

IPv6 Address Notation Exercise



In case multiple answers are possible, please circle all correct ones.

1. You have a /32 prefix starting with 2001:0db8. How do you search for it in the RIPE Database?

- A. 2001:0db8
- B. 2001:0db8/32
- C. 2001:0db8::/32
- D. 2001:db8::/32

2. How do you correctly compress the following IPv6 address:

2001:0db8:0000:0000:0000:0000:0000:0c50

- A. 2001:0db8:0:0:0:0:0:0c50
- B. 2001:0db8::0c50
- C. 2001:db8::c50
- D. 2001:db8::c5

3. How do you correctly compress the following IPv6 address:

2001:0db8:0000:0000:b450:0000:0000:00b4

- A. 2001:db8::b450::b4
- B. 2001:db8::b450:0:0:b4
- C. 2001:db8::b45:0000:0000:b4
- D. 2001:db8:0:0:b450::b4

4. How do you correctly compress the following IPv6 address:

2001:0db8:00f0:0000:0000:03d0:0000:00ff

- A. 2001:0db8:00f0::3d0:0:00ff
- B. 2001:db8:f0:0:0:3d0:0:ff
- C. 2001:db8:f0::3d0:0:ff
- D. 2001:0db8:0f0:0:0:3d0:0:0ff

5. How do you correctly compress the following IPv6 address:

2001:0db8:0f3c:00d7:7dab:03d0:0000:00ff

- A. 2001:db8:f3c:d7:7dab:3d:0:ff
- B. 2001:db8:f3c:d7:7dab:3d0:0:ff
- C. 2001:db8:f3c:d7:7dab:3d0::ff
- D. 2001:0db8:0f3c:00d7:7dab:03d::00ff

6. How do you access your IPv6 webserver at 2001:db8::8080 on port 8080 using a web browser

- A. http://2001:db8::8080:8080
- B. http://2001:0db8:0000:0000:0000:0000:0000:8080:8080
- C. http://[2001:db8::8080]:8080
- D. You cannot use the IPv6 address, you have to rely on DNS

IPv6 Address Notation Exercise Answers

All correct answers are marked in red

1. You have a /32 prefix starting with 2001:0db8. How do you search for it in the RIPE Database?

- A. 2001:0db8
- B. 2001:0db8/32
- C. 2001:0db8::/32
- D. 2001:db8::/32

2. How do you correctly compress the following IPv6 address:

2001:0db8:0000:0000:0000:0000:0c50

- A. 2001:0db8:0:0:0:0:0c50
- B. 2001:0db8::0c50
- C. 2001:db8::c50**
- D. 2001:db8::c5

3. How do you correctly compress the following IPv6 address:

2001:0db8:0000:0000:b450:0000:0000:00b4

- A. 2001:db8::b450::b4
- B. 2001:db8::b450:0:0:b4**
- C. 2001:db8::b45:0000:0000:b4
- D. 2001:db8:0:0:b450::b4

4. How do you correctly compress the following IPv6 address:

2001:0db8:00f0:0000:0000:03d0:0000:00ff

- A. 2001:0db8:00f0::3d0:0:00ff
- B. 2001:db8:f0:0:0:3d0:0:ff
- C. 2001:db8:f0::3d0:0:ff**
- D. 2001:0db8:0f0:0:0:3d0:0:0ff

5. How do you correctly compress the following IPv6 address:

2001:0db8:0f3c:00d7:7dab:03d0:0000:00ff

- A. 2001:db8:f3c:d7:7dab:3d:0:ff
- B. 2001:db8:f3c:d7:7dab:3d0:0:ff**
- C. 2001:db8:f3c:d7:7dab:3d0::ff
- D. 2001:0db8:0f3c:00d7:7dab:03d::00ff

6. How do you access your IPv6 webserver at 2001:db8::8080 on port 8080 using a web browser

- A. http://2001:db8::8080:8080
- B. http://2001:0db8:0000:0000:0000:0000:8080:8080
- C. http://[2001:db8::8080]:8080
- D. You cannot use the IPv6 address, you have to rely on DNS

** According to RFC5952, this answer is most correct.
However, your IPv6 capable device will accept all possibilities

For more information, please read RFC 5952 - A Recommendation for IPv6 Address Text Representation