

## Grid Services Monitoring Working Group

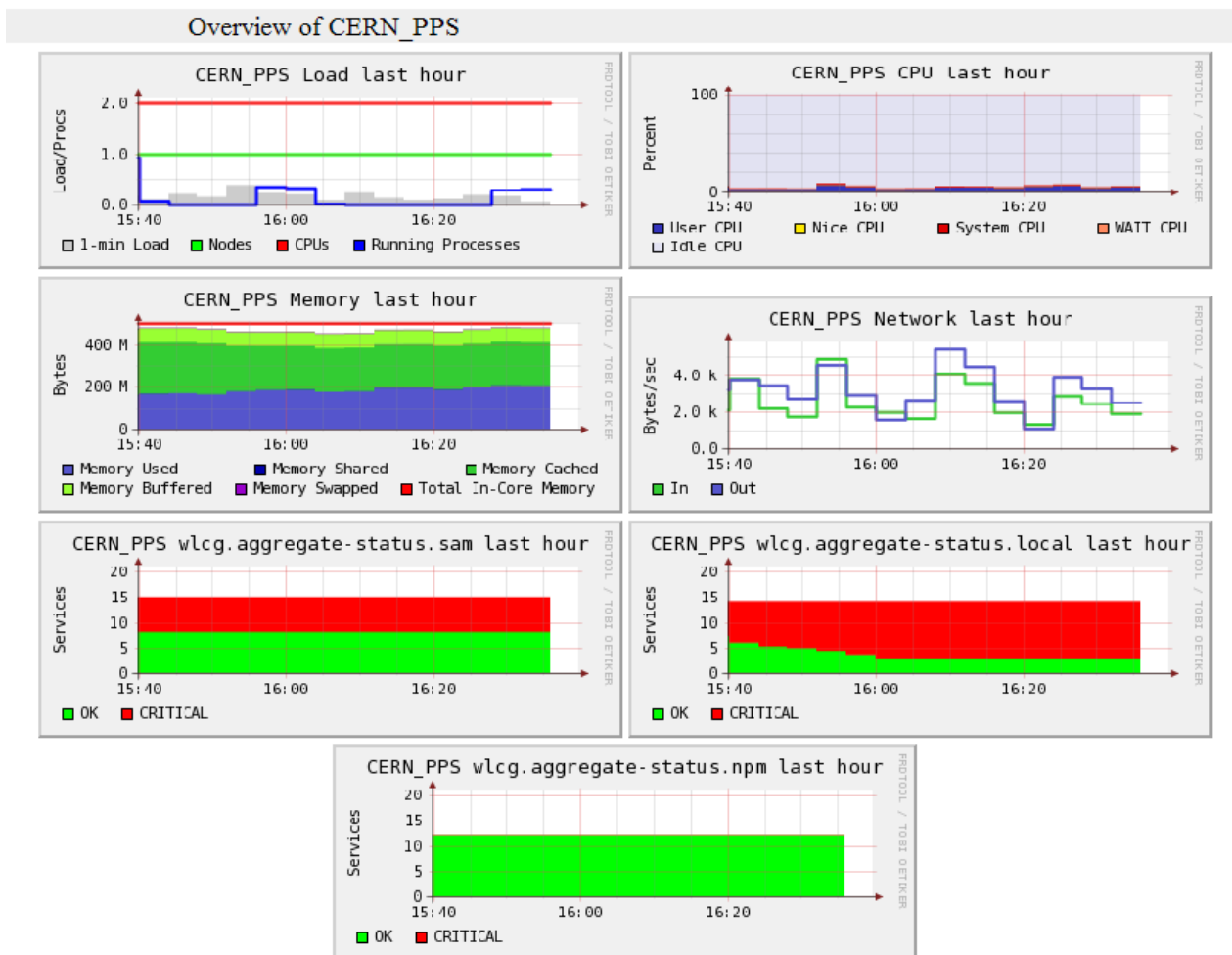
### Displaying Aggregated Service Metrics in Ganglia

**NOTE: The publisher script distributed with the Nagios prototype has changed and currently this ganglia integration is not possible.**

The Nagios-based monitoring prototype is distributed with a "publisher" .cgi script to calculate aggregate service metrics and publish these through the web interface as XML.

Whilst other Nagios-Ganglia integration methods are possible this documented describes a simple integration of this XML publisher interface allowing aggregated metrics to be displayed in graphical form in the Ganglia monitoring system Cluster view as shown in the screen clip below.

- ganglia\_shot.PNG:



1. Download the script `wlcg2ganglia.pl` from the repository [here](#) and install in `/opt/lcg/sbin/`.
2. Check you have the prerequisite perl module `XML::XPath` (`rpm perl-XML-XPath`) installed.
3. Install a cron (e.g. on the Ganglia server) to fetch the aggregate metrics published on the Nagios server and push them into Ganglia. **Note** ganglia 3.0.4 or above is required because of the use of gmetric host 'spoofing' feature. e.g. create `/etc/cron.d/wlcg2ganglia` with contents as follows

```
PATH=/sbin:/bin:/usr/sbin:/usr/bin
* * * * * nobody /opt/lcg/sbin/wlcg2ganglia.pl -s CERN_PPS \
-u https://pps-monitoring.cern.ch/cgi-bin/publisher.cgi >> /dev/null 2>&1
```

4. Patch 2 ganglia .php files in `/var/www/html/ganglia` using the patch data below.

## GridMonitoringGangliaIntegration < LCG < TWiki

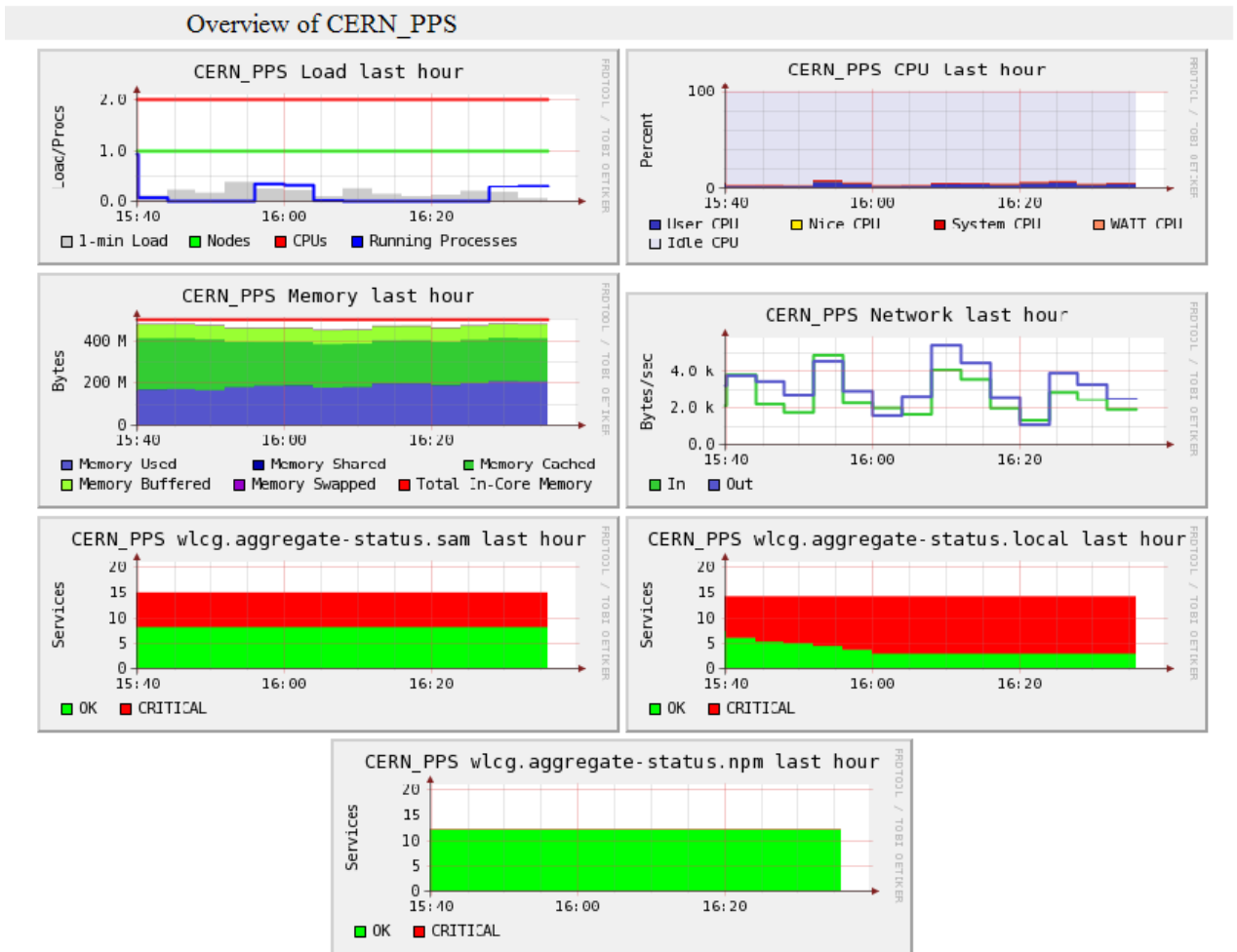
When completed 3 additional summary graphs for local and remote (SAM & NPM) metrics should be displayed in the Ganglia Cluster view.

```
*** graph.php 2007-07-30 17:10:16.000000000 +0200
--- graph.php_iann 2007-07-30 17:06:00.000000000 +0200
*****
*** 210,217 ****
--- 210,241 ----
        ."DEF:'bytes_out'='${rrd_dir}/pkts_out.rrd':'sum':AVERAGE "
        ."LINE2:'bytes_in'#$mem_cached_color:'In' "
        ."LINE2:'bytes_out'#$mem_used_color:'Out' ";
    }
+   #
+   # Handle aggregate WLCG metrics
+   # (eg. sam, local and npm, but this code does not care
+   # and looks for org.wlcg.aggregate-status.xxxx_report)
+   #
+   else if (strncmp($graph,"org.wlcg.aggregate-status.",26) == 0 )
+   {
+       # Construct the name of the rrd file from the graph name
+       $metric = substr($graph,0,strlen($graph)-7);
+       # Chop the graph name up to make a useful title string
+       $style = substr($metric,4,strlen($metric)-4);
+       $style = substr($metric,4,strlen($metric)-4);
+
+       $upper_limit = "--upper-limit 10";
+       $lower_limit = "--lower-limit 0";
+
+       $vertical_label = "--vertical-label Services ";
+
+       $series ="DEF:'ok'='${rrd_dir}/${metric}.rrd':'sum':AVERAGE "
+       ."DEF:'total'='${rrd_dir}/${metric}.rrd':'num':AVERAGE "
+       ."CDEF:'crit'=total,ok,- "
+       ."AREA:'ok'#00FF00:'OK' "
+       ."STACK:'crit'#FF0000:'CRITICAL' ";
+   }
+   else
+   {
+       /* Got a strange value for $graph */
+       exit();
+   }

*** cluster_view.php 2007-07-30 17:18:54.000000000 +0200
--- cluster_view.php_iann 2007-07-30 17:18:14.000000000 +0200
*****
*** 36,44 ****
#
$graph_args = "c=$cluster_url&$get_metric_string&st=$cluster[LOCALTIME]";
$tpl->assign("graph_args", $graph_args);
if (!isset($optional_graphs))
!   $optional_graphs = array();
foreach ($optional_graphs as $g) {
    $tpl->newBlock('optional_graphs');
    $tpl->assign('name', $g);
    $tpl->assign('graph_args', $graph_args);
--- 36,46 ----
#
$graph_args = "c=$cluster_url&$get_metric_string&st=$cluster[LOCALTIME]";
$tpl->assign("graph_args", $graph_args);
if (!isset($optional_graphs))
!   $optional_graphs = array("org.wlcg.aggregate-status.sam",
!                             "org.wlcg.aggregate-status.local",
!                             "org.wlcg.aggregate-status.npm");
foreach ($optional_graphs as $g) {
    $tpl->newBlock('optional_graphs');
    $tpl->assign('name', $g);
    $tpl->assign('graph_args', $graph_args);
```

-- IanNeilson - 31 Jul 2007

- ganglia\_shot.PNG:



This topic: LCG > GridMonitoringGangliaIntegration

Topic revision: r5 - 2007-10-16 - IanNeilson



Copyright &© 2008-2021 by the contributing authors. All material on this collaboration platform is the property of the contributing authors.  
 or Ideas, requests, problems regarding TWiki? use Discourse or Send feedback