



ospfv3\_v4\_dr\_election.pcapng

OSPFv3 Hello Packet

Frame 1 |  
2020-08-04T21:31:15.059421Z

ID	Source OSPF Router	10.3.3.3
Area ID	Area ID	0.0.0.0 (Backbone)
Instance ID	Instance ID	Base IPv4 Unicast AF (64)
Router Priority	Router Priority	33
Options	Options	0x000112, AF, R, E
Hello Interval [sec]	Hello Interval [sec]	10
Router Dead Interval [sec]	Router Dead Interval [sec]	40
Designated Router	Designated Router	0.0.0.0
Backup Designated Router	Backup Designated Router	0.0.0.0
Active Neighbor	Active Neighbor	10.1.1.1
Active Neighbor	Active Neighbor	10.2.2.2

OSPFv3 Hello Packet

Frame 2 |  
2020-08-04T21:31:15.844789Z

ID	Source OSPF Router	10.2.2.2
Area ID	Area ID	0.0.0.0 (Backbone)
Instance ID	Instance ID	Base IPv4 Unicast AF (64)
Router Priority	Router Priority	0
Options	Options	0x000112, AF, R, E
Hello Interval [sec]	Hello Interval [sec]	10
Router Dead Interval [sec]	Router Dead Interval [sec]	40
Designated Router	Designated Router	0.0.0.0
Backup Designated Router	Backup Designated Router	0.0.0.0
Active Neighbor	Active Neighbor	10.1.1.1
Active Neighbor	Active Neighbor	10.3.3.3

OSPFv3 Hello Packet

Frame 3 |  
2020-08-04T21:31:16.642778Z

ID	Source OSPF Router	10.1.1.1
Area ID	Area ID	0.0.0.0 (Backbone)
Instance ID	Instance ID	Base IPv4 Unicast AF (64)
Router Priority	Router Priority	0
Options	Options	0x000112, AF, R, E
Hello Interval [sec]	Hello Interval [sec]	10
Router Dead Interval [sec]	Router Dead Interval [sec]	40
Designated Router	Designated Router	0.0.0.0
Backup Designated Router	Backup Designated Router	0.0.0.0
Active Neighbor	Active Neighbor	10.2.2.2
Active Neighbor	Active Neighbor	10.3.3.3

OSPFv3 Hello Packet

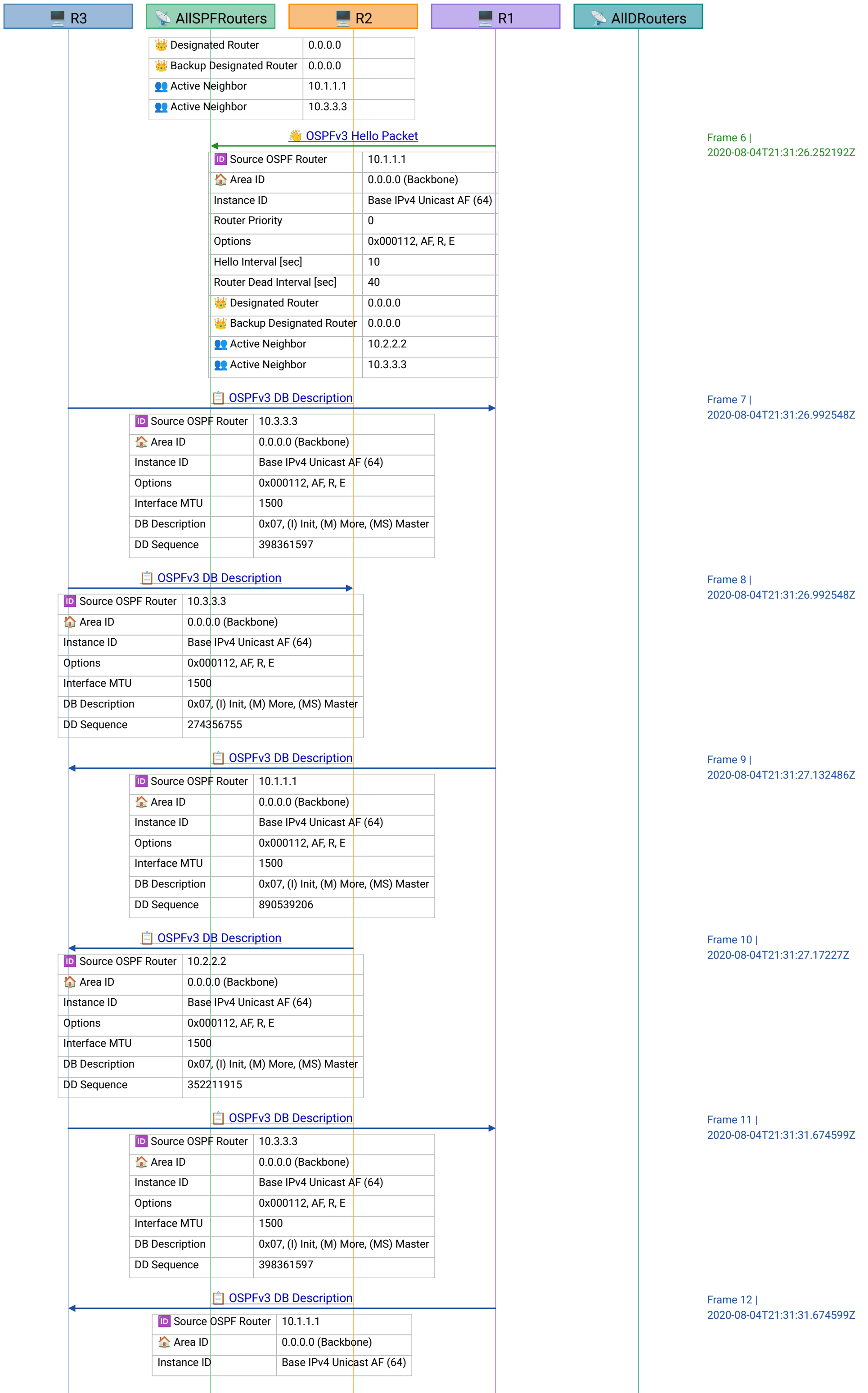
Frame 4 |  
2020-08-04T21:31:25.060894Z

ID	Source OSPF Router	10.3.3.3
Area ID	Area ID	0.0.0.0 (Backbone)
Instance ID	Instance ID	Base IPv4 Unicast AF (64)
Router Priority	Router Priority	33
Options	Options	0x000112, AF, R, E
Hello Interval [sec]	Hello Interval [sec]	10
Router Dead Interval [sec]	Router Dead Interval [sec]	40
Designated Router	Designated Router	0.0.0.0
Backup Designated Router	Backup Designated Router	0.0.0.0
Active Neighbor	Active Neighbor	10.1.1.1
Active Neighbor	Active Neighbor	10.2.2.2

OSPFv3 Hello Packet

Frame 5 |  
2020-08-04T21:31:25.060894Z

ID	Source OSPF Router	10.2.2.2
Area ID	Area ID	0.0.0.0 (Backbone)
Instance ID	Instance ID	Base IPv4 Unicast AF (64)
Router Priority	Router Priority	0
Options	Options	0x000112, AF, R, E
Hello Interval [sec]	Hello Interval [sec]	10
Router Dead Interval [sec]	Router Dead Interval [sec]	40



**R3**

**AllSPFRouters**

**R2**

**R1**

**AllDRouters**

Options	0x000112, AF, R, E
Interface MTU	1500
DB Description	0x02, (M) More
DD Sequence	398361597
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1

OSPFv3 DB Description

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Options	0x000112, AF, R, E
Interface MTU	1500
DB Description	0x01, (MS) Master
DD Sequence	398361598
Advertising Router	10.3.3.3
Advertising Router	10.3.3.3
Advertising Router	10.3.3.3
Advertising Router	10.3.3.3

OSPFv3 LS Request

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.3.3.3
Advertising Router	10.3.3.3
Advertising Router	10.3.3.3
Advertising Router	10.3.3.3

OSPFv3 DB Description

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Options	0x000112, AF, R, E
Interface MTU	1500
DB Description	0x00
DD Sequence	398361598

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	5
Advertising Router	10.3.3.3
Sequence Number	0x80000002
LS Age (seconds)	35
Advertising Router	10.3.3.3
Sequence Number	0x80000001
LS Age (seconds)	45
Advertising Router	10.3.3.3
Sequence Number	0x80000001
LS Age (seconds)	45
Advertising Router	10.3.3.3
Sequence Number	0x80000001

OSPFv3 LS Request

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1

Frame 13 | 2020-08-04T21:31:31.675596Z

Frame 14 | 2020-08-04T21:31:31.675596Z

Frame 15 | 2020-08-04T21:31:31.675596Z

Frame 16 | 2020-08-04T21:31:31.677053Z

Frame 17 | 2020-08-04T21:31:31.677245Z

**R3**

**AllSPFRouters**

**R2**

**R1**

**AllDRouters**

Advertising Router	10.1.1.1
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**OSPFv3 LS Update**

ID Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	5
Advertising Router	10.1.1.1
Sequence Number	0x80000002
LS Age (seconds)	35
Advertising Router	10.1.1.1
Sequence Number	0x80000001
LS Age (seconds)	35
Advertising Router	10.1.1.1
Sequence Number	0x80000001
LS Age (seconds)	45
Advertising Router	10.1.1.1
Sequence Number	0x80000001...
3 more	

**OSPFv3 DB Description**

ID Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Options	0x000112, AF, R, E
Interface MTU	1500
DB Description	0x07, (I) Init, (M) More, (MS) Master
DD Sequence	274356755

**OSPFv3 DB Description**

ID Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Options	0x000112, AF, R, E
Interface MTU	1500
DB Description	0x02, (M) More
DD Sequence	274356755
Advertising Router	10.2.2.2
Advertising Router	10.2.2.2
Advertising Router	10.2.2.2
Advertising Router	10.2.2.2

**OSPFv3 DB Description**

ID Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Options	0x000112, AF, R, E
Interface MTU	1500
DB Description	0x01, (MS) Master
DD Sequence	274356756
Advertising Router	10.1.1.1
Advertising Router	10.3.3.3
Advertising Router	10.1.1.1
Advertising Router	10.1.1.1
Advertising Router	10.3.3.3
Advertising Router	10.1.1.1
Advertising Router	10.3.3.3
Advertising Router	10.1.1.1...
1 more	

**OSPFv3 LS Request**

ID Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.1.1.1
Advertising Router	10.3.3.3

Frame 18 | 2020-08-04T21:31:31.677245Z

Frame 19 | 2020-08-04T21:31:31.962718Z

Frame 20 | 2020-08-04T21:31:31.963715Z

Frame 21 | 2020-08-04T21:31:31.964988Z

Frame 22 | 2020-08-04T21:31:31.965991Z

**R3**

**AllSPFRouters**

**R2**

**R1**

**AllDRouters**

Advertising Router	10.1.1.1
Advertising Router	10.1.1.1
Advertising Router	10.3.3.3
Advertising Router	10.1.1.1
Advertising Router	10.3.3.3
Advertising Router	10.1.1.1
Advertising Router	10.3.3.3

OSPFv3 DB Description

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Options	0x000112, AF, R, E
Interface MTU	1500
DB Description	0x00
DD Sequence	274356756

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	6
Advertising Router	10.1.1.1
Sequence Number	0x80000002
LS Age (seconds)	5
Advertising Router	10.3.3.3
Sequence Number	0x80000002
LS Age (seconds)	36
Advertising Router	10.1.1.1
Sequence Number	0x80000001
LS Age (seconds)	36
Advertising Router	10.1.1.1
Sequence Number	0x80000001...
	15 more

OSPFv3 LS Request

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.2.2.2
Advertising Router	10.2.2.2
Advertising Router	10.2.2.2
Advertising Router	10.2.2.2

OSPFv3 LS Update

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	5
Advertising Router	10.2.2.2
Sequence Number	0x80000002
LS Age (seconds)	35
Advertising Router	10.2.2.2
Sequence Number	0x80000001
LS Age (seconds)	45
Advertising Router	10.2.2.2
Sequence Number	0x80000001
LS Age (seconds)	45
Advertising Router	10.2.2.2
Sequence Number	0x80000001

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	46

Frame 23 |  
2020-08-04T21:31:31.965991Z

Frame 24 |  
2020-08-04T21:31:31.965991Z

Frame 25 |  
2020-08-04T21:31:31.966989Z

Frame 26 |  
2020-08-04T21:31:31.967935Z

Frame 27 |  
2020-08-04T21:31:31.969933Z

**R3**

**AllSPFRouters**

**R2**

**R1**

**AllDRouters**

Advertising Router	10.2.2.2
Sequence Number	0x80000001
LS Age (seconds)	6
Advertising Router	10.2.2.2
Sequence Number	0x80000002
LS Age (seconds)	36
Advertising Router	10.2.2.2
Sequence Number	0x80000001
LS Age (seconds)	46
Advertising Router	10.2.2.2
Sequence Number	0x80000001

OSPFv3 LS Acknowledge

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.2.2.2
Sequence Number	0x80000001
Advertising Router	10.2.2.2
Sequence Number	0x80000002
Advertising Router	10.2.2.2
Sequence Number	0x80000001
Advertising Router	10.2.2.2
Sequence Number	0x80000001

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	1
Advertising Router	10.3.3.3
Sequence Number	0x80000002
LS Age (seconds)	1
Advertising Router	10.3.3.3
Sequence Number	0x80000001
LS Age (seconds)	1
Advertising Router	10.3.3.3
Sequence Number	0x80000001

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	2
Advertising Router	10.1.1.1
Sequence Number	0x80000002

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)

OSPFv3 LS Update

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	1
Advertising Router	10.1.1.1
Sequence Number	0x80000002

OSPFv3 LS Update

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	1
Advertising Router	10.2.2.2
Sequence Number	0x80000002

Frame 28 | 2020-08-04T21:31:31.970931Z

Frame 29 | 2020-08-04T21:31:32.196643Z

Frame 30 | 2020-08-04T21:31:32.19769Z

Frame 31 | 2020-08-04T21:31:32.23632Z

Frame 32 | 2020-08-04T21:31:32.476987Z

Frame 33 | 2020-08-04T21:31:32.482978Z

**R3**

**AllSPFRouters**

**R2**

**R1**

**AllDRouters**

LS Age (seconds)	2
Advertising Router	10.2.2.2
Sequence Number	0x80000002

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	1
Advertising Router	10.3.3.3
Sequence Number	0x80000003

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	2
Advertising Router	10.1.1.1
Sequence Number	0x80000003

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	2
Advertising Router	10.2.2.2
Sequence Number	0x80000003

OSPFv3 LS Update

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	1
Advertising Router	10.1.1.1
Sequence Number	0x80000003

OSPFv3 LS Update

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	1
Advertising Router	10.2.2.2
Sequence Number	0x80000003

OSPFv3 LS Acknowledge

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.3.3.3
Sequence Number	0x80000002
Advertising Router	10.3.3.3
Sequence Number	0x80000001
Advertising Router	10.3.3.3
Sequence Number	0x80000001
Advertising Router	10.3.3.3
Sequence Number	0x80000001
Advertising Router	10.2.2.2
Sequence Number	0x80000001
Advertising Router	10.2.2.2
Sequence Number	0x80000002...
12 more	

OSPFv3 LS Acknowledge

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.1.1.1

Frame 34 |  
2020-08-04T21:31:32.52464Z

Frame 35 |  
2020-08-04T21:31:32.654502Z

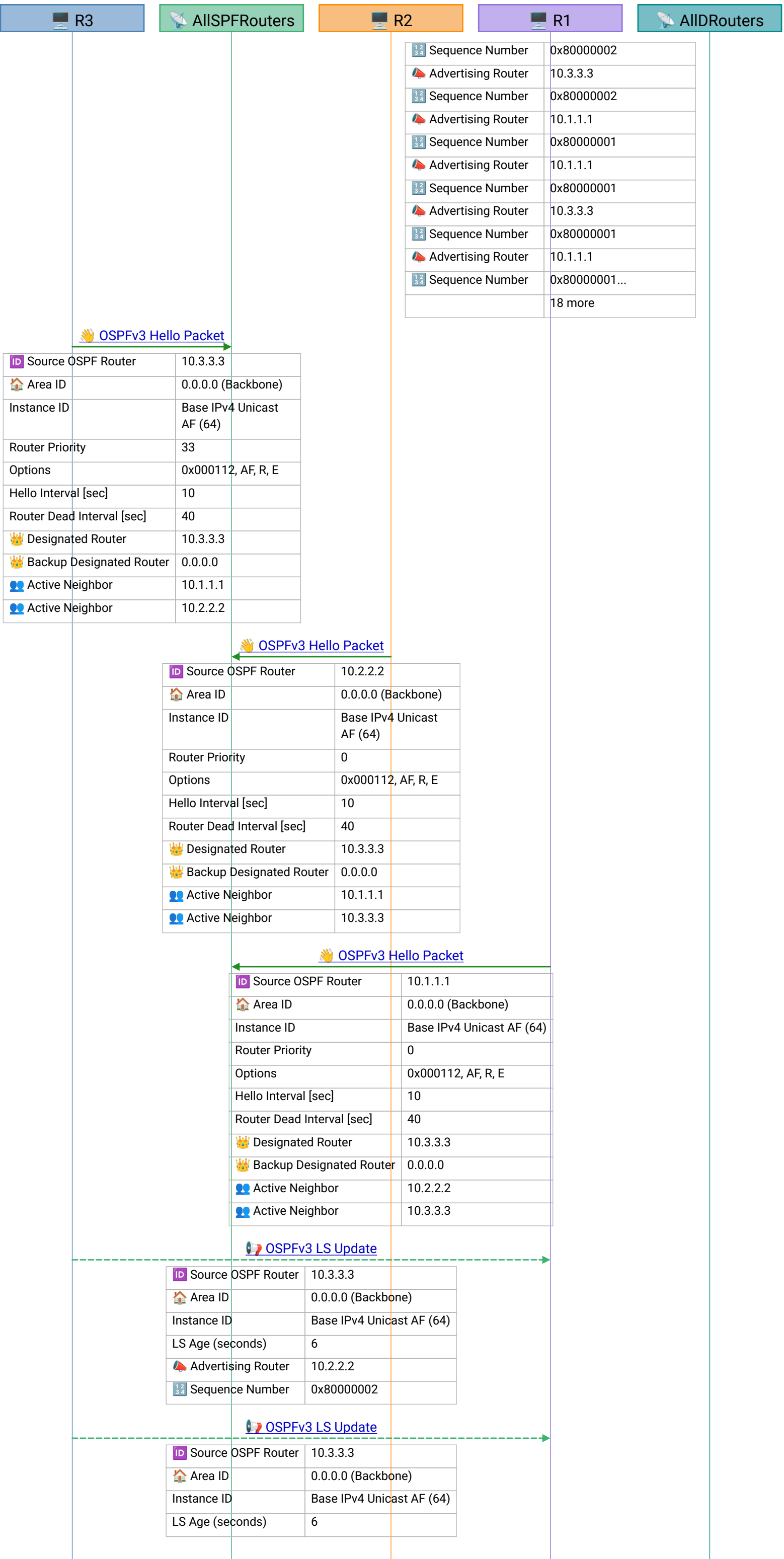
Frame 36 |  
2020-08-04T21:31:32.669462Z

Frame 37 |  
2020-08-04T21:31:32.691138Z

Frame 38 |  
2020-08-04T21:31:32.70632Z

Frame 39 |  
2020-08-04T21:31:34.17728Z

Frame 40 |  
2020-08-04T21:31:34.469567Z



Sequence Number	0x80000002
Advertising Router	10.3.3.3
Sequence Number	0x80000002
Advertising Router	10.1.1.1
Sequence Number	0x80000001
Advertising Router	10.1.1.1
Sequence Number	0x80000001
Advertising Router	10.3.3.3
Sequence Number	0x80000001
Advertising Router	10.1.1.1
Sequence Number	0x80000001...
	18 more

OSPFv3 Hello Packet

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Router Priority	33
Options	0x000112, AF, R, E
Hello Interval [sec]	10
Router Dead Interval [sec]	40
Designated Router	10.3.3.3
Backup Designated Router	0.0.0.0
Active Neighbor	10.1.1.1
Active Neighbor	10.2.2.2

OSPFv3 Hello Packet

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Router Priority	0
Options	0x000112, AF, R, E
Hello Interval [sec]	10
Router Dead Interval [sec]	40
Designated Router	10.3.3.3
Backup Designated Router	0.0.0.0
Active Neighbor	10.1.1.1
Active Neighbor	10.3.3.3

OSPFv3 Hello Packet

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Router Priority	0
Options	0x000112, AF, R, E
Hello Interval [sec]	10
Router Dead Interval [sec]	40
Designated Router	10.3.3.3
Backup Designated Router	0.0.0.0
Active Neighbor	10.2.2.2
Active Neighbor	10.3.3.3

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	6
Advertising Router	10.2.2.2
Sequence Number	0x80000002

OSPFv3 LS Update

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
LS Age (seconds)	6

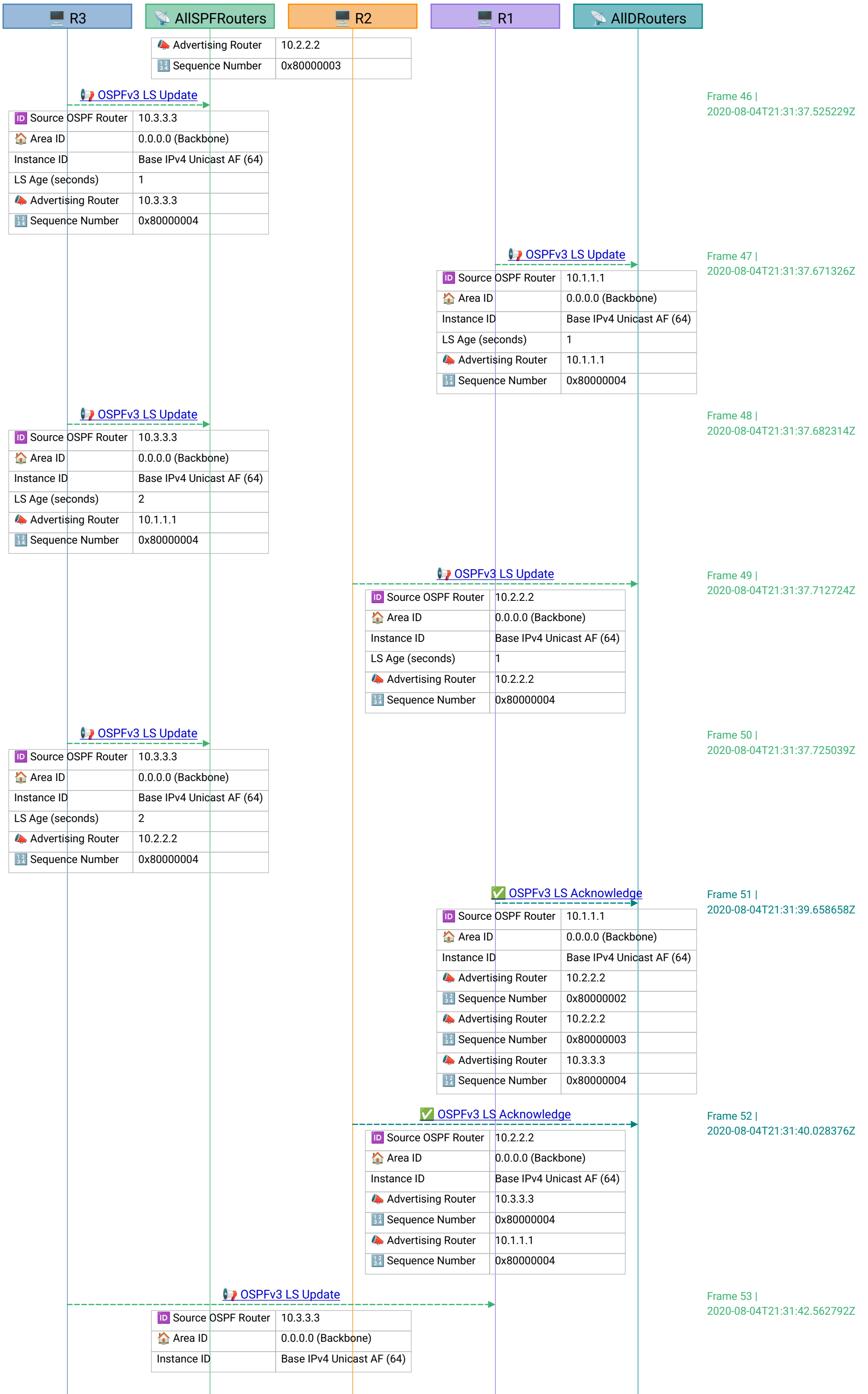
Frame 41 | 2020-08-04T21:31:34.85318Z

Frame 42 | 2020-08-04T21:31:34.900479Z

Frame 43 | 2020-08-04T21:31:35.555519Z

Frame 44 | 2020-08-04T21:31:37.150351Z

Frame 45 | 2020-08-04T21:31:37.253055Z



**R3**

**AllSPFRouters**

**R2**

**R1**

**AllDRouters**

LS Age (seconds)	6
Advertising Router	10.2.2.2
Sequence Number	0x80000004

OSPFv3 Hello Packet

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Router Priority	0
Options	0x000112, AF, R, E
Hello Interval [sec]	10
Router Dead Interval [sec]	40
Designated Router	10.3.3.3
Backup Designated Router	0.0.0.0
Active Neighbor	10.1.1.1
Active Neighbor	10.3.3.3

Frame 54 |  
2020-08-04T21:31:44.112401Z

OSPFv3 Hello Packet

Source OSPF Router	10.3.3.3
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Router Priority	33
Options	0x000112, AF, R, E
Hello Interval [sec]	10
Router Dead Interval [sec]	40
Designated Router	10.3.3.3
Backup Designated Router	0.0.0.0
Active Neighbor	10.1.1.1
Active Neighbor	10.2.2.2

Frame 55 |  
2020-08-04T21:31:44.227532Z

OSPFv3 LS Acknowledge

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Advertising Router	10.2.2.2
Sequence Number	0x80000004

Frame 56 |  
2020-08-04T21:31:45.07423Z

OSPFv3 Hello Packet

Source OSPF Router	10.1.1.1
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Router Priority	0
Options	0x000112, AF, R, E
Hello Interval [sec]	10
Router Dead Interval [sec]	40
Designated Router	10.3.3.3
Backup Designated Router	0.0.0.0
Active Neighbor	10.2.2.2
Active Neighbor	10.3.3.3

Frame 57 |  
2020-08-04T21:31:45.353374Z

OSPFv3 Hello Packet

Source OSPF Router	10.2.2.2
Area ID	0.0.0.0 (Backbone)
Instance ID	Base IPv4 Unicast AF (64)
Router Priority	0
Options	0x000112, AF, R, E
Hello Interval [sec]	10
Router Dead Interval [sec]	40
Designated Router	10.3.3.3
Backup Designated Router	0.0.0.0
Active Neighbor	10.1.1.1
Active Neighbor	10.3.3.3

Frame 58 |  
2020-08-04T21:31:53.321903Z

OSPFv3 Hello Packet

Frame 59 |  
2020-08-04T21:31:54.115594Z



ID	Source OSPF Router	10.3.3.3
🏠	Area ID	0.0.0.0 (Backbone)
	Instance ID	Base IPv4 Unicast AF (64)
	Router Priority	33
	Options	0x000112, AF, R, E
	Hello Interval [sec]	10
	Router Dead Interval [sec]	40
👑	Designated Router	10.3.3.3
👑	Backup Designated Router	0.0.0.0
👤	Active Neighbor	10.1.1.1
👤	Active Neighbor	10.2.2.2

👋 OSPFv3 Hello Packet

ID	Source OSPF Router	10.1.1.1
🏠	Area ID	0.0.0.0 (Backbone)
	Instance ID	Base IPv4 Unicast AF (64)
	Router Priority	0
	Options	0x000112, AF, R, E
	Hello Interval [sec]	10
	Router Dead Interval [sec]	40
👑	Designated Router	10.3.3.3
👑	Backup Designated Router	0.0.0.0
👤	Active Neighbor	10.2.2.2
👤	Active Neighbor	10.3.3.3

👋 OSPFv3 Hello Packet

ID	Source OSPF Router	10.2.2.2
🏠	Area ID	0.0.0.0 (Backbone)
	Instance ID	Base IPv4 Unicast AF (64)
	Router Priority	0
	Options	0x000112, AF, R, E
	Hello Interval [sec]	10
	Router Dead Interval [sec]	40
👑	Designated Router	10.3.3.3
👑	Backup Designated Router	0.0.0.0
👤	Active Neighbor	10.1.1.1
👤	Active Neighbor	10.3.3.3

Frame 60 |  
2020-08-04T21:31:54.769833Z

Frame 61 |  
2020-08-04T21:32:02.698236Z