SMOKE TEST

OpenVINO

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Document Information

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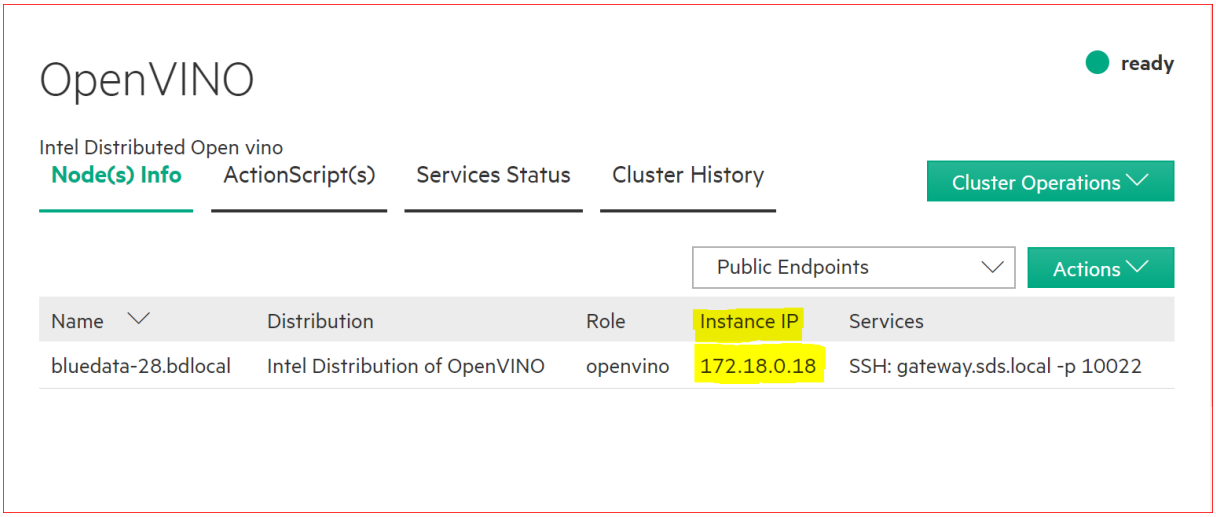
1 LOGIN TO OPENVINO CONTAINER

Login to Jupyter Notebook, using the following steps:

1. From the Cluster page under **INSTANCE IP** column, get the **CONTAINER IP**



2. Login to OpenVINO container from the HPECP Controller host with instance IP using your tenant's PEM key,

```
[root@controller ~]#
[root@controller ~]# ssh -i KeyPairs/2.pem bluedata@172.18.0.18
Warning: Permanently added '172.18.0.18' (ECDSA) to the list of known hosts.
Last login: Tue May 19 03:42:23 2020 from 172.18.0.2
[bluedata@bluedata-28 ~]$
[bluedata@bluedata-28 ~]$
```

2 TESTING SQUEEZENET MODEL EXECUTION EXAMPLE

Run a sample application by executing below commands,

1. Set environment variables.

```
source /opt/intel/openvino/bin/setupvars.sh
```

2. Download public Squeezenet model

   Go to /opt/intel/openvino_2020.2.120/deployment_tools/open_model_zoo/tools/downloader folder

```
python3 downloader.py --name squeezenet1.1 --output_dir ~/openvino-models
```

3. Convert Squeezenet model to OpenVINO IR

```
python3 converter.py --mo /opt/intel/openvino_2020.2.120/deployment_tools/model_optimizer/mo.py --name squeezenet1.1 -d ~/openvino-models/ -o ~/openvino-models/ir --precision FP32
```

4. Run sample application using Squeezenet IR

Go to /opt/intel/openvino_2020.2.120/deployment_tools/inference_engine/samples/python/classification_sample_async folder

```
python3 classification_sample_async.py -i /opt/intel/openvino_2020.2.120/deployment_tools/demo/car.png -m ~/openvino-models/ir/public/squeezenet1.1/FP32/squeezenet1.1.xml -d CPU
```

2.1 Validate Squeezenet model execution

Below output is observed after OpenVINO cluster is created and sample squeezenet model is executed

```
###############|| Post-processing ||###############

========== Replacing text in /root/openvino-models/public/squeezenet1.1/squeezenet1.1.prototxt
========= Converting squeezenet1.1 to IR (FP32)
Conversion command: /bin/python3 -- /opt/intel/openvino/deployment_tools/model_optimizer/mo.py --framework=caffe --data_type=FP32 --output_dir=/root/openvino-models/ir/public/squeezenet1.1/FP32
--model_name=squeezenet1.1 '--input_shape=[1,3,227,227]' --input=data '--mean_values=data[104.0,117.0,123.0]' --output=prob --input_model=/root/openvino-
models/public/squeezenet1.1/squeezenet1.1.caffemodel --input_proto=/root/openvino-models/public/squeezenet1.1/squeezenet1.1.prototxt

Model Optimizer arguments:
Common parameters:
        - Path to the Input Model:      /root/openvino-models/public/squeezenet1.1/squeezenet1.1.caffemodel
        - Path for generated IR:        /root/openvino-models/ir/public/squeezenet1.1/FP32
        - IR output name:       squeezenet1.1
        - Log level:    ERROR
        - Batch:        Not specified, inherited from the model
        - Input layers:         data
        - Output layers:        prob
        - Input shapes:         [1,3,227,227]
        - Mean values:  data[104.0,117.0,123.0]
        - Scale values:         Not specified
        - Scale factor:         Not specified
        - Precision of IR:      FP32
        - Enable fusing:        True
        - Enable grouped convolutions fusing:   True
        - Move mean values to preprocess section:       False
        - Reverse input channels:       False
Caffe specific parameters:
        - Path to Python Caffe* parser generated from caffe.proto:      /opt/intel/openvino/deployment_tools/model_optimizer/mo/front/caffe/proto
        - Enable resnet optimization:   True
        - Path to the Input prototxt:   /root/openvino-models/public/squeezenet1.1/squeezenet1.1.prototxt
        - Path to CustomLayersMapping.xml:      Default
        - Path to a mean file:  Not specified
        - Offsets for a mean file:      Not specified
Model Optimizer version:        2020.2.0-60-g0bc66e26ff

[ SUCCESS ] Generated IR version 10 model.
[ SUCCESS ] XML file: /root/openvino-models/ir/public/squeezenet1.1/FP32/squeezenet1.1.xml
[ SUCCESS ] BIN file: /root/openvino-models/ir/public/squeezenet1.1/FP32/squeezenet1.1.bin
[ SUCCESS ] Total execution time: 17.67 seconds.
[ SUCCESS ] Memory consumed: 76 MB.
```

```
[ INFO ] Creating Inference Engine
[ INFO ] Loading network files:
        /root/openvino-models/ir/public/squeezenet1.1/FP32/squeezenet1.1.xml
        /root/openvino-models/ir/public/squeezenet1.1/FP32/squeezenet1.1.bin
[ INFO ] Preparing input blobs
[ WARNING ] Image /opt/intel/openvino/deployment_tools/demo/car.png is resized from (259, 787) to (227, 227)
[ INFO ] Batch size is 1
[ INFO ] Loading model to the plugin
[ INFO ] Start inference (10 Asynchronous executions)
[ INFO ] Completed 1 Async request execution
[ INFO ] Completed 2 Async request execution
[ INFO ] Completed 3 Async request execution
[ INFO ] Completed 4 Async request execution
[ INFO ] Completed 5 Async request execution
[ INFO ] Completed 6 Async request execution
[ INFO ] Completed 7 Async request execution
[ INFO ] Completed 8 Async request execution
[ INFO ] Completed 9 Async request execution
[ INFO ] Completed 10 Async request execution
[ INFO ] Processing output blob
[ INFO ] Top 10 results:
Image /opt/intel/openvino/deployment_tools/demo/car.png

classid probability
------- -----------
  817     0.6851523
  479     0.1835010
  511     0.0918673
  436     0.0200784
  751     0.0069436
  656     0.0044373
  717     0.0024768
  581     0.0017814
  468     0.0013093
  661     0.0007501


[ INFO ] This sample is an API example, for any performance measurements please use the dedicated benchmark_app tool

========== postconfig.log ==========
Beginning auth setup.
Fetching misc context info from EPIC...
Nothing to be done (no tenant member or admin groups specified).
```