DNS集成

« (config-dhcp-ha.html) » (config-dns-int-ext-serv.html) (https://bugs.launchpad.net/neutron/+filebug?field.title=DNS%20integration%20in%20Neutron&field.comment=%0A%0A%0AThis bug tracker is for errors with the documentation, use the following as a template and remove or add fields as you see fit. Convert [ ] into [x] to check boxes:%0A%0A- [ ] This doc is inaccurate in this way: _____%0A- [ ] This is a doc addition request.%0A- [ ] I have a fix to the document that I can paste below including example: input and output. %0A%0AIf you have a troubleshooting or support issue, use the following resources:%0A%0A - Ask OpenStack: http://ask.openstack.org%0A - The mailing list: http://lists.openstack.org%0A - IRC: 'openstack' channel on Freenode%0A%0A----------%0ARelease:%2012.0.1.dev11%20on%202018-03-07%2021:05%0ASHA:%2043df2709acbdce86686a40b75fd34e96880427d0%0ASource:%20https://git.openstack.org/cgit/openstack/neutron/tree/doc/source/admin/config-dns-int.rst%0AURL: https://docs.openstack.org/neutron/queens/admin/config-dns-int.html&field.tags=doc)

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此页面可作为如何使用网络服务的DNS集成功能的指南。所描述的功能涵盖了两个角度的DNS：

- 网络服务提供的内部DNS功能及其与计算服务的交互。
- 计算服务和网络服务与外部DNSaaS（DNS即服务）的集成。

用户可以使用与端口，网络和浮动IP关联的两个属性来控制网络服务在DNS方面的行为。下表显示了这些资源中每一个资源的可用属性：

资源	DNS_NAME	dns_domain的
端口	是	是
网络	没有	是
浮动IP	是	是

> **注意**
>
> 该扩展启用了上表中显示的所有属性和资源组合，但需要扩展名的端口除外。**DNS Integrationdns_domaindns_domain for ports**

> **注意**
>
> 由于扩展是子集 ，如果需要端口功能，则只需配置后一种扩展。**DNS Integrationdns_domain for portsdns_domain**

> **注意**
>
> 当配置扩展时，Neutron服务器响应列出活动API扩展的请求时也包括该扩展。这保留了向后的API兼容性。**dns_domain for portsDNS Integration**

网络服务内部DNS解析¶

网络服务使用户能够控制由内部DNS分配给端口的名称。要启用此功能，请执行以下操作：

1. Edit the **/etc/neutron/neutron.conf** file and assign a value different to **openstacklocal** (its default value) to the **dns_domain** parameter in the **[default]** section. As an example:

```
dns_domain = example.org.
```

2. Add **dns** (for the **DNS Integration** extension) or **dns_domain_ports** (for the **dns_domain for ports** extension) to **extension_drivers** in the **[ml2]** section of **/etc/neutron/plugins/ml2/ml2_conf.ini**. The following is an example:

```
[ml2]
extension_drivers = port_security,dns_domain_ports
```

After re-starting the **neutron-server**, users will be able to assign a **dns_name** attribute to their ports.

> **Note**
>
> The enablement of this functionality is prerequisite for the enablement of the Networking service integration with an external DNS service, which is described in detail in DNS integration with an external service (config-dns-int-ext-serv.html#config-dns-int-ext-serv).

The following illustrates the creation of a port with **my-port** in its **dns_name** attribute.

> **Note**
>
> The name assigned to the port by the Networking service internal DNS is now visible in the response in the **dns_assignment** attribute.

```
$ neutron port-create my-net --dns-name my-port
Created a new port:
+-----------------------+--------------------------------------------------------------------------------+
| Field                 | Value                                                                          |
+-----------------------+--------------------------------------------------------------------------------+
| admin_state_up        | True                                                                           |
| allowed_address_pairs |                                                                                |
| binding:vnic_type     | normal                                                                         |
| device_id             |                                                                                |
| device_owner          |                                                                                |
| dns_assignment        | {"hostname": "my-port", "ip_address": "192.0.2.67", "fqdn": "my-port.example.org."} |
| dns_name              | my-port                                                                        |
| fixed_ips             | {"subnet_id":"6141b474-56cd-430f-b731-71660bb79b79", "ip_address": "192.0.2.67"}    |
| id                    | fb3c10f4-017e-420c-9be1-8f8c557ae21f                                           |
| mac_address           | fa:16:3e:aa:9b:e1                                                              |
| name                  |                                                                                |
| network_id            | bf2802a0-99a0-4e8c-91e4-107d03f158ea                                           |
| port_security_enabled | True                                                                           |
| revision_number       | 1                                                                              |
| security_groups       | 1f0ddd73-7e3c-48bd-a64c-7ded4fe0e635                                           |
| status                | DOWN                                                                           |
| tenant_id             | d5660cb1e6934612a01b4fb2fb630725                                               |
+-----------------------+--------------------------------------------------------------------------------+
```

When this functionality is enabled, it is leveraged by the Compute service when creating instances. When allocating ports for an instance during boot, the Compute service populates the **dns_name** attributes of these ports with the **hostname** attribute of the instance, which is a DNS sanitized version of its display name. As a consequence, at the end of the boot process, the allocated ports will be known in the dnsmasq associated to their networks by their instance **hostname**.

The following is an example of an instance creation, showing how its **hostname** populates the **dns_name** attribute of the allocated port:

```
$ openstack server create --image cirros --flavor 42 \
  --nic net-id=37aaff3a-6047-45ac-bf4f-a825e56fd2b3 my_vm
+-------------------------------------+--------------------------------------------------------------+
| Field                               | Value                                                        |
+-------------------------------------+--------------------------------------------------------------+
| OS-DCF:diskConfig                   | MANUAL                                                       |
| OS-EXT-AZ:availability_zone         |                                                              |
| OS-EXT-STS:power_state              | 0                                                            |
| OS-EXT-STS:task_state               | scheduling                                                   |
| OS-EXT-STS:vm_state                 | building                                                     |
| OS-SRV-USG:launched_at              | -                                                            |
| OS-SRV-USG:terminated_at            | -                                                            |
| accessIPv4                          |                                                              |
| accessIPv6                          |                                                              |
| adminPass                           | dB45Zvo8Jpfe                                                 |
| config_drive                        |                                                              |
| created                             | 2016-02-05T21:35:04Z                                         |
| flavor                              | m1.nano (42)                                                 |
| hostId                              |                                                              |
| id                                  | 66c13cb4-3002-4ab3-8400-7efc2659c363                         |
| image                               | cirros-0.3.5-x86_64-uec(b9d981eb-d21c-4ce2-9dbc-dd38f3d9015f)|
| key_name                            | -                                                            |
| locked                              | False                                                        |
| metadata                            | {}                                                           |
| name                                | my_vm                                                        |
| os-extended-volumes:volumes_attached| []                                                           |
| progress                            | 0                                                            |
| security_groups                     | default                                                      |
| status                              | BUILD                                                        |
| tenant_id                           | d5660cb1e6934612a01b4fb2fb630725                             |
| updated                             | 2016-02-05T21:35:04Z                                         |
| user_id                             | 8bb6e578cba24e7db9d3810633124525                             |
+-------------------------------------+--------------------------------------------------------------+

$ neutron port-list --device_id 66c13cb4-3002-4ab3-8400-7efc2659c363
+--------------------------------------+------+-------------------+-------------------------------------------------------------------------------------
| id                                   | name | mac_address       | fixed_ips
+--------------------------------------+------+-------------------+-------------------------------------------------------------------------------------
| b3ecc464-1263-44a7-8c38-2d8a52751773 |      | fa:16:3e:a8:ce:b8 | {"subnet_id": "277eca5d-9869-474b-960e-6da5951d09f7", "ip_address": "203.0
|                                      |      |                   | {"subnet_id": "eab47748-3f0a-4775-a09f-b0c24bb64bc4", "ip_address":"2001:d
+--------------------------------------+------+-------------------+-------------------------------------------------------------------------------------

$ neutron port-show b3ecc464-1263-44a7-8c38-2d8a52751773
+-----------------------+-----------------------------------------------------------------------------------------+
| Field                 | Value                                                                                   |
+-----------------------+-----------------------------------------------------------------------------------------+
| admin_state_up        | True                                                                                    |
| allowed_address_pairs |                                                                                         |
| binding:vnic_type     | normal                                                                                  |
| device_id             | 66c13cb4-3002-4ab3-8400-7efc2659c363                                                    |
| device_owner          | compute:None                                                                            |
| dns_assignment        | {"hostname": "my-vm", "ip_address": "203.0.113.8", "fqdn": "my-vm.example.org."}        |
|                       | {"hostname": "my-vm", "ip_address": "2001:db8:10::8", "fqdn": "my-vm.example.org."}     |
| dns_name              | my-vm                                                                                   |
| extra_dhcp_opts       |                                                                                         |
| fixed_ips             | {"subnet_id": "277eca5d-9869-474b-960e-6da5951d09f7", "ip_address": "203.0.113.8"}      |
|                       | {"subnet_id": "eab47748-3f0a-4775-a09f-b0c24bb64bc4", "ip_address": "2001:db8:10::8"}   |
| id                    | b3ecc464-1263-44a7-8c38-2d8a52751773                                                    |
| mac_address           | fa:16:3e:a8:ce:b8                                                                       |
| name                  |                                                                                         |
| network_id            | 37aaff3a-6047-45ac-bf4f-a825e56fd2b3                                                    |
| port_security_enabled | True                                                                                    |
| revision_number       | 1                                                                                       |
| security_groups       | 1f0ddd73-7e3c-48bd-a64c-7ded4fe0e635                                                    |
| status                | ACTIVE                                                                                  |
| tags                  | []                                                                                      |
| tenant_id             | d5660cb1e6934612a01b4fb2fb630725                                                        |
+-----------------------+-----------------------------------------------------------------------------------------+
```

In the above example notice that:

- The name given to the instance by the user, **my_vm**, is sanitized by the Compute service and becomes **my-vm** as the port's **dns_name**.
- The port's **dns_assignment** attribute shows that its FQDN is **my-vm.example.org.** in the Networking service internal DNS, which is the result of concatenating the port's **dns_name** with the value configured in the **dns_domain** parameter in **neutron.conf**, as explained previously.
- The **dns_assignment** attribute also shows that the port's **hostname** in the Networking service internal DNS is **my-vm**.
- Compute服务不是为实例创建端口，而是用户可能已经创建了它并为其**dns_name** 属性分配了一个值。在这种情况下，分配给**dns_name**属性的值必须等于计算服务将分配给实例的值 **hostname**，在本例中**my-vm**。否则，实例引导将失败。

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