

2.2 Check or Correct Versi

2.4 Key-Tags Tables

Data about results of the di

3.2 Key-Signing Key (KSK) Generation

3.2

Zone	Zone				Key				Exp
	Tag	Size	Content	S	Tag	Size	Content	S	
<u>zone.name</u>					<u>ksktag</u>	1024	<u>date</u>		

Leave the status field (S) empty if

the zone is a primary zone or a secondary zone

the zone is a stub zone

3.4.4 Wait for Old Zone Data to Expire from Cache

Wait .4 s

\$

3.4.7

3.4.1 Dispose of the Old Zone Key

Delete the old LS's *.private* and *.key* files.

3.5 KSK Roll-Over

This section gives the necessity for the double-signature scheme for KSK roll-over. The alternative, the pre-publish method, is used for rolling over ZSKs. Double signatures for records signed by the ZSK can increase the size of the zone many times. The pre-publish scheme, although it requires steps for the roll-over, does not suffer from this problem. The size argument does not apply during KSK roll-over since the DNSKEY RRset is the only record doubly signed by the KSK.

3.5.1 Ensure that Sufficient Time has Elapsed Since the Last Roll-Over

The time between roll-overs has to be at least twice the maximum zone TTL period. This is the largest TTL in the entire zone file multiplied by two.

3.5.2 Generate New KSK

Generate

;; ne

Key that is marked as the Current Key (C) in the Key-tag table. Both Current **KS** and the published **KS** must be simultaneously included in the *dnssec-sign*.

4 Normal Operation for Child Zone

This section describes those normal DNSSEC operations which are relevant for child zones. These operations are:

- Signing a Zone that Has No Delegations
- Creating a Signed Delegation in a Child Zone

2 21 ; Increase current value by 1.
 ; This value may be different
 ; in your zone file.

 ...
)
 ...
 ;; k k
 \$INCLUDE " "

4.1.7 Record

;;ANSWER SECTION

zone.name 3600 IN ...

...
\$

5.1 Signing a Zone that Has Delegations

A zone needs to be e-signed when any change is made to it.

```

2      21      ; Increase current value by 1.
           ; The value may be different
           ; in your zone

```


.1 KSK Roll-Over — KSK Compromise

The emergency procedures described for Key roll-over use the rationale that injection of valid but false data

.2 ZSK Role 1

; in your zone file.

```

    ...
)
...
;; rsk
$INCLUDE "/path/to/zone.name.+005+rsktag.key"
;; cu zsk
$INCLUDE "/path/to/zone.name.+005+zsktag-cu.key"
;; pub z k
$INCLUDE "/path/to/zone.+005+zsktag-cu.key"
;;

```


S

.1 KSK Roll-Over — Orient Action During KSK

A.1.4 Current ZSK Roll Over

- ☐ Ensure that Sufficient Time has Elapsed Since the Last Roll-Over
- ☐ Sign Zone with the **KS** and published **LS**
- ☐ Reload the Zone
- ☐ Wait for Old Zone Data to Expire from **Cache**

Reload the Zone

- ☐ **S**

A.3 Normal Output

