



Manually starting and stopping a Cassandra node

DataStax Academy:
Installing and configuring Cassandra

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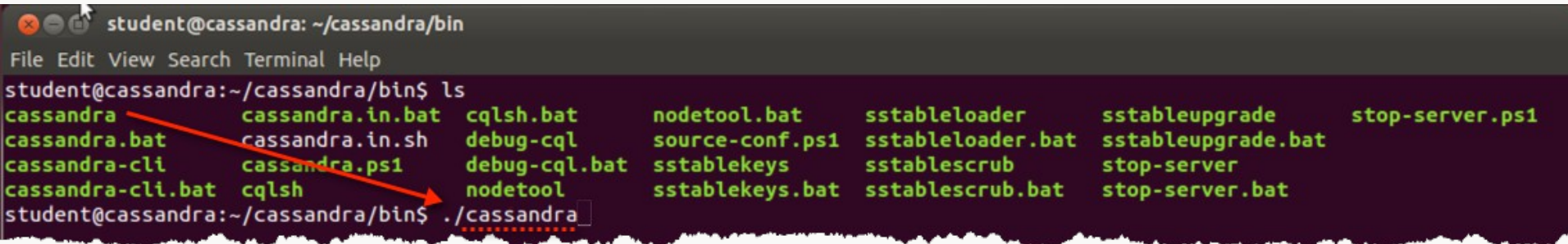
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How do you start Cassandra?

- Launch a server instance using the *cassandra* utility



A terminal window showing the contents of the Cassandra bin directory. The prompt is 'student@cassandra: ~/cassandra/bin'. The user has run 'ls' and the output is a grid of files: 'cassandra', 'cassandra.bat', 'cassandra-cli', 'cassandra-cli.bat', 'cassandra.in.bat', 'cassandra.in.sh', 'cassandra.ps1', 'cqlsh', 'cqlsh.bat', 'cqlsh.ps1', 'nodetool.bat', 'source-conf.ps1', 'sstablekeys', 'sstablekeys.bat', 'sstableloader', 'sstableloader.bat', 'sstablescrub', 'sstablescrub.bat', 'sstableupgrade', 'sstableupgrade.bat', 'stop-server.ps1', 'stop-server', 'stop-server.bat'. A red arrow points from the 'cassandra' file to the prompt area where './cassandra' is being typed.

```
student@cassandra: ~/cassandra/bin
File Edit View Search Terminal Help
student@cassandra:~/cassandra/bin$ ls
cassandra      cassandra.in.bat  cqlsh.bat        nodetool.bat     sstableloader    sstableupgrade   stop-server.ps1
cassandra.bat  cassandra.in.sh   debug-cql        source-conf.ps1  sstableloader.bat sstableupgrade.bat
cassandra-cli  cassandra.ps1     debug-cql.bat    sstablekeys      sstablescrib    stop-server
cassandra-cli.bat cqlsh             nodetool         sstablekeys.bat  sstablescrib.bat stop-server.bat
student@cassandra:~/cassandra/bin$ ./cassandra
```

cassandra [options]

- **-f**
start Cassandra in foreground (default is background process)
- **-p <filename>**
Log process ID in named file; useful to stop Cassandra by PID
- **-v**
print the version and exit
- **-D <parameter>**
Pass a startup parameter (see documentation)

How do you start Cassandra?

- Start a tarball install instance – foreground
 - `./cassandra -f`
- Start a tarball install instance – background, PID captured to file named "PID"
 - `./cassandra -p PID`
- Running when "state jump to normal"

```
60b377/system-local-ka-8-Data.db'), SSTableReader(path='/home/student/cassandra/bin/../../data/data/system/local-7ad54392bccd35a684174e047860b377/system-local-ka-5-Data.db')]
INFO 20:17:12 Enqueuing flush of local: 51475 (0%) on-heap, 0 (0%) off-heap
INFO 20:17:12 Writing Memtable-local@973482457(8538 serialized bytes, 259 ops, 0%/0% of on/off-heap limit)
INFO 20:17:12 Completed flushing /home/student/cassandra/bin/../../data/data/system/local-7ad54392bccd35a684174e047860b377/system-local-ka-9-Data.db (5302 bytes) for commitlog position ReplayPosition(segmentId=1414181830712, position=98898)
INFO 20:17:12 Node localhost/127.0.0.1 state jump to normal ←
INFO 20:17:12 Compacted 4 sstables to [../../data/data/system/local-7ad54392bccd35a684174e047860b377/system-local-ka-10,]. 6,252 bytes to 5,716 (~91% of original) in 206ms = 0.026462MB/s. 4 total partitions merged to 1. Partition merge counts were {4:1, }
```

- Start a package install instance
 - `sudo service cassandra start`

How do you stop Cassandra?

- Stop a tarball install instance – foreground
`ctrl-c` (in terminal window running Cassandra)
- Stop a tarball install instance – background
 - if no PID file, determine the Process ID (PID)
`ps ax | grep cassandra`
`kill <PID>`

```
student@cassandra: ~/cassandra/bin
File Edit View Search Terminal Help
student@cassandra:~/cassandra/bin$ ps ax | grep cassandra
3024 pts/1 Sll 0:06 java -ea -javaagent:../lib/jamm-0.2.6.jar -XX:+CMSClassUnloadingEnabled -XX:+UseThreadPriorities -XX:Threa
dPriorityPolicy=42 -Xms1024M -Xmx1024M -Xmn100M -XX:+HeapDumpOnOutOfMemoryError -Xr256k -XX:StringTableSize=1000000 -XX:+UseParNewGC
3089 pts/1 S+ 0:00 grep --color=auto cassandra
student@cassandra:~/cassandra/bin$ kill 3024
student@cassandra:~/cassandra/bin$
```

- Stop a package install instance
`sudo service cassandra stop`

How do you locate and review log data?

- Default system.log location
install/logs/system.log
 - Configuration logging in *install/conf/logback.xml*

```
<configuration scan="true">
  <jmxConfigurator />
  <appender name="FILE" class="ch.qos.logback.core.rolling.RollingFileAppender">
    <file>${cassandra.logdir}/system.log</file>
    <rollingPolicy class="ch.qos.logback.core.rolling.FixedWindowRollingPolicy">
      <fileNamePattern>${cassandra.logdir}/system.log.%i.zip</fileNamePattern>
    </rollingPolicy>
  </appender>
  <root level="INFO">
    <appender-ref ref="FILE" />
    <appender-ref ref="STDOUT" />
  </root>
```

- Levels: TRACE > DEBUG > INFO (default) > WARN > ERROR > FATAL
- Be sure to distinguish
 - **System.log**: system state log file, duplicates *stdout*, configurable by logging level

Demo: Run Cassandra and examine its logs

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