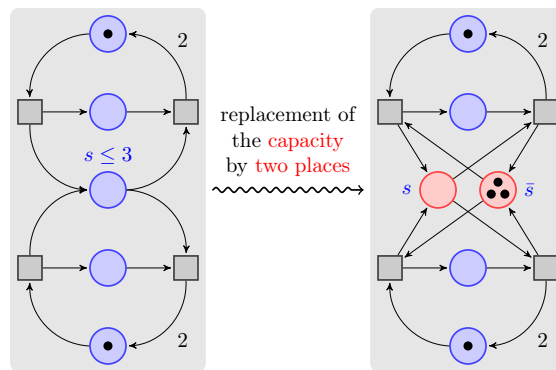


Walk Through the Petri-Net In TiKZ Tutorial

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December 16, 2019



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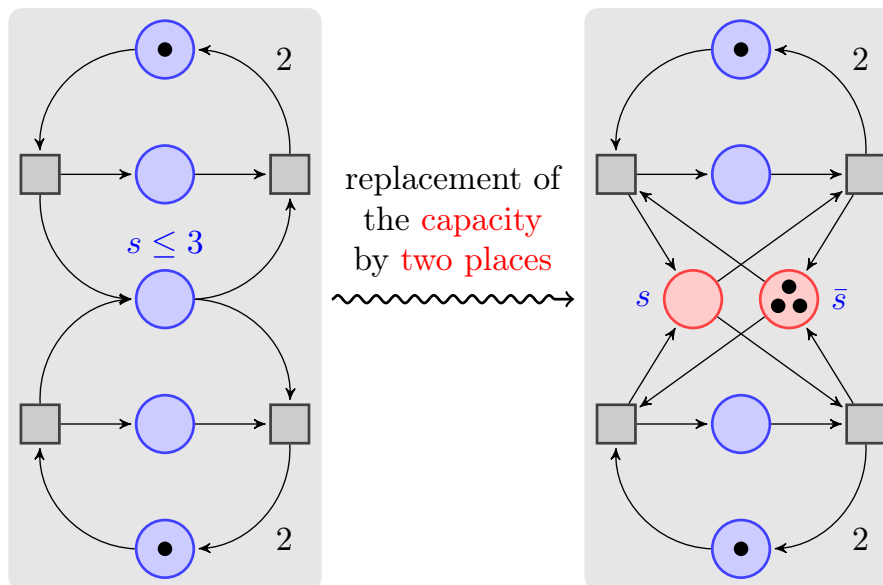
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Contents

Analyze the Petri-Net tutorial in Chapter 3 of the TikZ manual line by line.

Chapter 3 of the TikZ tutorial gives an example of Petri net. In this post, let me work through the code line by line. During this example, more tikz libraries are used, such as arrows, decorations.pathmorphing, backgrounds, positioning, fit, petri. These libraries should be added before the tikzpicture environment.



The code is shown as

```

1 \begin{tikzpicture}
2   [node distance=1.3cm,on grid,>=stealth',bend angle=45,auto,
3   every place/.style= {minimum size=6mm,thick,draw=blue!75,fill
4   =blue!20},
5   every transition/.style={thick,draw=black!75,fill=black!20},
6   red place/.style= {place,draw=red!75,fill=red!20},
7   every label/.style= {blue}]
8   \node [place,tokens=1] (w1) {};
9   \node [place] (c1) [below=of w1] {};
10  \node [place] (s) [below=of c1,label=above:$s\le 3$] {};
11  \node [place,tokens=1] (w2) [below=of c2] {};
12  \node [transition] (e1) [left=of c1] {}
13  edge [pre,bend left] (w1)
14  edge [post,bend right] (s)
15  edge [post] (c1);
16  \node [transition] (e2) [left=of c2] {}

```

```

17 edge [pre,bend right] (w2)
18 edge [post,bend left] (s)
19 edge [post] (c2);
20 \node [transition] (l1) [right=of c1] {}
21 edge [pre] (c1)
22 edge [pre,bend left] (s)
23 edge [post,bend right] node[swap] {2} (w1);
24 \node [transition] (l2) [right=of c2] {}
25 edge [pre] (c2)
26 edge [pre,bend right] (s)
27 edge [post,bend left] node {2} (w2);
28
29 \begin{scope}[xshift=6cm]
30   \node [place,tokens=1] (w1') {};
31   \node [place] (c1') [below=of w1'] {};
32   \node [red place] (s1') [below=of c1',xshift=-5mm]
33     [label=left:$s$] {};
34   \node [red place,tokens=3] (s2') [below=of c1',xshift=5mm]
35     [label=right:$\bar{s}$] {};
36   \node [place] (c2') [below=of s1',xshift=5mm] {};
37   \node [place,tokens=1] (w2') [below=of c2'] {};
38   \node [transition] (e1') [left=of c1'] {}
39   edge [pre,bend left] (w1')
40   edge [post] (s1')
41   edge [pre] (s2')
42   edge [post] (c1');
43   \node [transition] (e2') [left=of c2'] {}
44   edge [pre,bend right] (w2')
45   edge [post] (s1')
46   edge [pre] (s2')
47   edge [post] (c2');
48   \node [transition] (l1') [right=of c1'] {}
49   edge [pre] (c1')
50   edge [pre] (s1')
51   edge [post] (s2')
52   edge [post,bend right] node[swap] {2} (w1');
53   \node [transition] (l2') [right=of c2'] {}
54   edge [pre] (c2')
55   edge [pre] (s1')
56   edge [post] (s2')
57   edge [post,bend left] node {2} (w2');
58 \end{scope}
59 \begin{scope}[on background layer]
60   \node (r1) [fill=black!10,rounded corners,fit=(w1)(w2)(e1)(

```

```
        e2)(l1)(l2)] {};  
61    \node (r2) [fill=black!10,rounded corners,fit=(w1')(w2')(e  
        1')(e2')(l1')(l2')] {};  
62    \end{scope}  
63    \draw [shorten >=1mm,-to,thick,decorate,  
64    decoration={snake,amplitude=.4mm,segment length=2mm,  
65    pre=moveto,pre length=1mm,post length=2mm}]  
66    (r1) -- (r2) node [above=1mm,midway,text width=3cm,align=  
        center]  
67    {replacement of the \textcolor{red}{capacity} by \textcolor{  
        red}{two places}};  
68    \end{tikzpicture}
```