cloudos 3.0添加计算节点，提示失败“校验计算节点数据失败”的排查办法

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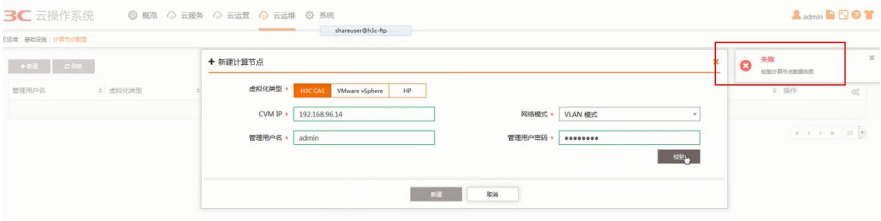
组网及说明

某局点在CAS虚拟机上单机测试环境安装Cloudos E3106H01版本，CAS版本E0526H05

问题描述

某局点搭建单机测试环境在CAS E0526H05中创建虚机安装Cluodos E3106H01版本，在cloudos界面新建该计算节点时，输入对接CAS的信息后，界面提示失败，失败原因为“校验计算节点数据失败”。



过程分析

该问题排查思路如下：

1、确认对接CAS用户名、密码和IP是否正确。

2、检查ETCD集群运行状态。kube-* 、docker、etcd等服务组件是否正常。

3、检查Node与pod运行状态。

4、对于非"Running”状态的pod仔细排查，可以通过kubectl describe pod名称查看异常容器问题。

解决方法

1、确认正常。

2、载入k8s别名环境变量“source /opt/bin/common/tool.sh”，然后通过命令“kubectl status kube-* ”、“kubectl status docker ”、“kubectl status etcd2”查询判断服务是否正常。

3、检查容器和Node状态，“/opt/bin/kubectl -s 127.0.0.1:8888 get node”node返回状态正常，如下图，查询“pod | grep -v Running”有大量处于“pending”和"error"状态的pod。

```
default       gemini-core-rc-mk926          0/1     ContainerCreating   0          59s     <none>          192.168.96.15
default       glancerc-cfxbl                0/1     ContainerCreating   0          59s     <none>          192.168.96.15
default       heatrc-jsxj4                  1/1     Running             0          58s     10.101.60.21    192.168.96.15
default       image-core-rc-r0pgv           0/1     ContainerCreating   0          58s     <none>          192.168.96.15
default       influxdbrc-bfh9n              1/1     Running             0          58s     10.101.60.23    192.168.96.15
default       ironicrc-185hg                0/1     ContainerCreating   0          58s     <none>          192.168.96.15
default       jujube-rc-tw7rw               0/1     ContainerCreating   0          58s     <none>          192.168.96.15
default       keystonerc-r6qkk              1/1     Running             0          58s     10.101.60.25    192.168.96.15
default       lemon-core-rc-9jmrg           0/1     ContainerCreating   0          57s     <none>          192.168.96.15
default       leo-core-rc-dt8xz             0/1     ContainerCreating   0          57s     <none>          192.168.96.15
default       manilarc-dkht2                0/1     ContainerCreating   0          57s     <none>          192.168.96.15
default       memcachedrc1-jlss9            0/1     ContainerCreating   0          57s     <none>          192.168.96.15
default       milk-cdn-rc-gf0jf             0/1     Running             0          57s     10.101.60.35    192.168.96.15
default       milk-rc-w0k9w                 0/1     ContainerCreating   0          57s     <none>          192.168.96.15
default       mysqlrc-x4x53                 0/1     ContainerCreating   0          57s     <none>          192.168.96.15
default       netsecurity-core-rc-5kxnm     0/1     ContainerCreating   0          56s     <none>          192.168.96.15
default       neutronagentrc-10qn4          0/1     ContainerCreating   0          56s     <none>          192.168.96.15
default       neutronserverrc-kj197         0/1     ContainerCreating   0          56s     <none>          192.168.96.15
default       novarc-5rn38                  1/1     Running             0          56s     10.101.60.33    192.168.96.15
default       ol-help-cn7gk                 0/1     ContainerCreating   0          56s     <none>          192.168.96.15
default       olive-rc-6hnlp                0/1     ContainerCreating   0          56s     <none>          192.168.96.15
default       papaya-rc-t1161               0/1     ContainerCreating   0          55s     <none>          192.168.96.15
default       parametodrc-bt22q             0/1     ContainerCreating   0          55s     <none>          192.168.96.15
default       pisces-core-rc-3n0b8          0/1     ContainerCreating   0          55s     <none>          192.168.96.15
default       plum-rc-9wtdf                 0/1     ContainerCreating   0          55s     <none>          192.168.96.15
default       pomelo-core-rc-9mb5m          0/1     ContainerCreating   0          55s     <none>          192.168.96.15
default       postgresqlrc-vfskn            0/1     ContainerCreating   0          55s     <none>          192.168.96.15
default       rabbitmqrc-g8bvc              0/1     ContainerCreating   0          54s     <none>          192.168.96.15
default       redis-core-rc-6f1rh           1/1     Running             0          54s     10.101.60.19    192.168.96.15
default       sagittarius-core-rc-787dj     0/1     ContainerCreating   0          54s     <none>          192.168.96.15
default       sahararc-n6z0x                0/1     ContainerCreating   0          54s     <none>          192.168.96.15
default       sorb-rc-6xsdk                 0/1     ContainerCreating   0          54s     <none>          192.168.96.15
default       xplit-nginx-gateway-rc-b6g2b  0/1     ContainerCreating   0          53s     <none>          192.168.96.15
default       torage-core-rc-3tc4r          0/1     Pending             0          53s     <none>
default       strawberry-rc-848hv           0/1     ContainerCreating   0          53s     <none>          192.168.96.15
default       sultana-rc-jgsrd              0/1     ContainerCreating   0          53s     <none>          192.168.96.15
default       taurus-core-rc-19z84          0/1     ContainerCreating   0          53s     <none>          192.168.96.15
default       trovero-8v7tw                 0/1     Pending             0          53s     <none>
default       virgo-core-rc-fh86q           0/1     Pending             0          53s     <none>
default       wechat-core-rc-kz8q7          0/1     Pending             0          52s     <none>
kube-system   kube-dns-v17.1-ljcqp          3/3     Running             0          19h     10.101.60.4     192.168.96.15
kube-system   kube-grafana-v31lrc-8rbf7     2/2     Running             0          18h     10.101.60.10    192.168.96.15
[root@cloudos ~]# kubectl describe pod
```

4、使用“kubectl describe 容器名称”分别检查上述为pending或error的pod，比如检查storage-core-rc该容器后如下返回。其中显示容器的调度状态失败，原因是“failedscheduling”，具体信息message显示具体原因为“No Nodes available that match all of the following predicates: insufficient cpu”说明CPU计算资源不够导致，后面检查CVM前台为该虚拟分配的资源没有达到标准最低要求导致。在虚拟机上安装cloudos最低硬件配置是vcpu为8核，内存最低要求32G，硬盘最低为500G。

```
      /opt/storage-core/tmp/ from storagetmp (rw)
Conditions:
  Type           Status
  PodScheduled   False
Volumes:
  time:
    Type:       HostPath (bare host directory volume)
    Path:       /etc/localtime
  storagelogs:
    Type:       HostPath (bare host directory volume)
    Path:       /var/log/storage
  storagetmp:
    Type:       EmptyDir (a temporary directory that shares a pod's lifetime)
    Medium:
QoS Class:      Burstable
Node-Selectors: nodeType=controller
Tolerations:    <none>
Events:
  FirstSeen     LastSeen        Count   From                SubObjectPath   Type          Reason              Message
  ---------     --------        -----   ----                -------------   --------      ------              -------
  1m            13s             8       default-scheduler                   Warning       FailedScheduling    No nodes are available that match all of the following predicates:: Insufficient cpu (1).
[root@cloudos ~]#
```