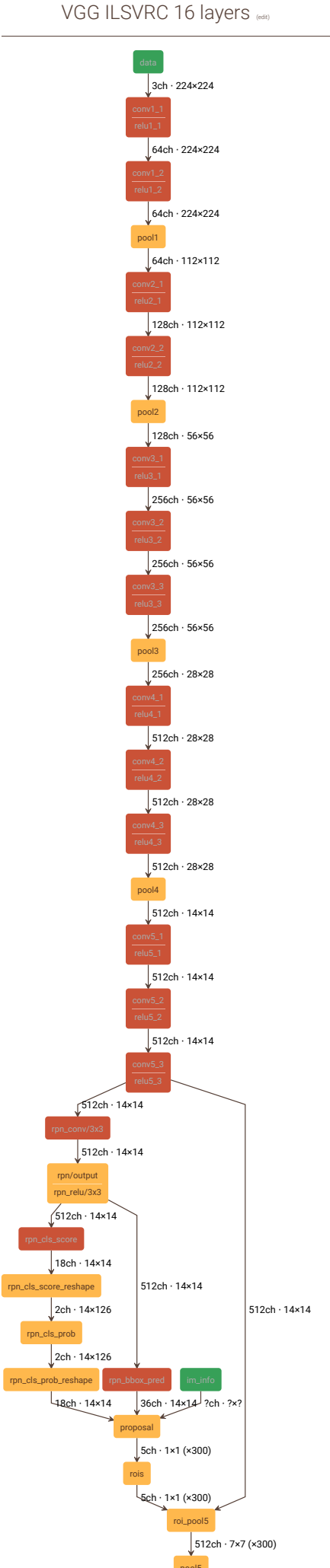
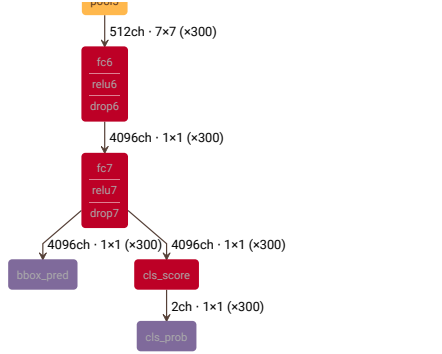


```
1 name: "VGG_ILSVRC_16_layers"
2
3 input: "data"
4 input_shape {
5   dim: 1
6   dim: 3
7   dim: 224
8   dim: 224
9 }
10
11 input: "im_info"
12 input_shape {
13   dim: 1
14   dim: 3
15 }
16
17 layer {
18   name: "conv1_1"
19   type: "Convolution"
20   bottom: "data"
21   top: "conv1_1"
22   param {
23     lr_mult: 0
24     decay_mult: 0
25   }
26   param {
27     lr_mult: 0
28     decay_mult: 0
29   }
30   convolution_param {
31     num_output: 64
32     pad: 1
33     kernel_size: 3
34   }
35 }
36 layer {
37   name: "relu1_1"
38   type: "ReLU"
39   bottom: "conv1_1"
40   top: "conv1_1"
41 }
42 layer {
43   name: "conv1_2"
44   type: "Convolution"
45   bottom: "conv1_1"
46   top: "conv1_2"
47   param {
48     lr_mult: 0
49     decay_mult: 0
50   }
51   param {
52     lr_mult: 0
53     decay_mult: 0
54   }
55   convolution_param {
56     num_output: 64
57     pad: 1
58     kernel_size: 3
59   }
60 }
61 layer {
62   name: "relu1_2"
63   type: "ReLU"
64   bottom: "conv1_2"
65   top: "conv1_2"
66 }
67 layer {
68   name: "pool1"
69   type: "Pooling"
70   bottom: "conv1_2"
71   top: "pool1"
72   pooling_param {
73     pool: MAX
74     kernel_size: 2
75     stride: 2
76   }
77 }
78 layer {
79   name: "conv2_1"
80   type: "Convolution"
81   bottom: "pool1"
82   top: "conv2_1"
83   param {
84     lr_mult: 0
85     decay_mult: 0
86   }
87   param {
88     lr_mult: 0
89     decay_mult: 0
90   }
91   convolution_param {
92     num_output: 128
93     pad: 1
94     kernel_size: 3
95   }
96 }
97 layer {
98   name: "relu2_1"
99   type: "ReLU"
100  bottom: "conv2_1"
101  top: "conv2_1"
102 }
103 layer {
104   name: "conv2_2"
105   type: "Convolution"
106   bottom: "conv2_1"
107   top: "conv2_2"
108   param {
109     lr_mult: 0
110     decay_mult: 0
111   }
112   param {
113     lr_mult: 0
114     decay_mult: 0
115   }
116   convolution_param {
117     num_output: 128
118     pad: 1
119     kernel_size: 3
120   }
121 }
122 layer {
123   name: "relu2_2"
124   type: "ReLU"
125   bottom: "conv2_2"
126   top: "conv2_2"
127 }
128 layer {
129   name: "pool2"
130   type: "Pooling"
131   bottom: "conv2_2"
132   top: "pool2"
133   pooling_param {
134     pool: MAX
135     kernel_size: 2
136     stride: 2
137   }
138 }
139 layer {
140   name: "conv3_1"
141   type: "Convolution"
142   bottom: "pool2"
143   top: "conv3_1"
144   param {
145     lr_mult: 1
146     decay_mult: 1
147   }
148   param {
149     lr_mult: 2
150     decay_mult: 0
151   }
152   convolution_param {
153     num_output: 256
154     pad: 1
155     kernel_size: 3
156   }
157 }
158 layer {
159   name: "relu3_1"
160   type: "ReLU"
161   bottom: "conv3_1"
162   top: "conv3_1"
163 }
```



```
164 layer {
165   name: "conv3_2"
166   type: "Convolution"
167   bottom: "conv3_1"
168   top: "conv3_2"
169   param {
170     lr_mult: 1
171     decay_mult: 1
172   }
173   param {
174     lr_mult: 2
175     decay_mult: 0
176   }
177   convolution_param {
178     num_output: 256
179     pad: 1
180     kernel_size: 3
181   }
182 }
183 layer {
184   name: "relu3_2"
185   type: "ReLU"
186   bottom: "conv3_2"
187   top: "conv3_2"
188 }
189 layer {
190   name: "conv3_3"
191   type: "Convolution"
192   bottom: "conv3_2"
193   top: "conv3_3"
194   param {
195     lr_mult: 1
196     decay_mult: 1
197   }
198   param {
199     lr_mult: 2
200     decay_mult: 0
201   }
202   convolution_param {
203     num_output: 256
204     pad: 1
205     kernel_size: 3
206   }
207 }
208 layer {
209   name: "relu3_3"
210   type: "ReLU"
211   bottom: "conv3_3"
212   top: "conv3_3"
213 }
214 layer {
215   name: "pool3"
216   type: "Pooling"
217   bottom: "conv3_3"
218   top: "pool3"
219   pooling_param {
220     pool: MAX
221     kernel_size: 2
222     stride: 2
223   }
224 }
225 layer {
226   name: "conv4_1"
227   type: "Convolution"
228   bottom: "pool3"
229   top: "conv4_1"
230   param {
231     lr_mult: 1
232     decay_mult: 1
233   }
234   param {
235     lr_mult: 2
236     decay_mult: 0
237   }
238   convolution_param {
239     num_output: 512
240     pad: 1
241     kernel_size: 3
242   }
243 }
244 layer {
245   name: "relu4_1"
246   type: "ReLU"
247   bottom: "conv4_1"
248   top: "conv4_1"
249 }
250 layer {
251   name: "conv4_2"
252   type: "Convolution"
253   bottom: "conv4_1"
254   top: "conv4_2"
255   param {
256     lr_mult: 1
257     decay_mult: 1
258   }
259   param {
260     lr_mult: 2
261     decay_mult: 0
262   }
263   convolution_param {
264     num_output: 512
265     pad: 1
266     kernel_size: 3
267   }
268 }
269 layer {
270   name: "relu4_2"
271   type: "ReLU"
272   bottom: "conv4_2"
273   top: "conv4_2"
274 }
275 layer {
276   name: "conv4_3"
277   type: "Convolution"
278   bottom: "conv4_2"
279   top: "conv4_3"
280   param {
281     lr_mult: 1
282     decay_mult: 1
283   }
284   param {
285     lr_mult: 2
286     decay_mult: 0
287   }
288   convolution_param {
289     num_output: 512
290     pad: 1
291     kernel_size: 3
292   }
293 }
294 layer {
295   name: "relu4_3"
296   type: "ReLU"
297   bottom: "conv4_3"
298   top: "conv4_3"
299 }
300 layer {
301   name: "pool4"
302   type: "Pooling"
303   bottom: "conv4_3"
304   top: "pool4"
305   pooling_param {
306     pool: MAX
307     kernel_size: 2
308     stride: 2
309   }
310 }
311 layer {
312   name: "conv5_1"
313   type: "Convolution"
314   bottom: "pool4"
315   top: "conv5_1"
316   param {
317     lr_mult: 1
318     decay_mult: 1
319   }
320   param {
321     lr_mult: 2
322     decay_mult: 0
323   }
324   convolution_param {
325     num_output: 512
326     pad: 1
```



Network Analysis

Summary:

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops	mem
1	data	data	3	224x224	3	224x224			activation 150.53k
2	conv1_1	Convolution	3	224x224	64	224x224	mac 86.7M	activation 3.21M	param 1.79k
3	relu1_1	ReLU	64	224x224	64	224x224	comp 3.21M	activation 3.21M	
4	conv1_2	Convolution	64	224x224	64	224x224	mac 1.85G	activation 3.21M	param 36.93k
5	relu1_2	ReLU	64	224x224	64	224x224	comp 3.21M	activation 3.21M	
6	pool1	Pooling	64	224x224	64	112x112	comp 3.21M	activation 802.82k	
7	conv2_1	Convolution	64	112x112	128	112x112	mac 924.84M	activation 1.61M	param 73.86k
8	relu2_1	ReLU	128	112x112	128	112x112	comp 1.61M	activation 1.61M	
9	conv2_2	Convolution	128	112x112	128	112x112	mac 1.85G	activation 1.61M	param 147.58k
10	relu2_2	ReLU	128	112x112	128	112x112	comp 1.61M	activation 1.61M	
11	pool2	Pooling	128	112x112	128	56x56	comp 1.61M	activation 401.41k	
12	conv3_1	Convolution	128	56x56	256	56x56	mac 924.84M	activation 802.82k	param 295.17k
13	relu3_1	ReLU	256	56x56	256	56x56	comp 802.82k	activation 802.82k	
14	conv3_2	Convolution	256	56x56	256	56x56	mac 1.85G	activation 802.82k	param 590.08k
15	relu3_2	ReLU	256	56x56	256	56x56	comp 802.82k	activation 802.82k	
16	conv3_3	Convolution	256	56x56	256	56x56	mac 1.85G	activation 802.82k	param 590.08k
17	relu3_3	ReLU	256	56x56	256	56x56	comp 802.82k	activation 802.82k	
18	pool3	Pooling	256	56x56	256	28x28	comp 802.82k	activation 200.7k	
19	conv4_1	Convolution	256	28x28	512	28x28	mac 924.84M	activation 401.41k	param 1.18M
20	relu4_1	ReLU	512	28x28	512	28x28	comp 401.41k	activation 401.41k	
21	conv4_2	Convolution	512	28x28	512	28x28	mac 1.85G	activation 401.41k	param 2.36M
22	relu4_2	ReLU	512	28x28	512	28x28	comp 401.41k	activation 401.41k	
23	conv4_3	Convolution	512	28x28	512	28x28	mac 1.85G	activation 401.41k	param 2.36M
24	relu4_3	ReLU	512	28x28	512	28x28	comp 401.41k	activation 401.41k	
25	pool4	Pooling	512	28x28	512	14x14	comp 401.41k	activation 100.35k	
26	conv5_1	Convolution	512	14x14	512	14x14	mac 462.42M	activation 100.35k	param 2.36M
27	relu5_1	ReLU	512	14x14	512	14x14	comp 100.35k	activation 100.35k	
28	conv5_2	Convolution	512	14x14	512	14x14	mac 462.42M	activation 100.35k	param 2.36M
29	relu5_2	ReLU	512	14x14	512	14x14	comp 100.35k	activation 100.35k	
30	conv5_3	Convolution	512	14x14	512	14x14	mac 462.42M	activation 100.35k	param 2.36M
31	relu5_3	ReLU	512	14x14	512	14x14	comp 100.35k	activation 100.35k	
32	rpn	submodule(1)	512	14x14	512	14x14	mac 462.42M	activation 200.7k	param 2.36M
34	rpn_relu/3x3	ReLU	512	14x14	512	14x14	comp 100.35k	activation 100.35k	
35	rpn_bbox_pred	Convolution	512	14x14	36	14x14	mac 3.61M	activation 7.06k	param 18.47k

```
327     kernel_size: 3
328   }
329 }
330 layer {
331   name: "relu5_1"
332   type: "ReLU"
333   bottom: "conv5_1"
334   top: "conv5_1"
335 }
336 layer {
337   name: "conv5_2"
338   type: "Convolution"
339   bottom: "conv5_1"
340   top: "conv5_2"
341   param {
342     lr_mult: 1
343     decay_mult: 1
344   }
345   param {
346     lr_mult: 2
347     decay_mult: 0
348   }
349   convolution_param {
350     num_output: 512
351     pad: 1
352     kernel_size: 3
353   }
354 }
355 layer {
356   name: "relu5_2"
357   type: "ReLU"
358   bottom: "conv5_2"
359   top: "conv5_2"
360 }
361 layer {
362   name: "conv5_3"
363   type: "Convolution"
364   bottom: "conv5_2"
365   top: "conv5_3"
366   param {
367     lr_mult: 1
368     decay_mult: 1
369   }
370   param {
371     lr_mult: 2
372     decay_mult: 0
373   }
374   convolution_param {
375     num_output: 512
376     pad: 1
377     kernel_size: 3
378   }
379 }
380 layer {
381   name: "relu5_3"
382   type: "ReLU"
383   bottom: "conv5_3"
384   top: "conv5_3"
385 }
386
387 ##### RPN #####
388
389 layer {
390   name: "rpn_conv/3x3"
391   type: "Convolution"
392   bottom: "conv5_3"
393   top: "rpn/output"
394   param { lr_mult: 1.0 decay_mult: 1.0 }
395   param { lr_mult: 2.0 decay_mult: 0 }
396   convolution_param {
397     num_output: 512
398     kernel_size: 3 pad: 1 stride: 1
399     weight_filler { type: "gaussian" std: 0.01 }
400     bias_filler { type: "constant" value: 0 }
401   }
402 }
403 layer {
404   name: "rpn_relu/3x3"
405   type: "ReLU"
406   bottom: "rpn/output"
407   top: "rpn/output"
408 }
409
410 layer {
411   name: "rpn_cls_score"
412   type: "Convolution"
413   bottom: "rpn/output"
414   top: "rpn_cls_score"
415   param { lr_mult: 1.0 decay_mult: 1.0 }
416   param { lr_mult: 2.0 decay_mult: 0 }
417   convolution_param {
418     num_output: 18 # 2(bg/fg) * 9(anchors)
419     kernel_size: 1 pad: 0 stride: 1
420     weight_filler { type: "gaussian" std: 0.01 }
421     bias_filler { type: "constant" value: 0 }
422   }
423 }
424 layer {
425   name: "rpn_bbox_pred"
426   type: "Convolution"
427   bottom: "rpn/output"
428   top: "rpn_bbox_pred"
429   param { lr_mult: 1.0 decay_mult: 1.0 }
430   param { lr_mult: 2.0 decay_mult: 0 }
431   convolution_param {
432     num_output: 36 # 4 * 9(anchors)
433     kernel_size: 1 pad: 0 stride: 1
434     weight_filler { type: "gaussian" std: 0.01 }
435     bias_filler { type: "constant" value: 0 }
436   }
437 }
438 layer {
439   bottom: "rpn_cls_score"
440   top: "rpn_cls_score_reshape"
441   name: "rpn_cls_score_reshape"
442   type: "Reshape"
443   reshape_param { shape { dim: 0 dim: 2 dim: -1 dim: 0 } }
444 }
445
446 ##### RoI Proposal #####
447
448 layer {
449   name: "rpn_cls_prob"
450   type: "Softmax"
451   bottom: "rpn_cls_score_reshape"
452   top: "rpn_cls_prob"
453 }
454 layer {
455   name: "rpn_cls_prob_reshape"
456   type: "Reshape"
457   bottom: "rpn_cls_prob"
458   top: "rpn_cls_prob_reshape"
459   reshape_param { shape { dim: 0 dim: 18 dim: -1 dim: 0 } }
460 }
461 layer {
462   name: "proposal"
463   type: "Python"
464   bottom: "rpn_cls_prob_reshape"
465   bottom: "rpn_bbox_pred"
466   bottom: "im_info"
467   top: "rois"
468   python_param {
469     module: "rpn_proposal_layer"
470     layer: "ProposalLayer"
471     param_str: "'feat_stride': 16"
472   }
473 }
474
475 ##### RCNN #####
476
477 layer {
478   name: "roi_pool5"
479   type: "ROIPooling"
480   bottom: "conv5_3"
481   bottom: "rois"
482   top: "pool5"
483   roi_pooling_param {
484     pooled_w: 7
485     pooled_h: 7
486     spatial_scale: 0.0625 # 1/16
487   }
488 }
489 layer {
```

	rpn_cls_score	Convolution		512	14x14	18	14x14		<div>macc 1.81M</div>	<div>activation 3.53k</div> <div>param 9.23k</div>
37	rpn_cls_score_reshape	Reshape		18	14x14	2	14x126			
38	rpn_cls_prob	Softmax		2	14x126	2	14x126		<div>add 3.53k</div> <div>div 3.53k</div> <div>exp 3.53k</div>	<div>activation 3.53k</div>
39	rpn_cls_prob_reshape	Reshape		2	14x126	18	14x14			
40	im_info	implicit		?	?x?	?	?x?			
41	proposal	Python		18	14x14	5	1x1		<div>macc 103.81k</div> <div>comp 3.44M</div> <div>add 286.74k</div> <div>div 44.85k</div> <div>exp 3.53k</div>	<div>activation 1.5k</div>
42	rois	implicit		5	1x1	5	1x1			<div>activation 1.5k</div>
43	roi_pool5	ROIPooling		512	14x14	512	7x7		<div>macc 300</div> <div>comp 30.11M</div> <div>add 300</div> <div>div 300</div>	<div>activation 7.53M</div>
ID	name	type	batch	ch_in	dim_in	ch_out	dim_out		ops	mem
44	pool5	implicit		512	7x7	512	7x7			<div>activation 7.53M</div>
45	fc6	InnerProduct		512	7x7	4096	1x1		<div>macc 30.83G</div>	<div>activation 1.23M</div> <div>param 102.76M</div>
46	relu6	ReLU		4096	1x1	4096	1x1		<div>comp 1.23M</div>	<div>activation 1.23M</div>
47	drop6	Dropout		4096	1x1	4096	1x1		<div>comp 1.23M</div>	<div>activation 1.23M</div>
48	fc7	InnerProduct		4096	1x1	4096	1x1		<div>macc 5.03G</div>	<div>activation 1.23M</div> <div>param 16.78M</div>
49	relu7	ReLU		4096	1x1	4096	1x1		<div>comp 1.23M</div>	<div>activation 1.23M</div>
50	drop7	Dropout		4096	1x1	4096	1x1		<div>comp 1.23M</div>	<div>activation 1.23M</div>
51	bbox_pred	InnerProduct		4096	1x1	8	1x1		<div>macc 9.83M</div>	<div>activation 2.4k</div> <div>param 32.78k</div>
52	cls_score	InnerProduct		4096	1x1	2	1x1		<div>macc 2.46M</div>	<div>activation 600</div> <div>param 8.19k</div>
53	cls_prob	Softmax		2	1x1	2	1x1		<div>add 600</div> <div>div 600</div> <div>exp 600</div>	<div>activation 600</div>
TOTAL									<div>macc 51.69G</div> <div>comp 58.13M</div> <div>add 291.17k</div> <div>div 49.28k</div> <div>exp 7.66k</div>	<div>activation 51.5M</div> <div>param 136.69M</div>

Details:

ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	ops_raw	mem_raw
1	data	data	1	3	224x224	3	224x224	<div>macco0</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation150528</div> <div>param0</div>
2	conv1_1	Convolution	1	3	224x224	64	224x224	<div>macco86704128</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation3211264</div> <div>param1792</div>
3	relu1_1	ReLU	1	64	224x224	64	224x224	<div>macco0</div> <div>comp3211264</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation3211264</div> <div>param0</div>
4	conv1_2	Convolution	1	64	224x224	64	224x224	<div>macco1849688064</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation3211264</div> <div>param36928</div>
5	relu1_2	ReLU	1	64	224x224	64	224x224	<div>macco0</div> <div>comp3211264</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation3211264</div> <div>param0</div>
6	pool1	Pooling	1	64	224x224	64	112x112	<div>macco0</div> <div>comp3211264</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation802816</div> <div>param0</div>
7	conv2_1	Convolution	1	64	112x112	128	112x112	<div>macco924844032</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation1605632</div> <div>param73856</div>

```
490 name: "fc6"
491 type: "InnerProduct"
492 bottom: "pool5"
493 top: "fc6"
494 param {
495   lr_mult: 1
496   decay_mult: 1
497 }
498 param {
499   lr_mult: 2
500   decay_mult: 0
501 }
502 inner_product_param {
503   num_output: 4096
504 }
505 }
506 layer {
507   name: "relu6"
508   type: "ReLU"
509   bottom: "fc6"
510   top: "fc6"
511 }
512 layer {
513   name: "drop6"
514   type: "Dropout"
515   bottom: "fc6"
516   top: "fc6"
517 dropout_param {
518   dropout_ratio: 0.5
519 }
520 }
521 layer {
522   name: "fc7"
523   type: "InnerProduct"
524   bottom: "fc6"
525   top: "fc7"
526 param {
527   lr_mult: 1
528   decay_mult: 1
529 }
530 param {
531   lr_mult: 2
532   decay_mult: 0
533 }
534 inner_product_param {
535   num_output: 4096
536 }
537 }
538 layer {
539   name: "relu7"
540   type: "ReLU"
541   bottom: "fc7"
542   top: "fc7"
543 }
544 layer {
545   name: "drop7"
546   type: "Dropout"
547   bottom: "fc7"
548   top: "fc7"
549 dropout_param {
550   dropout_ratio: 0.5
551 }
552 }
553 layer {
554   name: "cls_score"
555   type: "InnerProduct"
556   bottom: "fc7"
557   top: "cls_score"
558 param {
559   lr_mult: 1
560   decay_mult: 1
561 }
562 param {
563   lr_mult: 2
564   decay_mult: 0
565 }
566 inner_product_param {
567   num_output: 2
568 weight_filler {
569   type: "gaussian"
570   std: 0.01
571 }
572 bias_filler {
573   type: "constant"
574   value: 0
575 }
576 }
577 }
578 layer {
579   name: "bbox_pred"
580   type: "InnerProduct"
581   bottom: "fc7"
582   top: "bbox_pred"
583 param {
584   lr_mult: 1
585   decay_mult: 1
586 }
587 param {
588   lr_mult: 2
589   decay_mult: 0
590 }
591 inner_product_param {
592   num_output: 8
593 weight_filler {
594   type: "gaussian"
595   std: 0.001
596 }
597 bias_filler {
598   type: "constant"
599   value: 0
600 }
601 }
602 }
603 layer {
604   name: "cls_prob"
605   type: "Softmax"
606   bottom: "cls_score"
607   top: "cls_prob"
608 }
609 }
```

								macs	ops		
								exp	0		
8	relu2_1	ReLU	1	128	112x112	128	112x112	macs 0		activation	1605632
								comp	1605632	param	0
								add	0		
								div	0		
								exp	0		
9	conv2_2	Convolution	1	128	112x112	128	112x112	macs 1849688064		activation	1605632
								comp	0	param	147584
								add	0		
								div	0		
								exp	0		
10	relu2_2	ReLU	1	128	112x112	128	112x112	macs 0		activation	1605632
								comp	1605632	param	0
								add	0		
								div	0		
								exp	0		
11	pool2	Pooling	1	128	112x112	128	56x56	macs 0		activation	401408
								comp	1605632	param	0
								add	0		
								div	0		
								exp	0		
12	conv3_1	Convolution	1	128	56x56	256	56x56	macs 924844032		activation	802816
								comp	0	param	295168
								add	0		
								div	0		
								exp	0		
13	relu3_1	ReLU	1	256	56x56	256	56x56	macs 0		activation	802816
								comp	802816	param	0
								add	0		
								div	0		
								exp	0		
14	conv3_2	Convolution	1	256	56x56	256	56x56	macs 1849688064		activation	802816
								comp	0	param	590080
								add	0		
								div	0		
								exp	0		
15	relu3_2	ReLU	1	256	56x56	256	56x56	macs 0		activation	802816
								comp	802816	param	0
								add	0		
								div	0		
								exp	0		
16	conv3_3	Convolution	1	256	56x56	256	56x56	macs 1849688064		activation	802816
								comp	0	param	590080
								add	0		
								div	0		
								exp	0		
ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	macs	ops	mem_raw	
								div	0		
								exp	0		
17	relu3_3	ReLU	1	256	56x56	256	56x56	macs 0		activation	802816
								comp	802816	param	0
								add	0		
								div	0		
								exp	0		
18	pool3	Pooling	1	256	56x56	256	28x28	macs 0		activation	200704
								comp	802816	param	0
								add	0		
								div	0		
								exp	0		
19	conv4_1	Convolution	1	256	28x28	512	28x28	macs 924844032		activation	401408
								comp	0	param	1180160
								add	0		
								div	0		
								exp	0		
20	relu4_1	ReLU	1	512	28x28	512	28x28	macs 0		activation	401408
								comp	401408	param	0
								add	0		
								div	0		
								exp	0		
21	conv4_2	Convolution	1	512	28x28	512	28x28	macs 1849688064		activation	401408
								comp	0	param	2359808
								add	0		
								div	0		
								exp	0		
22	relu4_2	ReLU	1	512	28x28	512	28x28	macs 0		activation	401408
								comp	401408	param	0
								add	0		
								div	0		
								exp	0		
23	conv4_3	Convolution	1	512	28x28	512	28x28	macs 1849688064		activation	401408
								comp	0	param	2359808
								add	0		

								<div>div0</div>	
								<div>exp0</div>	
24	relu4_3	ReLU	1	512	28x28	512	28x28	<div>macco0</div> <div>comp401408</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation401408</div> <div>param0</div>
25	pool4	Pooling	1	512	28x28	512	14x14	<div>macco0</div> <div>comp401408</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param0</div>
26	conv5_1	Convolution	1	512	14x14	512	14x14	<div>macco462422016</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param2359808</div>
27	relu5_1	ReLU	1	512	14x14	512	14x14	<div>macco0</div> <div>comp100352</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param0</div>
28	conv5_2	Convolution	1	512	14x14	512	14x14	<div>macco462422016</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param2359808</div>
29	relu5_2	ReLU	1	512	14x14	512	14x14	<div>macco0</div> <div>comp100352</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param0</div>
30	conv5_3	Convolution	1	512	14x14	512	14x14	<div>macco462422016</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param2359808</div>
31	relu5_3	ReLU	1	512	14x14	512	14x14	<div>macco0</div> <div>comp100352</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param0</div>
32	rpn_conv/3x3	Convolution	1	512	14x14	512	14x14	<div>macco462422016</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param2359808</div>
ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	<div>gpus0</div>	mem_raw
								<div>add0</div>	
								<div>div0</div>	
								<div>exp0</div>	
33	rpn/output	implicit	1	512	14x14	512	14x14	<div>macco0</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param0</div>
34	rpn_relu/3x3	ReLU	1	512	14x14	512	14x14	<div>macco0</div> <div>comp100352</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation100352</div> <div>param0</div>
35	rpn_bbox_pred	Convolution	1	512	14x14	36	14x14	<div>macco3612672</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation7056</div> <div>param18468</div>
36	rpn_cls_score	Convolution	1	512	14x14	18	14x14	<div>macco1806336</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation3528</div> <div>param9234</div>
37	rpn_cls_score_reshape	Reshape	1	18	14x14	2	14x126	<div>macco0</div> <div>comp0</div> <div>add0</div> <div>div0</div> <div>exp0</div>	<div>activation0</div> <div>param0</div>
38	rpn_cls_prob	Softmax	1	2	14x126	2	14x126	<div>macco0</div> <div>comp0</div> <div>add3528</div> <div>div3528</div> <div>exp3528</div>	<div>activation3528</div> <div>param0</div>
39	rpn_cls_prob_reshape	Reshape	1	2	14x126	18	14x14	<div>macco0</div> <div>comp0</div>	<div>activation0</div> <div>param0</div>

									<div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>		
40	im_info	implicit	?	?	?x?	?	?x?	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>0</div></div> <div><div>param</div><div>0</div></div>		
41	proposal	Python	1	18	14x14	5	1x1	<div><div>mac</div><div>103812</div></div> <div><div>comp</div><div>3436230</div></div> <div><div>add</div><div>286740</div></div> <div><div>div</div><div>44850</div></div> <div><div>exp</div><div>3528</div></div>	<div><div>activation</div><div>1500</div></div> <div><div>param</div><div>0</div></div>		
42	rois	implicit	300	5	1x1	5	1x1	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>1500</div></div> <div><div>param</div><div>0</div></div>		
43	roi_pool5	ROI Pooling	300	512	14x14	512	7x7	<div><div>mac</div><div>300</div></div> <div><div>comp</div><div>30105600</div></div> <div><div>add</div><div>300</div></div> <div><div>div</div><div>300</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>7526400</div></div> <div><div>param</div><div>0</div></div>		
44	pool5	implicit	300	512	7x7	512	7x7	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>7526400</div></div> <div><div>param</div><div>0</div></div>		
45	fc6	InnerProduct	300	512	7x7	4096	1x1	<div><div>mac</div><div>30828134400</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>1228800</div></div> <div><div>param</div><div>102764544</div></div>		
46	relu6	ReLU	300	4096	1x1	4096	1x1	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>1228800</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>1228800</div></div> <div><div>param</div><div>0</div></div>		
47	drop6	Dropout	300	4096	1x1	4096	1x1	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>1228800</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>1228800</div></div> <div><div>param</div><div>0</div></div>		
48	fc7	InnerProduct	300	4096	1x1	4096	1x1	<div><div>mac</div><div>5033164800</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>1228800</div></div> <div><div>param</div><div>16781312</div></div>		
ID	name	type	batch	ch_in	dim_in	ch_out	dim_out	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>0</div></div> <div><div>param</div><div>0</div></div>		
49	relu7	ReLU	300	4096	1x1	4096	1x1	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>1228800</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>1228800</div></div> <div><div>param</div><div>0</div></div>		
50	drop7	Dropout	300	4096	1x1	4096	1x1	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>1228800</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>1228800</div></div> <div><div>param</div><div>0</div></div>		
51	bbox_pred	InnerProduct	300	4096	1x1	8	1x1	<div><div>mac</div><div>9830400</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>2400</div></div> <div><div>param</div><div>32776</div></div>		
52	cls_score	InnerProduct	300	4096	1x1	2	1x1	<div><div>mac</div><div>2457600</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>0</div></div> <div><div>div</div><div>0</div></div> <div><div>exp</div><div>0</div></div>	<div><div>activation</div><div>600</div></div> <div><div>param</div><div>8194</div></div>		
53	cls_prob	Softmax	300	2	1x1	2	1x1	<div><div>mac</div><div>0</div></div> <div><div>comp</div><div>0</div></div> <div><div>add</div><div>600</div></div> <div><div>div</div><div>600</div></div> <div><div>exp</div><div>600</div></div>	<div><div>activation</div><div>600</div></div> <div><div>param</div><div>0</div></div>		