

OSPF Topology-Transparent Zone

draft-chen-ospf-ttz-08

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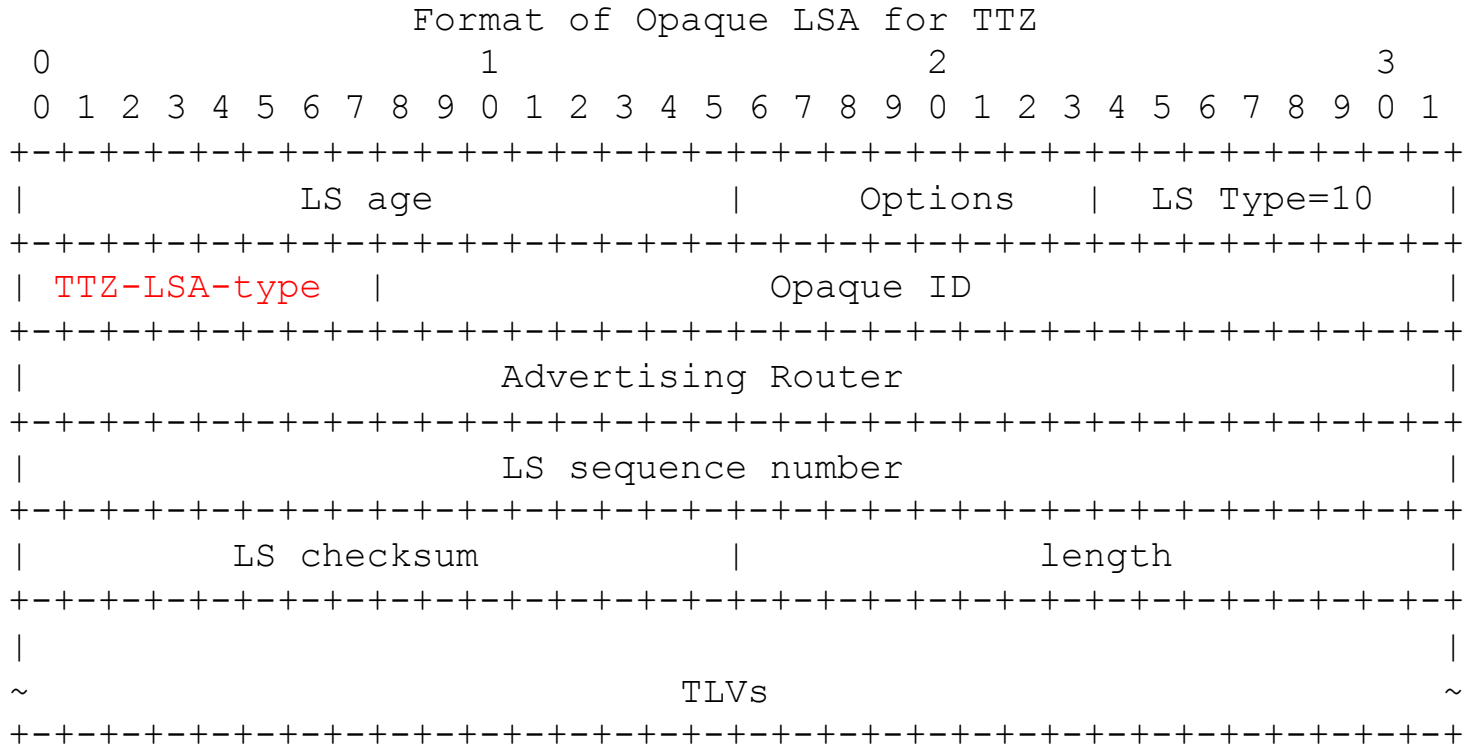
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Changes to the last version

Opaque LSAs for wrapping and distributing TTZ information:

1. Router LSAs for TTZ (defined in previous version)
2. Network LSAs for TTZ
3. Migration to TTZ

Opaque LSAs for TTZ



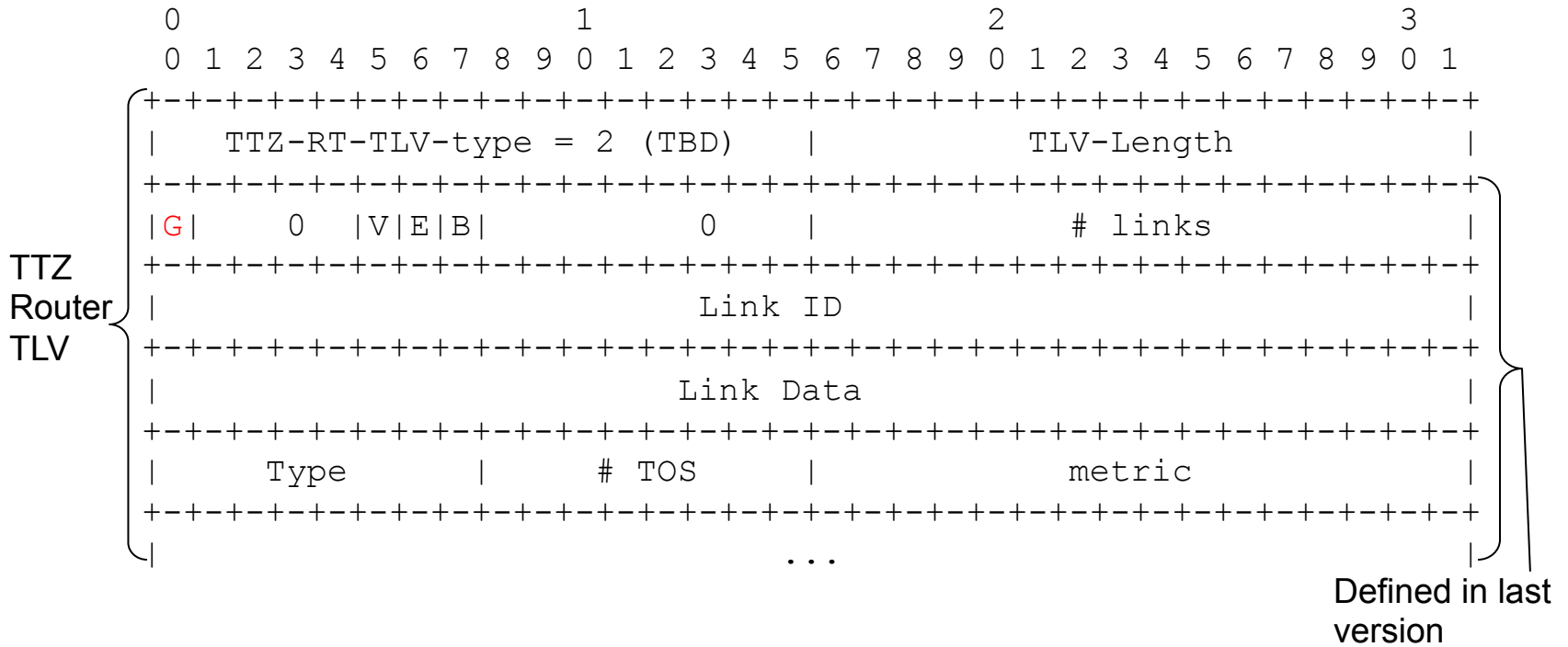
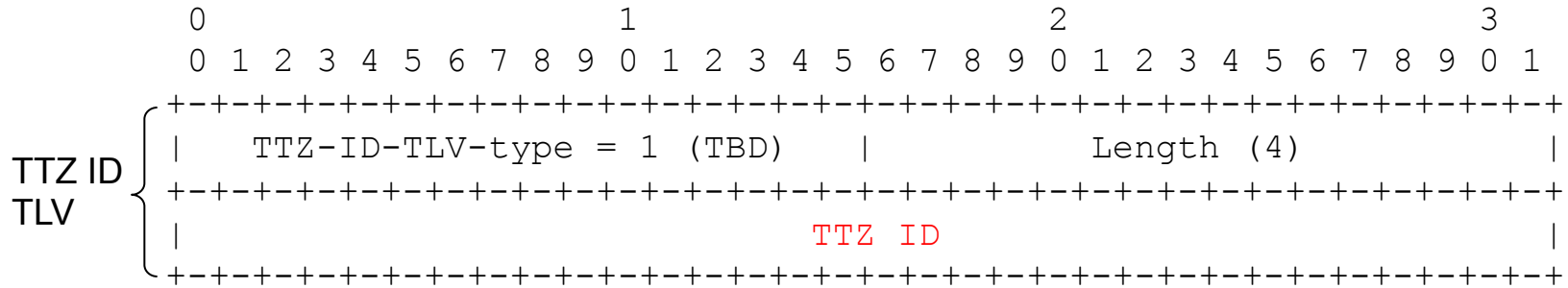
TTZ-LSA-type:

- TTZ-RT-LSA-type (11?, TBD1) for TTZ Router LSA
- TTZ-NW-LSA-type (12, TBD2) for TTZ Network LSA
- TTZ-CT-LSA-type (13, TBD3) for TTZ Control LSA

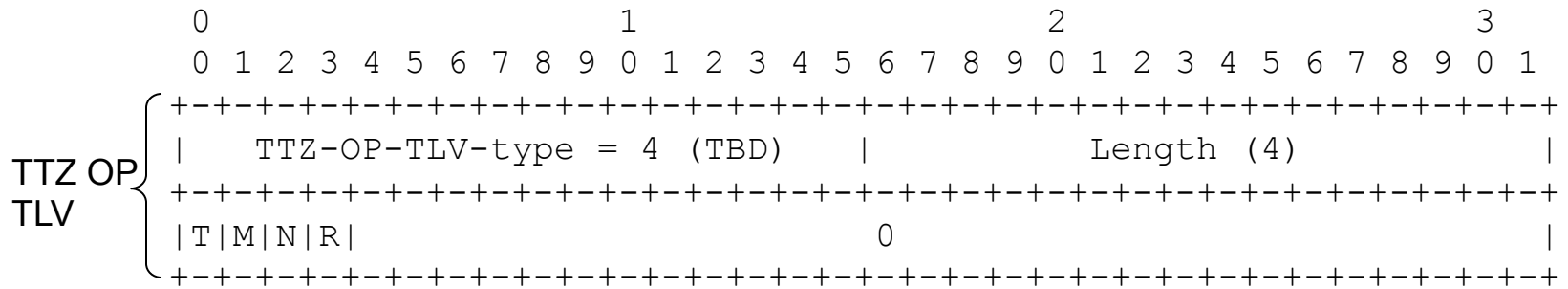
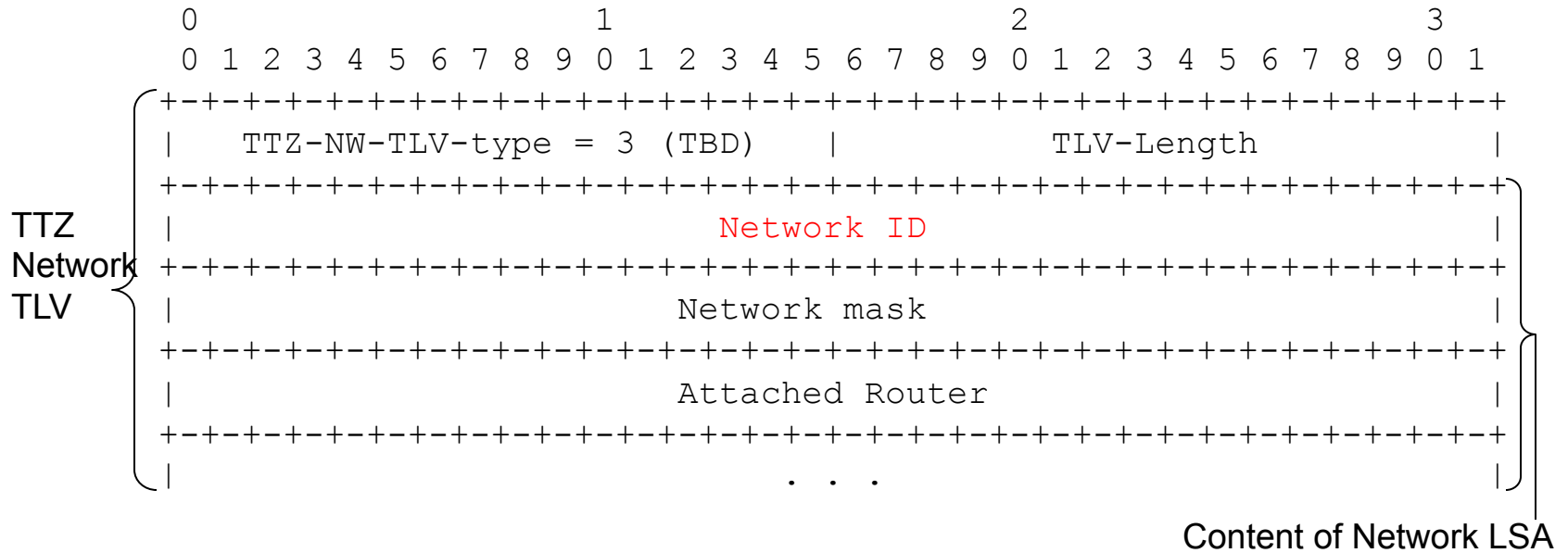
TLVs:

- TTZ ID TLV
- TTZ Router TLV
- TTZ Network TLV
- TTZ Options TLV

TTZ TLVs

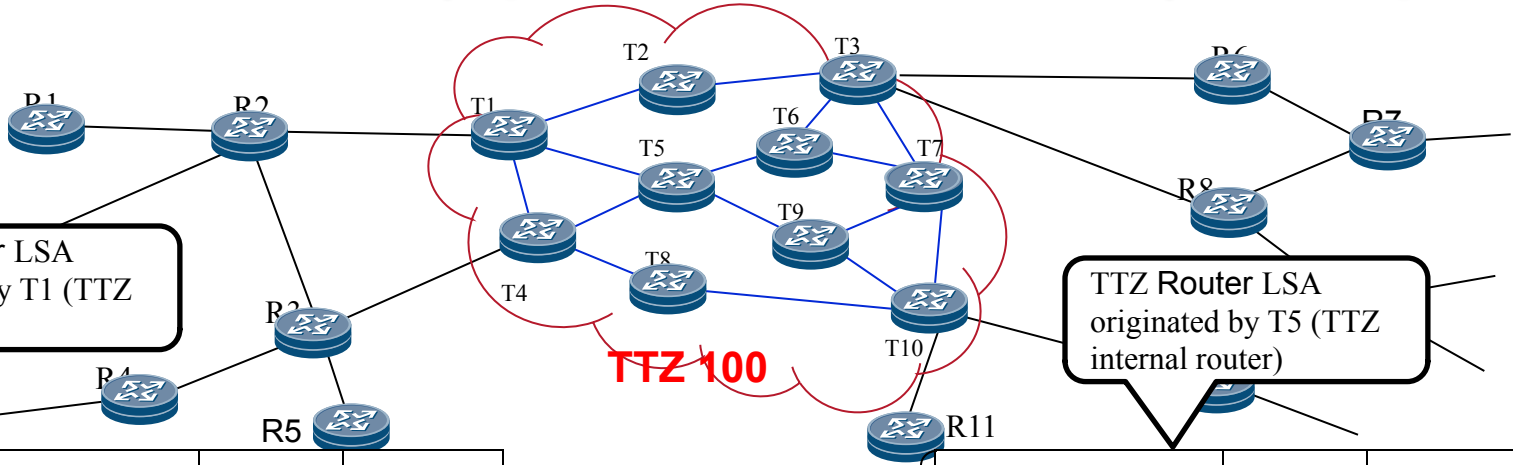


TTZ TLVs



- T = 1: Distributing TTZ Topology Information for Migration
- M = 1: Migrating to TTZ
- N = 1: Distributing Normal Topology Information for Rollback
- R = 1: Rolling back from TTZ

TTZ Router LSA (Opaque LSA for Router): Examples



TTZ Router LSA originated by T1 (TTZ edge router)

TTZ Router LSA originated by T5 (TTZ internal router)

TTZ 100

Header	LS Age	Options	LS Type=10
	Type=11(TBD)	Instance = 1	
	Advertising Router (T1)		
	LS Sequence Number		
	LS Checksum	Length	
TTZ ID TLV + TTZ Router TLV			

Header	LS Age	Options	LS Type=10
	Type=11(TBD)	Instance = 1	
	Advertising Router (T5)		
	LS Sequence Number		
	LS Checksum	Length	
TTZ ID TLV + TTZ Router TLV			

```

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-----+-----+-----+-----+-----+-----+-----+-----+
|  TTZ-ID-TLV-type = 1(TBD)  |          Length (4)          |
+-----+-----+-----+-----+-----+-----+-----+-----+
|          TTZ ID = 100          |
+-----+-----+-----+-----+-----+-----+-----+-----+
|  TTZ-RT-TLV-type = 2 (TBD)  |          TLV-Length          |
+-----+-----+-----+-----+-----+-----+-----+-----+
|G| 0  |V|E|B|          0  |          # links          |
+-----+-----+-----+-----+-----+-----+-----+
~  G=1 for TTZ edge router  Link T1 to R2
~
~  Link T1 to T2

```

I=0
I=1
Content of router LSA
I=1

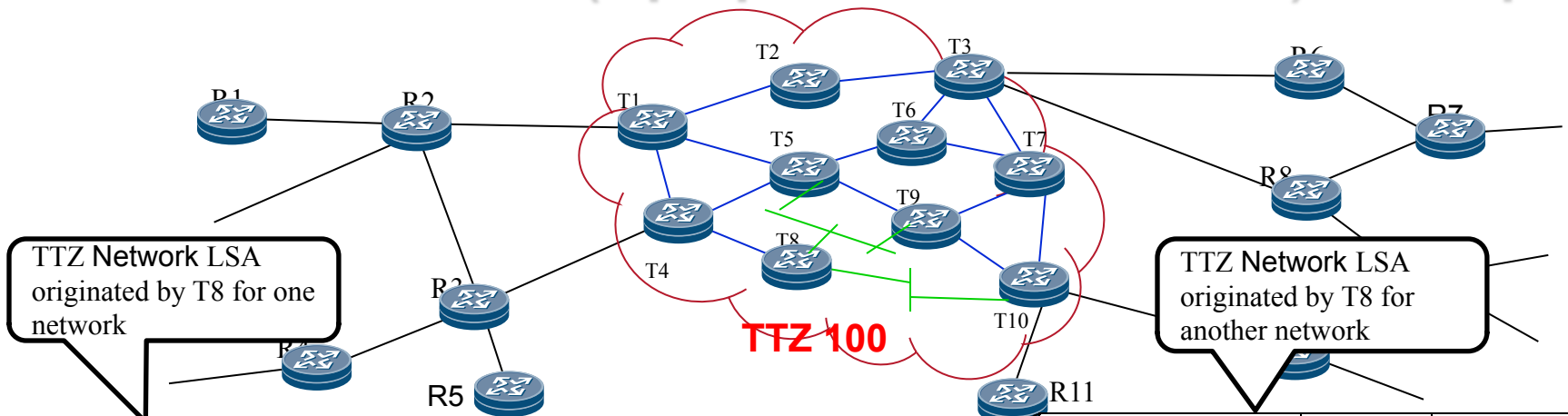
```

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-----+-----+-----+-----+-----+-----+-----+-----+
|  TTZ-ID-TLV-type = 1(TBD)  |          Length (4)          |
+-----+-----+-----+-----+-----+-----+-----+-----+
|          TTZ ID = 100          |
+-----+-----+-----+-----+-----+-----+-----+-----+
|  TTZ-RT-TLV-type = 2 (TBD)  |          TLV-Length          |
+-----+-----+-----+-----+-----+-----+-----+-----+
|G| 0  |V|E|B|          0  |          # links          |
+-----+-----+-----+-----+-----+-----+-----+
~  G=0 for TTZ internal router  Link T5 to T1
~
~

```

I=1
I=1
I=1
I=1

TTZ Network LSA (Opaque LSA for Network): Examples



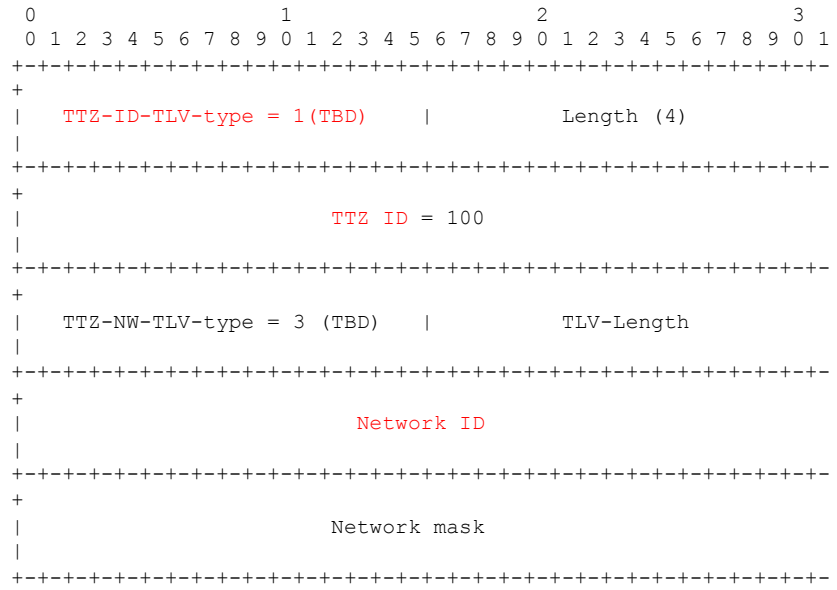
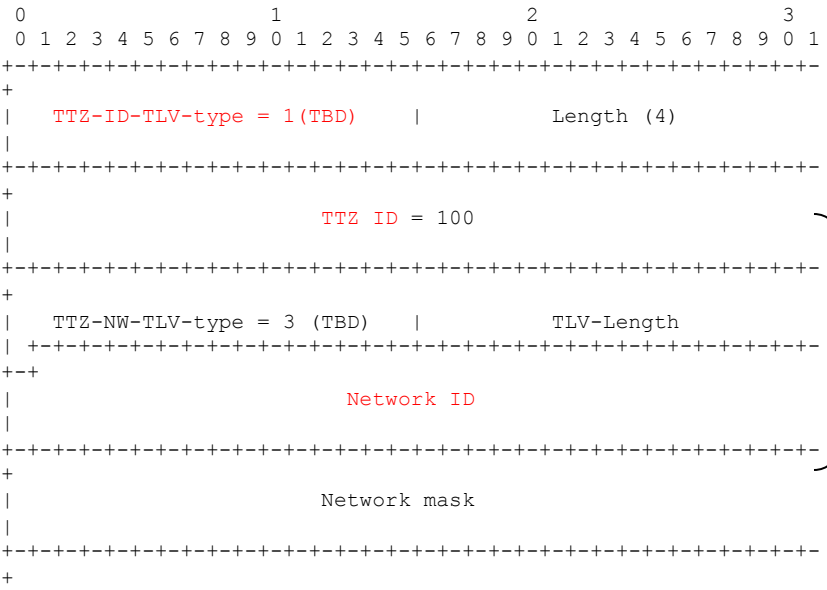
TTZ Network LSA originated by T8 for one network

TTZ Network LSA originated by T8 for another network

TTZ 100

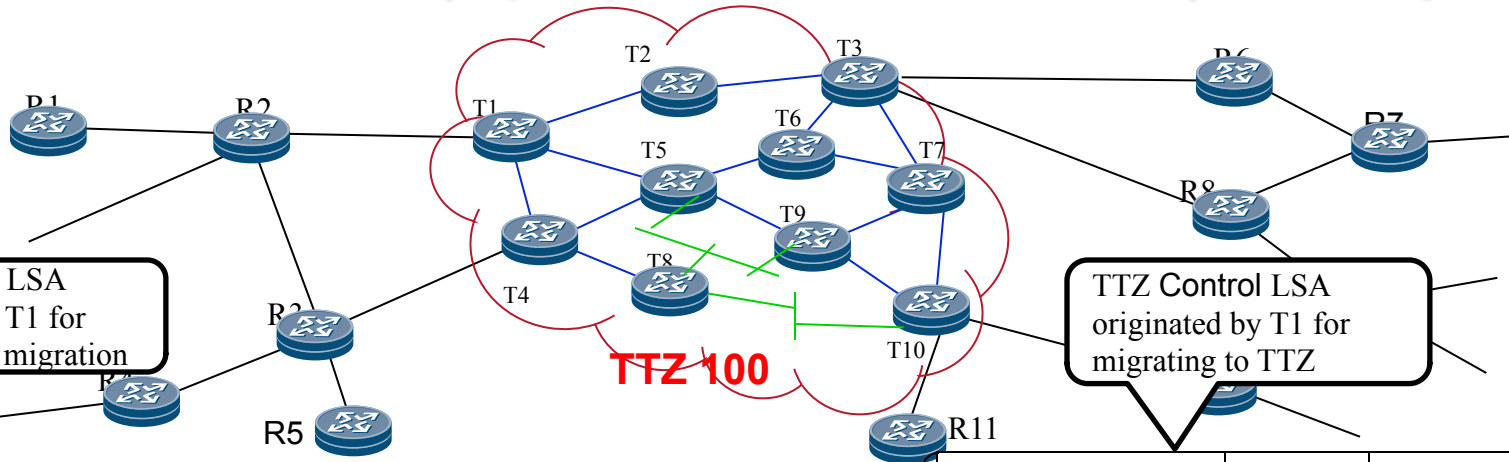
LS Age		Options	LS Type=10
Type=12(TBD)	Instance = 1		
Advertising Router (T8)			
LS Sequence Number			
LS Checksum		Length	
TTZ ID TLV + TTZ Network TLV			

LS Age		Options	LS Type=10
Type=12(TBD)	Instance = 2		
Advertising Router (T8)			
LS Sequence Number			
LS Checksum		Length	
TTZ ID TLV + TTZ Network TLV			



Content of network LSA

TTZ Control LSA (Opaque LSA for Control): Examples



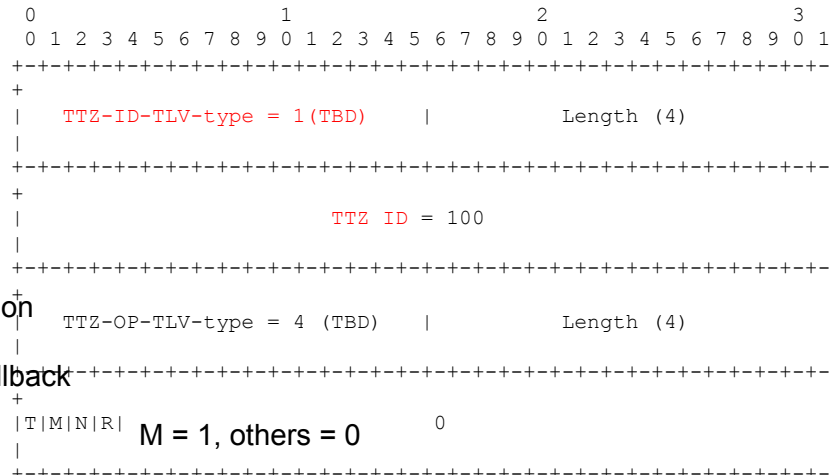
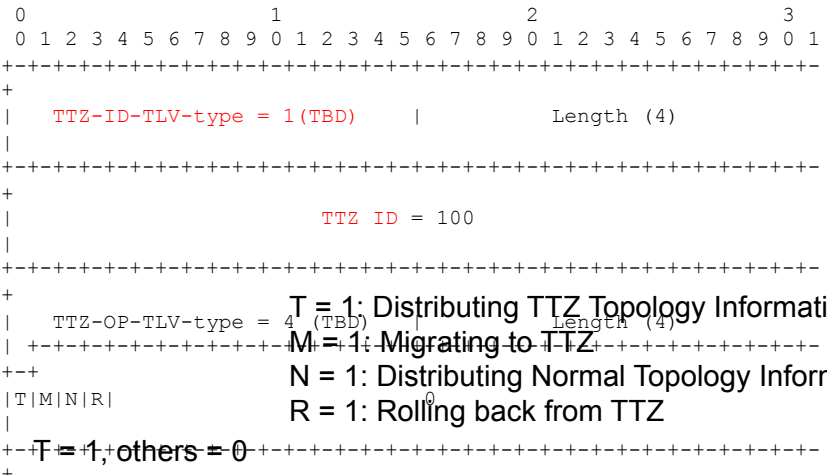
TTZ Control LSA originated by T1 for preparing for migration

TTZ Control LSA originated by T1 for migrating to TTZ

TTZ 100

LS Age		Options	LS Type=10
Type=13(TBD)	Instance = 1		
Advertising Router (T1)			
LS Sequence Number			
LS Checksum		Length	
TTZ ID TLV + TTZ Options TLV			

LS Age		Options	LS Type=10
Type=13(TBD)	Instance = 1		
Advertising Router (T1)			
LS Sequence Number			
LS Checksum		Length	
TTZ ID TLV + TTZ Options TLV			



T = 1: Distributing TTZ Topology Information for Migration
M = 1: Migrating to TTZ
N = 1: Distributing Normal Topology Information for Rollback
R = 1: Rolling back from TTZ

T = 1, others = 0

M = 1, others = 0

Next Step

Welcome comments