

Using regular expressions to validate IP address with Delphi XE

in [DELPHI \(WIN32\)](#) by [Andreano Lanusse](#) — September 8, 2010 at 10:57 pm | [10 comments](#)

One of the new Delphi XE features is the RTL support for regular expressions (`RegularExpressions`), regular expressions provide a concise and flexible means for matching strings of text, such as particular characters, words, or patterns of characters.

The follow example shows how to use regexp to validate IP address.

```
01 program RegExpIP;
02
03 {$APPTYPE CONSOLE}
04
05 uses
06   SysUtils,
07   RegularExpressions;
08
09 var
10   ipRegExp : String;
11 begin
12   try
13
14     ipRegExp := '\b(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\b';
15
16     if TRegEx.IsMatch(paramstr(1), ipRegExp) then
17       Writeln('Text DOES match the regular expression')
18     else
19       Writeln('Text DOES NOT match the regular expression');
20
21   except
22     on E: Exception do
23       Writeln(E.ClassName, ': ', E.Message);
24   end;
25 end.
```

Just execute the program and pass the IP address as parameter.

In this case the IP address is valid

RegExpIP 200.100.2.21

Text DOES match the regular expression

In this case not, the IP address finish with 263, it is out of the range which is 255

RegExpIP 200.100.2.263

Text DOES NOT match the regular expression

On the [RAD Studio demo repository at sourceforge](#) you can find a project sample showing other regular expressions that you can use.

As well download the Delphi XE trial and start looking the other great features on this release,

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ChAr

September 8, 2010 at 11:31 pm


Hi, I think that in Your second example the “invalid” IP adress 200.100.2.243 is actually perfectly valid one. 243 is NOT greater than maximum of 255.



pedrow

September 8, 2010 at 11:31 pm

Can you just check, is your second example right?




Jeroen Pluimers

September 8, 2010 at 11:43 pm

This is in fact a much better example than the eternal email address validation (which – when you read the RFC’s closely – can only be approximated by regular expressions).

–jeroen



Michael Justin


September 9, 2010 at 12:03 am

Hint: a simple number like 123456789 is also a valid IP address (if it is in the IPv4 or IPv6 address range). The dot-decimal notation is only the usual representation. Try it with “ping 123456789”.

Atle


September 9, 2010 at 12:24 am

This is wrong:
“In this case not, the IP address finish with 243, it is out of the range which is




Stefan on:

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Uwe Raabe on:

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255"..

243 is not outside the range.



Uwe Raabe September 9, 2010 at 12:47 am

@Atle: The output actually states that the IP address is correct!



Andreano Lanusse September 9, 2010 at 4:01 am

All sorry, it was a typo from my side, the second example finish with 263 and the output message said DOES NOT match, so the program is correct, again my typo 😊



Stefan September 9, 2010 at 4:21 am

Actually your example checks if the given text **contains** a valid IP address, not if it **is** a valid IP address.



Andreano Lanusse September 9, 2010 at 4:49 am

Hi Stefan, it will check if the IP address is valid, as well it will restrict the 4 numbers in the IP address to 0..255.

But if you are considering if the IP address is valid on the network, not I'm not doing that, you can use the IP works ping component to check that 😊



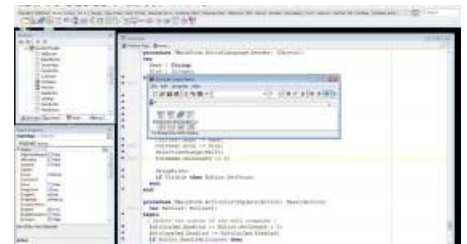
Stefan September 9, 2010 at 4:59 am

Nope, you are using word boundaries instead of start and end of string anchors. "Hello 127.0.0.1 World" would match the regex.



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<cite> <code> <del datetime=""> <em> <i> <q  
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