# Configuring DNSSEC

# **Configuring DNSSEC**

- Enable DNSSEC for a Server (ProVision GUI)
- Enable DNSSEC for a Zone (ProVision GUI)

   Enabling DNSSEC (for a single zone)
  - Update Registrar and Confirm
- For BIND server(s)
- For Secure64 and PowerDNS

Additional Information

# Enable DNSSEC for a Server (ProVision GUI)

DNSSEC may be enabled on a per-server basis in the ProVision DNS Server Settings.

Navigate to the DNS Tab, and select the DNS Servers section.

Find the desired server in the DNS Server List, and then click on the server name to open the settings for that server.

(ANewServer) ISCBIND master Delete Push Perms		<	ANewServer	ISCBIND	master	Delete Push Perms
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In the server settings page, scroll to the bottom of the second section, containing server-specific settings.

Near the bottom of the section is a toggle to "Enable DNSSEC" for the server; click the toggle to the "ON" position.

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## Enable DNSSEC for a Zone (ProVision GUI)

DNSSEC may be enabled on a per-zone basis in the ProVision Zone Advanced Settings.

Before you enable DNSSEC for a zone, make sure that do the following:

- Make sure DNSSEC is enabled on the DNS server(s) you will be pushing zones to (see "Enable DNSSEC for a Server", above)
- run configTest.php to make sure that your directories/permissions are correct
- Set external server for Authenticated Data verification
- Create/Edit a zone see Working with DNS Zones for additional information.
- Ensure that the zone is associated with a DNS server(s)

#### Enabling DNSSEC (for a single zone)

Navigate to the DNS Tab, and select the DNS Groups section.

Find the desired Group and Zone in the Groups List, and then click on the zone name to open the details for that zone.

			-	
example.com.	02/21/2019 15:17:35	02/21/2019 15:59:46	1	Delete Push Check Perms

The view zone details page will open. Expand the zone details section "Advanced Settings" by clicking on the expansion arrow.

msn.com.				
Default Group	DNS Group 1	0		
Edit the comment.				
Advanced Settings				$\diamond$

At the top of the "Advanced Settings" section will be a toggle to "Enable DNSSEC". Click the toggle to enable to the ON position.

isn.com.				
Default Group	DNS Group 1			
Edit the comment.				
Advanced Settings				
Enable DNSSEC:				
Enable Dynan	nic Updates: OFF			
	This feature is using the dynamic update functionality of the DNS Server. Every record that you mod updated on the servers automatically without pushing the zone.	dify/remove/create will be		

Once enabled, the toggle will show as "ON", and a "Show DS Records" button will appear. At this point, no records exists, so clicking "Show DS Records" will result in a message telling you so.

msn.com.				
Default Group DNS Group				
Edit the comment.				
Advanced Settings		•		
Enable DNSSEC:	ON Show DS Records			
Enable Dynamic Updates:	OFF This feature is using the dynamic update functionality of the DNS Server. Every record that you modify/remove/create will be updated on the servers automatically without pushing the zone.			

In order for DS Records to be created, the zone must be successfully pushed. Push the zone, Group, or Server containing the zone successfully and DS records will be created (see Working with DNS Zones and Working with DNS Groups for details on how to schedule and push zones).

To quickly push just a single zone, go back to the DNS Groups section, and click on the "Push" button for the zone.

X Example Group						
DNS Zones	Add Zone Push Gr	oup Schedule Push	Export Zone	s Perms		
Forward Zones	Reverse Zones					
		↓↑ Last Modified	Records	Zone Status	Actions 🔻	
6connect.com.	01/08/2019 14:49:12	01/08/2019 14:48:53	3		Delete Push Move Check Perms	
6connectqa.com.		01/08/2019 14:49:46	0		Delete Push Move Check Perms	
example.com.		01/08/2019 15:22:24	0		Delete Push Move Check Perms	

If successfully pushed, a green "Finished DNS Pushing Request" message will appear.

20	17 15:16:00 03/27/2017 15:15:59 1		Рe
2	DNS Push Status	×	)e
2	Last status messages :		)e
2	Finished DNS Pushing Request		)e
2	Sending the global configs and closing the connection		)e
	Pushing zone "msn.com." Server "6c BIND QA Server"		
ĺ	Initializing the connection Server "6c BIND QA Server"		)e
Ł	DNS Pushing started		ł
L			Į
Ł			ł
	Cic	se	

At this point, you will now have DS records available in the view zone details - Advanced Settings section. Open Advanced Settings for the zone and click on the "Show DS Records" button.

r	msn.com.					
	Default Group DNS Group 1					
	Edit the comment.					
	Advanced Settings	*				
	Enable DNSSEC: ON Show DS Records					

The DS records will be shown in a pop-up. Note these values for Registrar confirmation.

DN:	DNS DS Records	×
S	DS Records :	
l	msn.com. IN DS 5344 8 1 C04617EB64A19B25D5C2B9F3D4222A703CD421CF	
l	msn.com. IN DS 28809 8 1 FB7436C72A7BEE7E45CD0261B11E935C638D3636	
Gr	msn.com. IN DS 57498 8 1 BEAAFB939EBA9B9A491923980F02EF7B3C69BE30	
	Clos	se

#### **Update Registrar and Confirm**

Once DS records have been created in ProVision, you will need to update and confirm the Zone Registrar:

- Upload these values to your Zone Registrar, obtained from the "Show DS Records" button

   DS Record #, Key Tag, Algorithm, Digest Type, Digest

   Confirm values are saved at the Zone Registrar
- External sites
  - http://dnssec-debugger.verisignlabs.com/
  - http://dnsviz.net/

## For BIND server(s)

To enable DNSSEC on BIND9 you need to modify named.conf.options with following parameters in the options { } section:

```
dnssec-enable yes:
dnssec-validation yes:
dnssec-lookaside auto;
```

These parameters may already be enabled in some Linux distributions by default, so please confirm before making changes.

Your DNSSEC implementation may need other options for your environment - please contact support@6connect.com if you have ny

Please note that you will need to restart the BIND service after these changes.

### For Secure64 and PowerDNS

#### DNSSEC Signatures

In this scenario, 6connect ProVision uses the DNSSEC signing functions of the respective environment we write the zones to. We are evaluating how to properly integrate DNSSEC functions to ProVision for these platforms. Please contact support@6connect.com if you have feedback or specific questions.

# **Additional Information**

For additional information on working in DNS, see the following sections:

- Working with DNS Servers
- Configuring ISC BIND Support
- Configuring PowerDNS Support
- Configuring Secure64 Support
- Configuring Split Horizon/Views
- Import DNS Zones
- DNS Tab