

Working with DNS Records

Working with DNS Records

The screenshot shows a web interface for managing DNS records. At the top is a navigation bar with tabs for Dashboard, Resources, DNS (selected), DHCP, Servers, IPAM, Peering, Reporting, and Global Commander. A search bar and user profile icon are on the right. Below the navigation bar, there's a sub-navigation area with buttons for DNSv3, DNS Groups, DNS Servers, DNS Zones, and DNS Records (selected). A dropdown menu shows 'A' and an 'Add Record' button. The main section is titled 'Record List'. It contains a complex filter area with fields for Record Host, Record Type, Record Comment, Record Value, Last Query, Last Modified, Record TTL, Record Status, and IP Range. A 'Filter' button is at the bottom left of the filter area. Below the filters is a table with columns: Record Host, Record Type, Record Value, Last Queried, and Actions. The table lists three PTR records for different IP ranges, each with 'Check', 'Perms', and 'Delete' action buttons.

Record Host	Record Type	Record Value	Last Queried	Actions
{1-255}.192.88.64.in-addr.arpa.	PTR	64-88-192-\$1-smartcom.sc2000.net. test test		Check Perms Delete
{1-255}.193.88.64.in-addr.arpa.	PTR	64-88-193-\$1-smartcom.sc2000.net.		Check Perms Delete
{1-255}.194.88.64.in-addr.arpa.	PTR	64-88-194-\$1-smartcom.sc2000.net.		Check Perms Delete

DNS Records may be managed either from the [Zone View](#) page (for the records under their respective zone) or globally through the **DNS Records** sub-tab.

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Working with Records - DNS Records List

The DNS Records List provides a global list records for expedited searching, filtering, adding, and editing of DNS Records.

DNSv3
DNS Groups
DNS Servers
DNS Zones
DNS Records
A
Add Record

Record List

Record Host
Filter by Record Host

Record Type
Record Comment
Filter by Record Comment

Record Value
Filter by Record Value

Last Query
< Pick Date...
> Pick Date...

Last Modified
< Pick Date...

Record TTL
Record TTL

Record Status

IP Range
Filter IP Address Min...
Filter IP Address Max...

Filter

Record Host	Record Type	Record Value	Last Queried	Actions
{1-255}.192.88.64.in-addr.arpa.	PTR	64-88-192-\$1-smartcom.sc2000.net. test test		Check Perms Delete
{1-255}.193.88.64.in-addr.arpa.	PTR	64-88-193-\$1-smartcom.sc2000.net.		Check Perms Delete
{1-255}.194.88.64.in-addr.arpa.	PTR	64-88-194-\$1-smartcom.sc2000.net.		Check Perms Delete

From the DNS Tab, click on the "DNS Records" sub-tab button, or select it from the DNS dropdown menu.

All DNS records available in ProVision displays in a single Record List, along with Host, Type, Value, and Last Queried information.

Records may be sorted ascending/descending by "Record Host" name, or by "Last Queried", by clicking on the column header name / sort arrows.

Filter Records

Search for specific records by filtering by Host, Type, Comment, Value, Last Query, Last Modified, Record TTL, Status, or IP Range.

After entering your filter criteria, click "Filter".

Record List

Record Host
www.as

Record Type
A

Record Comment
Filter by Record Comment

Record Value
Filter by Record Value

Last Query
< Pick Date...
> Pick Date...

Last Modified
< Pick Date...

Record TTL
Record TTL

Record Status

IP Range
Filter IP Address Min...
Filter IP Address Max...

Filter

Record Host	Record Type	Record Value	Last Queried	Actions
www.as14860.net.	A	64.88.210.71		Check Perms Delete

Page :
1
Go

Record Actions

For each record, you may:

- Click the "Check" button to run an DNS Monitor error check on the record
- Review or change record permissions by clicking "Perms" (Admin only)
- Delete the record by clicking "Delete"
- Review or Edit record details by double-clicking on the row for the desired record.
 - Review record revision dates or enter your desired edit, then click "Save changes" to complete.

Edit NS record

Type: NS

Host: 123zone.com.

Value: ns1.example.com.

TTL: 1 hour

Comment: You can add a comment to the record, that will not be pushed to the server.

☐ Skip Validation.

Record revisions

Date	Host	Value
2019-08-11 14:19:26	123zone.com.	ns1.example.com.
2019-08-11 14:19:22	123zone.com.	ns1.example.com.
2019-02-21 15:09:59	123zone.com.	ns1.example.com.

Close Save changes

Add a New Record

At the top of the DNS Records page, select the desired record type, then click "Add Record".

DNSv3 DNS Groups DNS Servers DNS Zones **DNS Records**

A Add Record

Record List

Record Host: Filter by Record Host

Record Type: [Dropdown]

Record Comment: Filter by Record Comment

Record Value: Filter by Record Value

Available Record Types for the Record List include the following:

- A
- A6
- AAAA
- CNAME
- CAA
- DNAME
- DNSKEY

- DS
- MX
- NAPTR
- NS
- PTR
- RP
- SRV
- TLSA
- SPF
- HINFO
- LOC
- TXT
- URI

Enter the record information for the record type. When done, click "Save Changes".

Edit NS record

Type: NS

Host: ex: host

Value: ex: ns1.example.com

TTL: [dropdown arrow]

Comment: You can add a comment to the record, that will not be pushed to the server.

☐ Add to all groups.

☐ Skip Validation.

Close Save changes

Working with Zone Records - Zone View Page

Record Types

The Zone View page supports 20 record types, as well as the ability to add a custom/arbitrary record type manually.

Available record types include the following:

- A
- A6
- AAAA
- CNAME
- CAA
- DNAME
- DNSKEY
- DS
- HINFO

- LOC
- MX
- NAPTR
- NS
- PTR
- RP
- SPF
- SRV
- TLSA
- TXT
- URI
- Other

OTHER Record Types

When working with DNS Zones and Records, additional record types may be manually added by selecting "Other" when adding a new record.

S64 DNS users can use record type "Other" to add "SYNTH" or "TYPE65464" type records similar to the format below:

```
$ORIGIN 30 IN TYPE65464 ${p4} PTR ${a4}.pool.example.com.
$ORIGIN 600 IN TYPE65464 ${a4} A ${a4}
$ORIGIN TYPE65464 ${p6} PTR user${a6}.my.example.com.
$ORIGIN 5 IN SYNTH user${a6} AAAA ${a6}
$ORIGIN IN SYNTH nptr-${u} NAPTR 10 20 "A" " " " " srv-${u}
$ORIGIN IN SYNTH srv-${u} SRV 10 20 1234 srv-addr-${u}
```

However, arbitrary / other record types are unable to be validated, so use with care!

Add Zone Records

From the Zone View page, under DNS Records, look for the line "Add a new ____ Record".

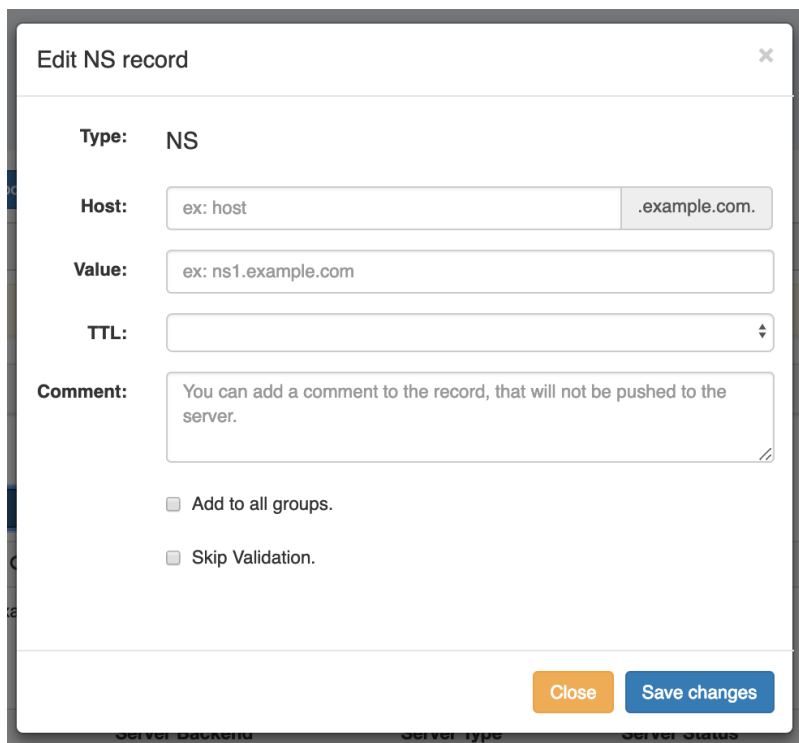
Select the desired record type from the dropdown list, then click "Add".

DNS Records

Add a New NS Record Add

Record Type	Record Data Q	Actions
SOA	hostmaster.example.com. mail.example.com. (2019022001 172800 900 3600 86400)	
NS	host.example.com. maps to ns1.example.com	Delete Check Perms

Fill in the information for the new record, selecting options for adding to groups or skipping validation.



Edit NS record

Type: NS

Host: ex: host .example.com.

Value: ex: ns1.example.com

TTL:

Comment: You can add a comment to the record, that will not be pushed to the server.

☐ Add to all groups.

☐ Skip Validation.

Close Save changes

When done, click "Save Changes".

A Note on Quotes

When working with records (like TXT), there is no need to add quotes around the record value - ProVision will automatically add double quotes for the TXT records on Zone Push, and will also automatically use quotes to split TXT values larger than 255 characters.

If your record value contains internal quotes that you wish to keep, you may escape it by adding a backslash (\) before the quote from the "Edit Record" screen.

Examples:

In the Edit Record screen, there is no need to add quotes to the record value, as seen below:

×

Type: TXT

Host:

Value:

TTL:

Comment:

You can add a comment to the record, that will not be pushed to the server.

☐ Skip Validation.

Record revisions

➤

Close

Save changes

However, if an internal quote exists that you wish to retain, escape it by using a backslash (\) before the quote(s):

×

Type: TXT

Host:

Value:

TTL:

Comment:

You can add a comment to the record, that will not be pushed to the server.

☐ Skip Validation.

Record revisions

➤

Close

Save changes

When done editing the record, click "Save changes".

Repeating this to create four TXT record examples, we end up with the following for test1 through test4:

TXT	test1.acctest.com. maps to qweqwe	Delete	Check	Perms
TXT	test2.acctest.com. maps to qweqwe qweqwe	Delete	Check	Perms
TXT	test3.acctest.com. maps to \"qweqw qwewq\"	Delete	Check	Perms
TXT	test4.acctest.com. maps to asdsa \" wqeqwe	Delete	Check	Perms

These four records become the following in the zone file once pushed (note the automatic addition of quotes around the values, and the escaped quotes in test3 and test 4):

```
test1.acctest.com. 3600 IN TXT "qweqwe"
test2.acctest.com. 3600 IN TXT "qweqwe qweqwe"
test3.acctest.com. 3600 IN TXT "\"qweqw qwewq\""
test4.acctest.com. 3600 IN TXT "asdsa \" wqeqwe"
```

If you have additional questions on handling of quote characters in zone records, contact support@6connect.com.

Autogenerate Forward Zone Records

From the Zone View page, under DNS Records, look for the line "Add a new ____ Record".

Select the desired record type from the dropdown list, then click "Add".

DNS Records

Add a New NS Record Add

Record Type	Record Data Q	Actions
SOA	hostmaster.example.com. mail.example.com. (2019022001 172800 900 3600 86400)	
NS	host.example.com. maps to ns1.example.com	Delete Check Perms

Enter the Host value for the record.

For the Record Value, enter the IP Address, using brackets for the last octet to denote the range of IPs.

Example:

Host: h69-131-159-\$1.qncyfi

Value: 69.131.159.{240-255}

Edit A record

Type: A

Host:

h69-131-159-\$1.qncyfi

.acctest.com.

Value:

69.131.159.{240-255}

TTL:

Comment:

You can add a comment to the record, that will not be pushed to the server.

☐ Add to all groups.

☐ Skip Validation.

Close

Save changes

and this is expanded to:

h69-131-159-240.qncyfi.acctest.com.	3600	IN	A	69.131.159.240
h69-131-159-241.qncyfi.acctest.com.	3600	IN	A	69.131.159.241
h69-131-159-242.qncyfi.acctest.com.	3600	IN	A	69.131.159.242
h69-131-159-243.qncyfi.acctest.com.	3600	IN	A	69.131.159.243
h69-131-159-244.qncyfi.acctest.com.	3600	IN	A	69.131.159.244
h69-131-159-245.qncyfi.acctest.com.	3600	IN	A	69.131.159.245
h69-131-159-246.qncyfi.acctest.com.	3600	IN	A	69.131.159.246
h69-131-159-247.qncyfi.acctest.com.	3600	IN	A	69.131.159.247
h69-131-159-248.qncyfi.acctest.com.	3600	IN	A	69.131.159.248
h69-131-159-249.qncyfi.acctest.com.	3600	IN	A	69.131.159.249
h69-131-159-250.qncyfi.acctest.com.	3600	IN	A	69.131.159.250
h69-131-159-251.qncyfi.acctest.com.	3600	IN	A	69.131.159.251
h69-131-159-252.qncyfi.acctest.com.	3600	IN	A	69.131.159.252
h69-131-159-253.qncyfi.acctest.com.	3600	IN	A	69.131.159.253
h69-131-159-254.qncyfi.acctest.com.	3600	IN	A	69.131.159.254
h69-131-159-255.qncyfi.acctest.com.	3600	IN	A	69.131.159.255

When you are done, click "Save Changes" to complete the edit.

Autogenerate Reverse Zone Records

ProVision can be configured auto-generate IPv4 / IPv6 PTR records in reverse zones based on template.

Example IPv4 :

If the zone is named 33.44.in-addr.arpa.

Host : {100-150}.{22-24}
Value : \$1-\$2-available.example.com.

The generated records on push will look like :
100.22.33.44.in-addr.arpa. IN PTR 100-22-available.example.com.
101.22.33.44.in-addr.arpa. IN PTR 101-22-available.example.com.
...
149.24.33.44.in-addr.arpa. IN PTR 149-24-available.example.com.
150.24.33.44.in-addr.arpa. IN PTR 150-24-available.example.com.

Example IPv6 :

If the zone is named 0.f.e.d.c.b.a.9.8.7.6.5.4.3.2.1.ip6.arpa.

Host : 0.{0-f}.{2-3}.d.c.b.a.9.8.7.6.5.4.3.2.1
Value : \$1-\$2-host.example.com.

The generated records on push will look like :
0.0.2.d.c.b.a.9.8.7.6.5.4.3.2.1.0.f.e.d.c.b.a.9.8.7.6.5.4.3.2.1.ip6.arpa. 3600 IN PTR 0-2-host.example.com.
0.1.2.d.c.b.a.9.8.7.6.5.4.3.2.1.0.f.e.d.c.b.a.9.8.7.6.5.4.3.2.1.ip6.arpa. 3600 IN PTR 1-2-host.example.com.
...
0.e.3.d.c.b.a.9.8.7.6.5.4.3.2.1.0.f.e.d.c.b.a.9.8.7.6.5.4.3.2.1.ip6.arpa. 3600 IN PTR e-3-host.example.com.
0.f.3.d.c.b.a.9.8.7.6.5.4.3.2.1.0.f.e.d.c.b.a.9.8.7.6.5.4.3.2.1.ip6.arpa. 3600 IN PTR f-3-host.example.com.

Autogeneration of Reverse Zone Records is also performed when generating a reverse zone from the IPAM Gadget:

Autogenerate Reverse Zone

Autogenerate a reverse zone from an IP Block by clicking on the CIDR link in the block list.

IP Address / CIDR	Size	Category	Created	Updated	Owner	Net
144.121.216.132/30	30	Customer	2018-07-16	-	-	NET-144-...
144.121.228.1 reverse zone: 144.121.216.132/30	-	Customer	2018-10-04	-	-	NET-144-...
144.121.228.128/29	29	Customer	2018-10-04	-	-	NET-144-...

The reverse zone will be created for the block, and the Zone View page will load, displaying further information and autogenerated records.

DNSv3
DNS Groups
DNS Servers
DNS Zones
DNS Records

216.121.144.in-addr.arpa.

Test Group 2

Push Zone Now
Schedule Push
Export Zone
Import Zone

Edit the comment.

Advanced Settings

DNS Records

Add a New
A
Record
Add

Record Type	Record Data Q	Actions
SOA	ns.example.com. hostmaster.example.com. (2022081801 172801 900 3600 86400)	
NS	216.121.144.in-addr.arpa. maps to test.	Delete Check Perms
PTR	{132-135}.216.121.144.in-addr.arpa. maps to \$1.216.121.144.test.test.com.	Delete Check Perms

Attached Servers

Import Zone Records

To import a zone file to populate record data in ProVision, go to the Zone View page for the zone. The zone must already exist in ProVision, although it may be empty

Tip

You may wish to enable "Save Import File" in Admin Settings > DNS Settings prior to importing zone files, so that the file is available for later download. See [Working with DNS Zones](#) or [Import DNS Zones](#).

Click "Import Zone" on the Zone View page.

example.com.

Example Group

Push Zone Now
Schedule Push
Export Zone
Import Zone

Edit the comment.

A Zone Import dialog box will open. Next to **Zone File:**, click "Choose File" and select your .zone file to import. Then, select an import policy to follow.

Zone Import [Close]

Zone Name: example.com.

Zone File: Choose File No file chosen

Import Policy [Chevron Right]

- ☒ **Default Records Add**
The records with the same hosts but with different values will be added (useful for Load Balancing).
- ☐ **Skip records with the same host**
The import will skip adding records with hosts that already exists.
- ☐ **Remove the existing hosts from the zone. WARNING!**
If the import contains a host that already exists in the zone, the existing records will be removed from the zone and the imported record will be added.

Import Zone **Close**

When done, Click "Import Zone".

Edit Zone Records

To edit an existing zone record, click on the record line in the DNS Records list.

The Edit Record dialog will open, allowing you to fill in record details.

Edit NS record

Type: NS

Host: someZone2.com.

Value: ns1.test.com.

TTL: 1 hour

Comment: You can add a comment to the record, that will not be pushed to the server.

☐ Skip Validation.

Record revisions

Date	Host	Value
2017-05-31 13:19:13	someZone2.com.	ns1.test.com.

Close

Save changes

Fill in the Host, Value, TTL, and comment if desired.

An option exists to "Skip Validation" - check to select if you wish to bypass validation for the record.

If previous versions of the record exist, the revision log will be visible under "Record revisions".

When edits or reviewing is complete, click "Save changes", or "Close" to exit without saving.

Delete Zone Records

Delete a zone record by clicking the "Delete" button under "Actions" for the desired record entry.

DNS Records		
Add a New <input type="text" value="A"/> Record <input type="button" value="Add"/>		
Record Type	Record Data	Actions
SOA	hostmaster.example.com. mail.example.com. (2019022101 172800 900 3600 86400)	
NS	host.example.com. maps to ns1.example.com	<input type="button" value="Delete"/> <input type="button" value="Check"/> <input type="button" value="Perms"/>

Check a Record

Check a record for errors by clicking the "Check" button under "Actions" for the desired record entry.

DNS Records

Add a New Record

Record Type	Record Data	Actions
SOA	hostmaster.example.com. mail.example.com. (2019022101 172800 900 3600 86400)	
NS	host.example.com. maps to ns1.example.com	<input type="button" value="Delete"/> <input type="button" value="Check"/> <input type="button" value="Perms"/>

A dialog box will appear, with details on any errors.

You may clear the error if desired, recheck, or close the box.

Attach / Detach Servers to a Zone

Under the "Attached Servers" section of the Zone View page, next to "Attach Server:", select the desired server to attach and choose the server type (Default, Master, Slave), then click the "Attach" button.

Attached Servers

Server Name	Server Backend	Server Type	Server Status	Actions
Attach server :	<input type="text" value="Select Server"/>	<input type="text" value="Use Default Type (Recommended)"/>		<input type="button" value="Attach"/>

To detach a server from a zone, look for the server under the "Attached Servers" list, then click "Detach" under actions for that server.

Restore a Zone / Record from Backup

If a zone has had changes successfully pushed, a "Zone Backups" section appears near the bottom of the page, showing the date and time of the backup.

Zone Backups

Backup Date

2019-02-21 13:17:34

2019-02-20 14:19:06

2019-01-28 13:15:05

To view details, or restore the zone to the previous version, click on the row of the desired date/time backup, and the "Zone Restore" module will open.

Zone Restore

Restore someZone2.com.

Backup date: 2017-05-31 14:00:04

By clicking on the individual records you are able to restore only specific records from the zone. Otherwise the whole zone will be restored.

Record Type	Record Data
NS	someZone2.com. maps to ns1.test.com.

From here, you may restore individual records by clicking on them, or restore the entire zone by clicking the "Restore Zone" button.

To exit without saving, click the "Close" button.

Additional Information

For more information on DNSv3 tasks, see:

- [Working with DNS Zones](#)
- [DNS Zones Overview](#)
- [DNS Administration](#)
- [Working with DNS Servers](#)
- [Approvals](#)