, select the link and then do Update>New port

Host	router.akron.rmham ▾	
IP		
Hostname	.router.akron.rmham	
Observium	No ▾	
Smokeping	Thorodin	No ▾
	cBridge	No ▾
	Canon	No ▾
	CRA	No ▾
Remarks		

Submit   Cancel

Tips and Tricks

- *Add link with devices* will add link, routers and radios

- *Update > Show routes* on routers provides a table of routes

- *Configure > Graph Network* shows orphans in yellow

- *Networking > HOWTO* on support page provides useful information