

IPv6 Practice Worksheet

Convert IPv4 to IPv6 for 6to4 tunneling.

IPv4 Address – 5.176.230.154				
IPv4 Address	5	176	230	154
Covert to Binary				
Convert to Hex				
CAT 2002::/16	2002			::1/64
Resulting IPv6				

IPv4 Address – 33.96.47.99				
IPv4 Address	33	96	47	99
Covert to Binary				
Convert to Hex				
CAT 2002::/16	2002			::1/64
Resulting IPv6				

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IPv4 Address – 221.156.3.248				
IPv4 Address	221	156	3	248
Covert to Binary				
Convert to Hex				
CAT 2002::/16	2002			::1/64
Resulting IPv6				

IPv4 Address – 34.4.171.101				
IPv4 Address	34	4	171	101
Covert to Binary				
Convert to Hex				
CAT 2002::/16	2002			::1/64
Resulting IPv6				

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IPv4 Address – 6.170.161.178				
IPv4 Address	6	170	161	178
Covert to Binary				
Convert to Hex				
CAT 2002::/16	2002			::1/64
Resulting IPv6				

IPv4 Address – 95.205.173.236				
IPv4 Address	95	205	173	236
Covert to Binary				
Convert to Hex				
CAT 2002::/16	2002			::1/64
Resulting IPv6				

IPv6 Practice Worksheet

Use a MAC Address to create an IPv6 Host ID

Given a MAC address – 7B:85:99:30:40:C8							
OUI			IPv6 Reserved		Serial Number		
			FF	FE			
Convert first octet to binary							
Locate the U/L Bit							
Ensure the U/L Bit is set to local							
Convert the binary back to Hexadecimal							
			FF	FE			
Resulting Host ID							

Given a MAC address – 9F:4C:12:BD:3C:B6							
OUI			IPv6 Reserved		Serial Number		
			FF	FE			
Convert first octet to binary							
Locate the U/L Bit							
Ensure the U/L Bit is set to local							
Convert the binary back to Hexadecimal							
			FF	FE			
Resulting Host ID							

IPv6 Practice Worksheet

Given a MAC address – 1C:0A:B2:9E:84:34							
OUI			IPv6 Reserved		Serial Number		
			FF	FE			
	Convert first octet to binary						
	Locate the U/L Bit						
	Ensure the U/L Bit is set to local						
	Convert the binary back to Hexadecimal						
			FF	FE			
Resulting Host ID							

Given a MAC address – 90:09:09:83:61:21							
OUI			IPv6 Reserved		Serial Number		
			FF	FE			
	Convert first octet to binary						
	Locate the U/L Bit						
	Ensure the U/L Bit is set to local						
	Convert the binary back to Hexadecimal						
			FF	FE			
Resulting Host ID							

IPv6 Practice Worksheet

Given a MAC address – B1:9A:c6:E7:55:DF							
OUI			IPv6 Reserved		Serial Number		
			FF	FE			
	Convert first octet to binary						
	Locate the U/L Bit						
	Ensure the U/L Bit is set to local						
	Convert the binary back to Hexadecimal						
			FF	FE			
Resulting Host ID							

Given a MAC address – F2:EE:AA:C1:20:BE							
OUI			IPv6 Reserved		Serial Number		
			FF	FE			
	Convert first octet to binary						
	Locate the U/L Bit						
	Ensure the U/L Bit is set to local						
	Convert the binary back to Hexadecimal						
			FF	FE			
Resulting Host ID							