Install Stand-Alone AtScale

This document describes the first-time installation of Stand-Alone AtScale. These instructions are for CentOS/RedHat operating systems. You may have to modify for your supported OS.

Before you begin:

- Complete all prerequisite installation steps.
- If deploying on AWS ensure to follow the IAM AWS Best practices

Install The AtScale Installer Package

Installing the AtScale installer package does the following:

1. Creates the `atscale` user. This can be overridden by setting the `ATSCALE_USER` environment variable prior to installing.
2. Creates the AtScale home directory at `/opt/atscale` . This can be overridden when installing via `rpm` by passing `--prefix /my/custom/path` to the `rpm -i` command.

   > 📄 **Note**: We recommend using encrypted volumes for AtScale home directory in case of cloud-based deployment, e.g.: Amazon Elastic Block Store (Amazon EBS)

3. Sets up AtScale under the AtScale home directory.
4. Gives ownership of the AtScale home directory to the `atscale` user.

If you wish to run the system with an account other than the default `atscale` then assign the desired user name to the ATSCALE_USER environment variable:

```
export ATSCALE_USER=myatscaleuser
```

If you are the root user, install the downloaded AtScale installer package using the RPM Package Manager:

```
rpm -i installer_package_filename.rpm
```

or if using Debian packages:

```
dpkg --install installer_package_filename.deb
```

If you are not the root user but have sudo privileges, then install the rpm with the `sudo -E` option to preserve the ATSCALE_USER environment variable in the subshell.

```
sudo -E rpm -i installer_package_filename.rpm
```

or if using Debian packages:

```
sudo -E dpkg --install installer_package_filename.deb
```

Activate AtScale

The existing AtScale services must be running so that `configurator.sh` can determine if the system meets all of the preconditions for upgrading. As the ATSCALE_USER user (`atscale` by default), run the installed AtScale's `configurator.sh` script in `--first-time` mode. If running AtScale under a different account, alter the switch user command to switch to the desired user (e.g. `su - myatscaleuser`):

```
su - atscale
cd /opt/atscale/versions/<package_version>
./bin/configurator.sh --first-time
```

You will be asked to confirm:

1. The configured host and service account settings
2. That you want to apply this configuration

Answer `y` to these to start the activation process, which will configure and run AtScale.

> 📄 **Note:** If an error occurs, you must perform a full reinstallation. You cannot simply rerun the installer. See Uninstall AtScale.

Advanced Configuration

You may need to make advanced configuration changes if any of the following situations apply to your installation:

1. The machine's host name, as returned by the `hostname` command, is not publicly routable. This is common when deployed on a cloud service such as AWS or GCP.
2. The machine has multiple private IP addresses.

To perform these advanced configuration changes you must have previously run the "activate" step described above to generate the `atscale.yaml` file.

1. As the ATSCALE_USER user (`atscale` by default), open `/opt/atscale/conf/atscale.yaml` .
2. The following properties must be set to a publicly-routable Fully Qualified Domain Name (FQDN). See figure 1 for an example.

   1. `loadbalancer_dns_name` (If not using a load balancer set this to the FQDN of the host)
   2. Each `hosts.name` property
   3. `kerberos.principal` (Only needed if setting up Kerberos)

3. Add a configuration hostname line under the hosts.name property. The hostname value must be the same as the machine name returned by the `hostname` command. There can only be one hostname value per host configuration. See Figure 1 for an example.

   Figure 1: Example of atscale.yaml configured with a publicly-routable FQDN and a non-routable host name. In this example, the host's dnsname values are set to routable domain names, whereas their hostname values are set to the value returned by the `hostname` command. The load balancer uses a publicly routable FQDN.

```
installation_location: "/opt/atscale"
service_account: "atscale"
loadbalancer_dns_name: "atscale-service.acme.com"

tls:
  enabled: false
  certificate: "/opt/atscale/conf/server.cert"
  key: "/opt/atscale/conf/server.key"

kerberos:
  enabled: false
  keytab: "/opt/atscale/conf/atscale.keytab"
  principal: "atscale/atscale-service.acme.com@REALM"

hosts:
  - dnsname: atscale-service.acme.com
    hostname: ip-172-18-2-36.us-west-2.compute.internal
    services:
      - atscale
      - coordinator
    override:
      coordinator:
        id: 12
```

4. If the host has multiple private IP addresses, you must set the IP address for the AtScale Service Registry by overriding the service_registry `bind_addr` property.

   Figure 2: Example of atscale.yaml hosts section configured to bind the AtScale Service Registry Service to a specific private IP address.
   In this example, the host contains multiple private IP addresses and the AtScale Service Registry is configured to use a specific address.

```
hosts:
- dnsname: atscale-01.local.atscale.com
  hostname: atscale-01.local.atscale.com
  override:
    service_registry:
      bind_addr: 1.2.3.4
```

Alternatively, set the `ATSCALE_BIND_ADDRESS` environment variable. For each host that has more than one private IP address, set `ATSCALE_BIND_ADDRESS` to the desired private IP. Once completed, run `atscale_stop` (if AtScale is running) followed by `atscale_start`, OR run `configurator.sh` in `--apply` mode.

```
export ATSCALE_BIND_ADDRESS=1.2.3.4
```

5. After making the desired edits, save and close the file.
6. Run `./bin/configurator.sh --activate`

Run The First-Time Setup Wizard

After you have successfully activated AtScale, follow these steps:

1. Connect to the Design Center to confirm that AtScale is running. Enter the following URL in your browser location field. If SSL is enabled, make sure to use https instead of http:

```
http://hostname:port
```

hostname

    Use the public DNS hostname of the AtScale server if you are connecting from a remote client machine.

port

    The port for connecting to the AtScale Design Center. This port is specified during the installation process. The default is 10500.

2. Use the default credentials for logging into the Design Center for the first time.

- User ID: admin
- Password: admin

For next steps, see First Time Guided Setup.