

Report for Assignment 1

Name of Project chosen: Salt Project

URL: <https://github.com/Pahal-7974/salt>

Number of lines of code and the tool used to count it: 57 kloc counted with lizard

Programming language: Python

Coverage measurement

Existing tool

Coverage.py was used as the coverage tool

Name	Stmts	Miss	Cover
/home/varuni/salt/tests/salt/salt/__init__.py	47	18	62%
/home/varuni/salt/tests/salt/salt/_compat.py	11	4	64%
/home/varuni/salt/tests/salt/salt/_logging/__init__.py	1	0	100%
/home/varuni/salt/tests/salt/salt/_logging/handlers.py	60	39	35%
/home/varuni/salt/tests/salt/salt/_logging/impl.py	489	298	39%
/home/varuni/salt/tests/salt/salt/_logging/mixins.py	68	30	56%
/home/varuni/salt/tests/salt/salt/beacons/__init__.py	244	216	11%
/home/varuni/salt/tests/salt/salt/cache/__init__.py	138	107	22%
/home/varuni/salt/tests/salt/salt/channel/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/channel/client.py	361	267	26%
/home/varuni/salt/tests/salt/salt/cli/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/cli/daemons.py	234	190	19%
/home/varuni/salt/tests/salt/salt/client/__init__.py	788	705	11%
/home/varuni/salt/tests/salt/salt/config/__init__.py	1202	779	35%
/home/varuni/salt/tests/salt/salt/crypt.py	938	787	16%
/home/varuni/salt/tests/salt/salt/defaults/__init__.py	24	11	54%
/home/varuni/salt/tests/salt/salt/defaults/events.py	2	0	100%
/home/varuni/salt/tests/salt/salt/defaults/exitcodes.py	20	0	100%
/home/varuni/salt/tests/salt/salt/engines/__init__.py	59	49	17%
/home/varuni/salt/tests/salt/salt/exceptions.py	154	65	58%
/home/varuni/salt/tests/salt/salt/features.py	18	5	72%
/home/varuni/salt/tests/salt/salt/fileclient.py	763	602	21%
/home/varuni/salt/tests/salt/salt/fileserver/__init__.py	523	411	21%
/home/varuni/salt/tests/salt/salt/fileserver/gitfs.py	49	21	57%
/home/varuni/salt/tests/salt/salt/fileserver/minionfs.py	174	151	13%
/home/varuni/salt/tests/salt/salt/fileserver/roots.py	271	218	20%
/home/varuni/salt/tests/salt/salt/grains/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/grains/core.py	1694	1114	34%
/home/varuni/salt/tests/salt/salt/grains/disks.py	118	74	37%
/home/varuni/salt/tests/salt/salt/grains/extra.py	55	24	56%
/home/varuni/salt/tests/salt/salt/grains/minion_process.py	22	2	91%
/home/varuni/salt/tests/salt/salt/grains/opts.py	4	1	75%
/home/varuni/salt/tests/salt/salt/grains/package.py	8	0	100%
/home/varuni/salt/tests/salt/salt/grains/pending_reboot.py	11	2	82%
/home/varuni/salt/tests/salt/salt/grains/rest_sample.py	23	10	57%
/home/varuni/salt/tests/salt/salt/loader/__init__.py	408	211	48%
/home/varuni/salt/tests/salt/salt/loader/context.py	98	56	43%
/home/varuni/salt/tests/salt/salt/loader/lazy.py	685	243	65%

/home/varuni/salt/tests/salt/salt/minion.py	1997	1757	12%
/home/varuni/salt/tests/salt/salt/modules/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/modules/cmdmod.py	871	656	25%
/home/varuni/salt/tests/salt/salt/modules/cron.py	402	141	65%
/home/varuni/salt/tests/salt/salt/modules/match.py	144	118	18%
/home/varuni/salt/tests/salt/salt/modules/network.py	863	782	9%
/home/varuni/salt/tests/salt/salt/modules/selinux.py	291	251	14%
/home/varuni/salt/tests/salt/salt/modules/smbios.py	100	77	23%
/home/varuni/salt/tests/salt/salt/modules/syslog_ng.py	466	141	76%
/home/varuni/salt/tests/salt/salt/modules/x509.py	716	642	10%
/home/varuni/salt/tests/salt/salt/payload.py	193	162	16%
/home/varuni/salt/tests/salt/salt/pillar/__init__.py	673	478	29%
/home/varuni/salt/tests/salt/salt/renderers/jinja.py	29	21	28%
/home/varuni/salt/tests/salt/salt/renderers/yaml.py	51	37	27%
/home/varuni/salt/tests/salt/salt/roster/__init__.py	62	52	16%
/home/varuni/salt/tests/salt/salt/serializers/__init__.py	3	0	100%
/home/varuni/salt/tests/salt/salt/serializers/msgpack.py	18	10	44%
/home/varuni/salt/tests/salt/salt/serializers/yaml.py	78	25	68%
/home/varuni/salt/tests/salt/salt/state.py	2864	2684	6%
/home/varuni/salt/tests/salt/salt/states/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/states/cron.py	234	164	30%
/home/varuni/salt/tests/salt/salt/states/disk.py	81	2	98%
/home/varuni/salt/tests/salt/salt/states/group.py	145	78	46%
/home/varuni/salt/tests/salt/salt/states/ipset.py	130	13	90%
/home/varuni/salt/tests/salt/salt/states/loop.py	87	14	84%
/home/varuni/salt/tests/salt/salt/states/module.py	213	53	75%
/home/varuni/salt/tests/salt/salt/states/pip_state.py	388	195	50%
/home/varuni/salt/tests/salt/salt/states/syslog_ng.py	10	2	80%
/home/varuni/salt/tests/salt/salt/states/x509.py	240	189	21%
/home/varuni/salt/tests/salt/salt/syspaths.py	130	37	72%
/home/varuni/salt/tests/salt/salt/template.py	107	76	29%
/home/varuni/salt/tests/salt/salt/transport/__init__.py	6	0	100%
/home/varuni/salt/tests/salt/salt/transport/base.py	226	179	21%
/home/varuni/salt/tests/salt/salt/transport/frame.py	59	53	10%
/home/varuni/salt/tests/salt/salt/utls/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/utls/args.py	287	234	18%
/home/varuni/salt/tests/salt/salt/utls/asynchronous.py	107	87	19%
/home/varuni/salt/tests/salt/salt/utls/atomicfile.py	49	30	39%
/home/varuni/salt/tests/salt/salt/utls/cache.py	206	155	25%
/home/varuni/salt/tests/salt/salt/utls/configparser.py	135	119	12%

/home/varuni/salt/tests/salt/salt/utls/context.py	126	87	31%
/home/varuni/salt/tests/salt/salt/utls/crypt.py	62	43	31%
/home/varuni/salt/tests/salt/salt/utls/ctx.py	15	6	60%
/home/varuni/salt/tests/salt/salt/utls/data.py	715	559	22%
/home/varuni/salt/tests/salt/salt/utls/dateutils.py	34	23	32%
/home/varuni/salt/tests/salt/salt/utls/debug.py	72	55	24%
/home/varuni/salt/tests/salt/salt/utls/decorators/__init__.py	271	207	24%
/home/varuni/salt/tests/salt/salt/utls/decorators/extension_deprecation.py	15	9	40%
/home/varuni/salt/tests/salt/salt/utls/decorators/jinja.py	35	0	100%
/home/varuni/salt/tests/salt/salt/utls/decorators/path.py	21	11	48%
/home/varuni/salt/tests/salt/salt/utls/decorators/state.py	53	37	30%
/home/varuni/salt/tests/salt/salt/utls/dictdiffer.py	170	137	19%
/home/varuni/salt/tests/salt/salt/utls/dicttrim.py	43	39	9%
/home/varuni/salt/tests/salt/salt/utls/dictupdate.py	130	83	36%
/home/varuni/salt/tests/salt/salt/utls/dns.py	592	483	18%
/home/varuni/salt/tests/salt/salt/utls/entrypoints.py	40	10	75%
/home/varuni/salt/tests/salt/salt/utls/error.py	24	18	25%
/home/varuni/salt/tests/salt/salt/utls/event.py	692	582	16%
/home/varuni/salt/tests/salt/salt/utls/extmods.py	101	88	13%
/home/varuni/salt/tests/salt/salt/utls/files.py	473	376	21%
/home/varuni/salt/tests/salt/salt/utls/functools.py	64	19	70%
/home/varuni/salt/tests/salt/salt/utls/gitfs.py	1700	1518	11%
/home/varuni/salt/tests/salt/salt/utls/gzip_util.py	52	40	23%
/home/varuni/salt/tests/salt/salt/utls/hashutils.py	89	52	42%
/home/varuni/salt/tests/salt/salt/utls/http.py	597	537	10%
/home/varuni/salt/tests/salt/salt/utls/immutabletypes.py	59	20	66%
/home/varuni/salt/tests/salt/salt/utls/itertools.py	50	44	12%
/home/varuni/salt/tests/salt/salt/utls/jid.py	64	50	22%
/home/varuni/salt/tests/salt/salt/utls/jinja.py	426	307	28%
/home/varuni/salt/tests/salt/salt/utls/json.py	52	32	38%
/home/varuni/salt/tests/salt/salt/utls/kinds.py	6	0	100%
/home/varuni/salt/tests/salt/salt/utls/lazy.py	49	12	76%
/home/varuni/salt/tests/salt/salt/utls/locales.py	44	37	16%
/home/varuni/salt/tests/salt/salt/utls/master.py	463	409	12%
/home/varuni/salt/tests/salt/salt/utls/migrations.py	26	22	15%
/home/varuni/salt/tests/salt/salt/utls/minion.py	97	85	12%
/home/varuni/salt/tests/salt/salt/utls/minions.py	629	571	9%
/home/varuni/salt/tests/salt/salt/utls/msgpack.py	48	24	50%
/home/varuni/salt/tests/salt/salt/utls/network.py	1040	778	25%
/home/varuni/salt/tests/salt/salt/utls/odict.py	33	21	36%

/home/varuni/salt/tests/salt/salt/utlils/openstack/_init_.py	0	0	100%
/home/varuni/salt/tests/salt/salt/utlils/openstack/swift.py	131	103	21%
/home/varuni/salt/tests/salt/salt/utlils/package.py	15	4	73%
/home/varuni/salt/tests/salt/salt/utlils/parsers.py	1155	829	28%
/home/varuni/salt/tests/salt/salt/utlils/path.py	162	72	56%
/home/varuni/salt/tests/salt/salt/utlils/pkg/_init_.py	55	37	33%
/home/varuni/salt/tests/salt/salt/utlils/pkg/rpm.py	79	53	33%
/home/varuni/salt/tests/salt/salt/utlils/platform.py	103	38	63%
/home/varuni/salt/tests/salt/salt/utlils/powershell.py	35	29	17%
/home/varuni/salt/tests/salt/salt/utlils/process.py	582	501	14%
/home/varuni/salt/tests/salt/salt/utlils/pycrypto.py	100	60	40%
/home/varuni/salt/tests/salt/salt/utlils/rsax931.py	124	72	42%
/home/varuni/salt/tests/salt/salt/utlils/sanitizers.py	30	15	50%
/home/varuni/salt/tests/salt/salt/utlils/schedule.py	982	908	8%
/home/varuni/salt/tests/salt/salt/utlils/sdb.py	73	66	10%
/home/varuni/salt/tests/salt/salt/utlils/ssdp.py	222	171	23%
/home/varuni/salt/tests/salt/salt/utlils/stringio.py	9	3	67%
/home/varuni/salt/tests/salt/salt/utlils/stringutils.py	313	232	26%
/home/varuni/salt/tests/salt/salt/utlils/templates.py	349	287	18%
/home/varuni/salt/tests/salt/salt/utlils/textformat.py	32	14	56%
/home/varuni/salt/tests/salt/salt/utlils/timed_subprocess.py	71	43	39%
/home/varuni/salt/tests/salt/salt/utlils/url.py	98	64	35%
/home/varuni/salt/tests/salt/salt/utlils/user.py	215	118	45%
/home/varuni/salt/tests/salt/salt/utlils/validate/_init_.py	0	0	100%
/home/varuni/salt/tests/salt/salt/utlils/validate/net.py	42	32	24%
/home/varuni/salt/tests/salt/salt/utlils/validate/path.py	18	11	39%
/home/varuni/salt/tests/salt/salt/utlils/verify.py	399	319	20%
/home/varuni/salt/tests/salt/salt/utlils/versions.py	186	126	32%
/home/varuni/salt/tests/salt/salt/utlils/vt.py	459	409	11%
/home/varuni/salt/tests/salt/salt/utlils/win_chcp.py	65	52	20%
/home/varuni/salt/tests/salt/salt/utlils/win_dacl.py	655	622	5%
/home/varuni/salt/tests/salt/salt/utlils/win_functions.py	126	104	17%
/home/varuni/salt/tests/salt/salt/utlils/win_network.py	212	185	13%
/home/varuni/salt/tests/salt/salt/utlils/win_reg.py	334	308	8%
/home/varuni/salt/tests/salt/salt/utlils/win_system.py	101	75	26%
/home/varuni/salt/tests/salt/salt/utlils/win_update.py	373	340	9%
/home/varuni/salt/tests/salt/salt/utlils/winapi.py	25	12	52%
/home/varuni/salt/tests/salt/salt/utlils/xdg.py	5	0	100%
/home/varuni/salt/tests/salt/salt/utlils/xmlutil.py	153	135	12%
/home/varuni/salt/tests/salt/salt/utlils/yaml.py	3	0	100%

/home/varuni/salt/tests/salt/salt/utlils/win_system.py	101	75	26%
/home/varuni/salt/tests/salt/salt/utlils/win_update.py	373	340	9%
/home/varuni/salt/tests/salt/salt/utlils/winapi.py	25	12	52%
/home/varuni/salt/tests/salt/salt/utlils/xdg.py	5	0	100%
/home/varuni/salt/tests/salt/salt/utlils/xmlutil.py	153	135	12%
/home/varuni/salt/tests/salt/salt/utlils/yaml.py	3	0	100%
/home/varuni/salt/tests/salt/salt/utlils/yamldumper.py	41	10	76%
/home/varuni/salt/tests/salt/salt/utlils/yamlencoding.py	27	17	37%
/home/varuni/salt/tests/salt/salt/utlils/yamlloader.py	85	35	59%
/home/varuni/salt/tests/salt/salt/utlils/yamlloader_old.py	119	99	17%
/home/varuni/salt/tests/salt/salt/utlils/zeromq.py	28	12	57%
/home/varuni/salt/tests/salt/salt/version.py	570	232	59%
init.py	10	5	50%
conftest.py	682	293	57%
support/_init_.py	0	0	100%
support/helpers.py	955	763	20%
support/mixins.py	364	219	40%
support/mock.py	208	162	22%
support/paths.py	63	17	73%
support/pytest/_init_.py	0	0	100%
support/pytest/helpers.py	424	285	33%
support/pytest/loader.py	83	19	77%
support/runtests.py	72	37	49%
support/sminion.py	137	52	62%
support/unit.py	131	80	39%
unit/_init_.py	0	0	100%
unit/conftest.py	6	0	100%
unit/states/_init_.py	0	0	100%
unit/states/test_cron.py	109	0	100%
unit/states/test_disk.py	225	0	100%
unit/states/test_group.py	46	0	100%
unit/states/test_ipset.py	163	0	100%
unit/states/test_loop.py	77	10	87%
unit/states/test_module.py	152	6	96%
unit/states/test_pip_state.py	179	0	100%
unit/states/test_syslog_ng.py	88	0	100%
unit/states/test_x509.py	43	10	77%

TOTAL	44875	32667	27%

Code Instrumentation

Varuni Sood

Show the coverage results provided by the existing tool with a screenshot

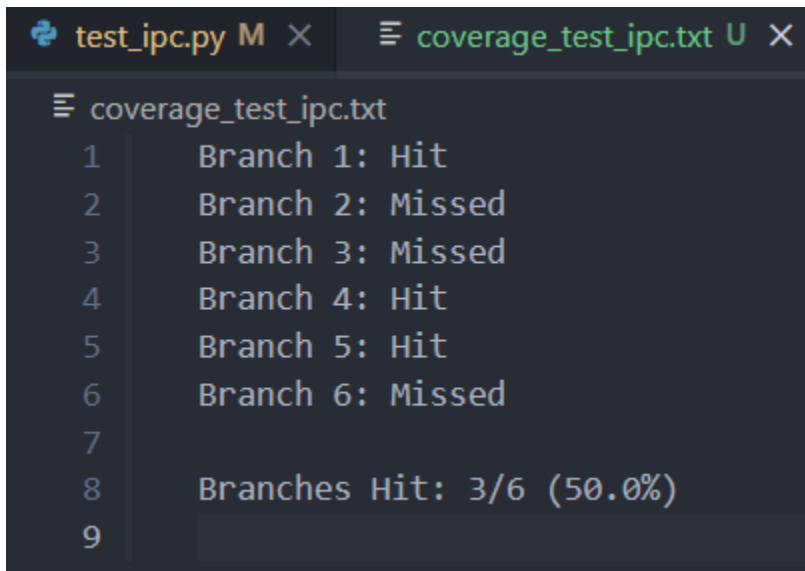
Your own coverage tool

Function 1: unit>transport>test_ipc>def teardown(self)

Show a patch (diff) or a link to a commit made in your forked repository that shows the instrumented code to gather coverage measurements

<https://github.com/Pahal-7974/salt/commit/1b2942823a7228dde5195fa56a12335a14123bf5>

Provide a screenshot of the coverage results output by the instrumentation



The screenshot shows a code editor with two tabs: 'test_ipc.py M' and 'coverage_test_ipc.txt U'. The 'coverage_test_ipc.txt' tab is active, displaying the following coverage results:

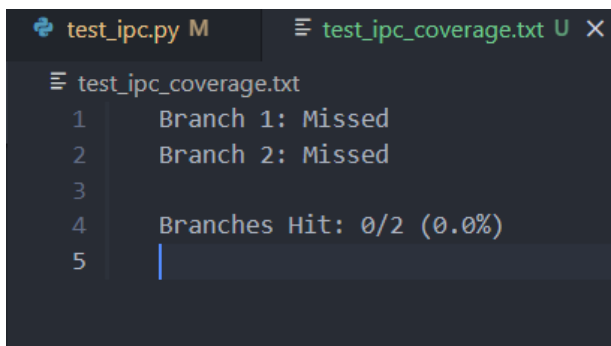
```
1 Branch 1: Hit
2 Branch 2: Missed
3 Branch 3: Missed
4 Branch 4: Hit
5 Branch 5: Hit
6 Branch 6: Missed
7
8 Branches Hit: 3/6 (50.0%)
9
```

Function 2: unit>transport>test_ipc>def test_multi_client_reading(self)

Show a patch (diff) or a link to a commit made in your forked repository that shows the instrumented code to gather coverage measurements

<https://github.com/Pahal-7974/salt/commit/e9a60bf5dba7660168c73c2c3842843786d3b872>

Provide a screenshot of the coverage results output by the instrumentation



The screenshot shows a code editor with two tabs: 'test_ipc.py M' and 'test_ipc_coverage.txt U'. The 'test_ipc_coverage.txt' tab is active, displaying the following coverage results:

```
1 Branch 1: Missed
2 Branch 2: Missed
3
4 Branches Hit: 0/2 (0.0%)
5
```

Pahal Agrawal

Function 1: unit>utils>test_botomod.py> def _has_required_boto()

URL:

<https://github.com/Pahal-7974/salt/commit/cc1929d4ae43fb75aa0614f1ddc2e494a4c85680>

```
Branch 1: Hit
Branch 2: Missed
Branch 3: Missed

Branches Hit: 1/3 (33.33333333333333%)
```

Function 2: unit>states>test_module.py> def test_run_typed_return(self)

URL:

<https://github.com/Pahal-7974/salt/commit/9943b4425529fd381f42917251e116a88a78c870>

```
Branch 1: Hit
Branch 2: Hit
Branch 3: Hit
Branch 4: Hit
Branch 5: Hit
Branch 6: Hit
Branch 7: Hit
Branch 8: Hit
Branch 9: Hit
Branch 10: Hit
Branch 11: Hit
Branch 12: Hit
Branch 13: Missed
Branch 14: Missed
Branch 15: Missed
Branch 16: Missed
Branch 17: Missed
Branch 18: Missed
Branch 19: Missed
Branch 20: Missed
Branch 21: Missed
Branch 22: Missed
Branch 23: Missed
Branch 24: Missed

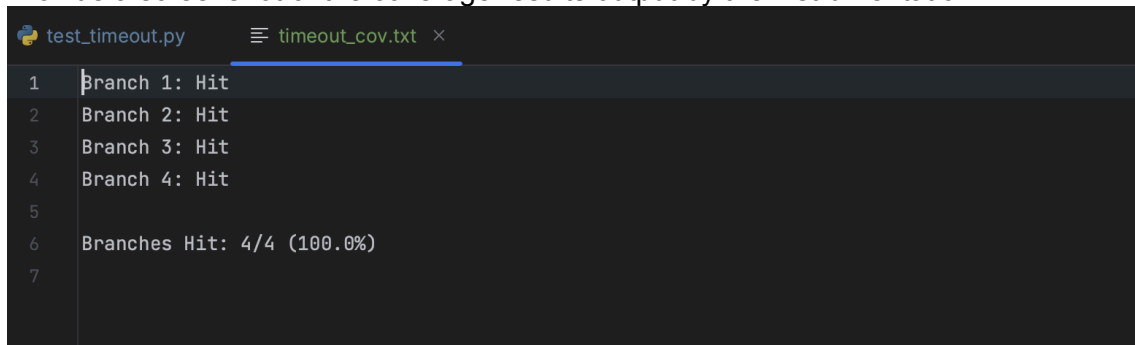
Branches Hit: 12/24 (50.0%)
```

Sakshi Sharma

Show a patch (diff) or a link to a commit made in your forked repository that shows the instrumented code to gather coverage measurements

<https://github.com/Pahal-7974/salt/tree/sakshicherry4-patch-1>

Provide a screenshot of the coverage results output by the instrumentation



```
test_timeout.py  timeout_cov.txt ×
1 Branch 1: Hit
2 Branch 2: Hit
3 Branch 3: Hit
4 Branch 4: Hit
5
6 Branches Hit: 4/4 (100.0%)
7
```


return_something_after -> first function

return_args_after -> second function

```
# Coverage data structure
branch_coverage = {
    "return_something_after": {"branch_1_hit": False, "branch_2_hit": False},
    "return_args_after": {"branch_3_hit": False, "branch_4_hit": False},
}
```

Function 1:

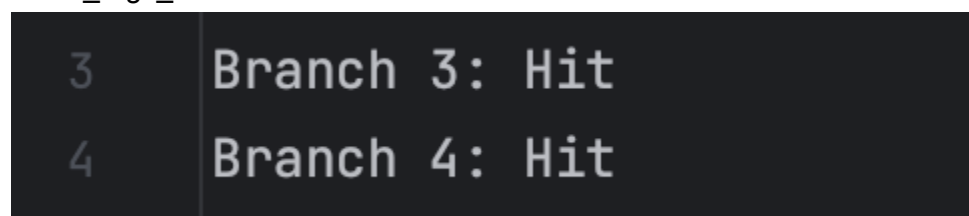
return_something_after



```
1 Branch 1: Hit
2 Branch 2: Hit
```

Function 2:

return_args_after



```
3 Branch 3: Hit
4 Branch 4: Hit
```

Pahal Agrawal

Test 1: unit>utils>test_path.py

<https://github.com/Pahal-7974/salt/commit/676bfb5d48d5b3177be5af86e17fb8cbd4c27456>

unit/utils/test_msgpack.py	356	50	86%
unit/utils/test_path.py	127	28	78%
unit/utils/test_pbm.py	430	331	23%
unit/utils/test_pkg.py	36	0	100%
unit/utils/test_minions.py	250	0	100%
unit/utils/test_msgpack.py	356	50	86%
unit/utils/test_path.py	132	28	79%
unit/utils/test_pbm.py	430	331	23%
unit/utils/test_pkg.py	36	0	100%

The coverage went from 78% to 79%. The file in question, test_path.py tests and checks for possible filepaths. However, not all edge cases are covered. I added a function to check for paths with empty strings and assert whether or not it works. Since the file is so big, The five branches I added (for loop iterations) increase the branch coverage by the seemingly low value of 1%.

Test 2: unit>utils>test_path.py

<https://github.com/Pahal-7974/salt/commit/676bfb5d48d5b3177be5af86e17fb8cbd4c27456>

unit/utils/test_minions.py	250	0	100%
unit/utils/test_msgpack.py	356	50	86%
unit/utils/test_path.py	132	28	79%
unit/utils/test_pbm.py	430	331	23%
unit/utils/test_pkg.py	36	0	100%
unit/utils/test_minions.py	250	0	100%
unit/utils/test_msgpack.py	356	50	86%
unit/utils/test_path.py	142	29	80%
unit/utils/test_pbm.py	430	331	23%
unit/utils/test_pkg.py	36	0	100%

The coverage went from 79% to 80%. This is the same file as the one for the first test, hence the old coverage is the same as the new coverage for Test 1. I added a similar function to check if the application works with special characters in the paths. Both these are possible edge cases. The code that I added adds ten branches to the existing code, increasing the coverage by 1%.

Varuni Sood

Coverage improvement

Individual tests

Provide a screenshot of the new coverage results

State the coverage improvement with a number and elaborate on why the coverage is improved

Test 1: unit>transport>test_ipc>test_empty_message(self)

Show a patch (diff) or a link to a commit made in your forked repository that shows the new/enhanced test

<https://github.com/saltstack/salt/commit/8799995696914a1a02fb0ec17ca754e223cb7884>

Provide a screenshot of the old coverage results (the same as you already showed above)

unit/conftest.py	6	0	100%
unit/transport/__init__.py	0	0	100%
unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	197	31	84%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48273	37306	23%

Provide a screenshot of the new coverage results

unit/transport/__init__.py	0	0	100%
unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	139	18	87%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48215	37295	23%

State the coverage improvement with a number and elaborate on why the coverage is improved
-> This function increases the coverage by three per cent. As the name suggests, its purpose is to verify how empty messages are handled. Since this is not appropriately being handled in the current code.

Test 2: unit>transport>test_ipc>test_large_message(self) and
unit>transport>test_ipc>test_binary_data(self)

Show a patch (diff) or a link to a commit made in your forked repository that shows the new/enhanced test

<https://github.com/saltstack/salt/commit/8799995696914a1a02fb0ec17ca754e223cb7884>

Provide a screenshot of the old coverage results (the same as you already showed above)

unit/transport/__init__.py	0	0	100%
unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	139	18	87%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48215	37295	23%

Provide a screenshot of the new coverage results

unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	147	18	88%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48223	37295	23%

State the coverage improvement with a number and elaborate on why the coverage is improved
-> The coverage increases by one per cent. The purpose is to enhance the system's ability to handle large messages and to process binary data correctly. The current code was not performing these actions effectively

Test 3: unit>transport>test_ipc>test_message_order(self)

Show a patch (diff) or a link to a commit made in your forked repository that shows the new/enhanced test

<https://github.com/saltstack/salt/commit/8799995696914a1a02fb0ec17ca754e223cb7884>

Provide a screenshot of the old coverage results (the same as you already showed above)

unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	147	18	88%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48223	37295	23%

Provide a screenshot of the new coverage results

unit/transport/__init__.py	0	0	100%
unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	165	18	89%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48241	37295	23%

State the coverage improvement with a number and elaborate on why the coverage is improved
-> The coverage improvement is only one per cent, however, this checks a very important case, that is if messages are being received in the correct order. It ensures messages are being received in the same order as the one they are sent in and also can validate the system's ability to correctly handle asynchronous multiple message reads to a certain extent.

Test 4: unit>transport>test_ipc>test_error_handling_in_publisher functions,
test_error_handling_in_subscriber

Show a patch (diff) or a link to a commit made in your forked repository that shows the new/enhanced test

<https://github.com/saltstack/salt/commit/8799995696914a1a02fb0ec17ca754e223cb7884>

Provide a screenshot of the old coverage results (the same as you already showed above)

unit/transport/__init__.py	0	0	100%
unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	165	18	89%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48241	37295	23%

Provide a screenshot of the new coverage results

unit/__init__.py	0	0	100%
unit/conftest.py	6	0	100%
unit/transport/__init__.py	0	0	100%
unit/transport/mixins.py	14	12	14%
unit/transport/test_ipc.py	169	15	91%
unit/transport/test_tcp.py	85	56	34%

TOTAL	48245	37290	23%

State the coverage improvement with a number and elaborate on why the coverage is improved
-> The coverage increases by two per cent. The function handles the response to the system when it attempts to publish messages on a closed channel and when it tries to read from a closed channel by raising exceptions.

Sakshi Sharma

Coverage improvement

Individual tests

The following is supposed to be repeated for each group member

Sakshi Sharma

<Show a patch (diff) or a link to a commit made in your forked repository that shows the new/enhanced test>

<https://github.com/Pahal-7974/salt/tree/sakshicherry4-patch-1>

<Provide a screenshot of the old coverage results (the same as you already showed above)>

unit/utils/test_sanitizers.py	26	0	100%
unit/utils/test_schema.py	804	485	40%
unit/utils/test_ssdp.py	331	0	100%
unit/utils/test_state.py	144	0	100%
unit/utils/test_systemd.py	136	0	100%
unit/utils/test_thin.py	619	24	96%
unit/utils/test_timed_subprocess.py	6	0	100%
unit/utils/test_timeout.py	72	29	60%

<Provide a screenshot of the new coverage results>

Test 1:

def test_wait_for_negative_timeout(self)

unit/utils/test_state.py	144	0	100%
unit/utils/test_systemd.py	136	0	100%
unit/utils/test_thin.py	619	24	96%
unit/utils/test_timed_subprocess.py	6	0	100%
unit/utils/test_timeout.py	94	32	66%

State the coverage improvement with a number and elaborate on why the coverage is improved: The coverage percentage increased from 60% to 66% with the help of this function. The function basically showcases that if a negative value is given to wait_for, the function returns False justifying its behavior while handling invalid input scenarios. This is an edge case which was not taken care of in the original code.

Test 2

def test_wait_for_function_returning_false(self)

State the coverage improvement with a number and elaborate on why the coverage is improved: The coverage increased from 66% to 68%. Basically handles a function that does not

meet a certain requirement in a given/ specific amount of time. This is an edge case which was not taken care of in the original code.

unit/utls/test_state.py	144	0	100%
unit/utls/test_systemd.py	136	0	100%
unit/utls/test_thin.py	619	24	96%
unit/utls/test_timed_subprocess.py	6	0	100%
unit/utls/test_timeout.py	99	32	68%

Test 3

def test_wait_for_timeout_equal_to_step(self)

State the coverage improvement with a number and elaborate on why the coverage is improved: The coverage went up from 68% to 71% because of this function. The wait_for correctly terminates the waiting process if the condition does not meet within the time frame in the first step itself.

unit/utls/test_ssdp.py	331	0	100%
unit/utls/test_state.py	144	0	100%
unit/utls/test_systemd.py	136	0	100%
unit/utls/test_thin.py	619	24	96%
unit/utls/test_timed_subprocess.py	6	0	100%
unit/utls/test_timeout.py	102	30	71%

Test 4

def test_return_args_after_timeout(self):

State the coverage improvement with a number and elaborate on why the coverage is improved: Coverage increased from 71% to 80%. Method basically ensures that correct arguments are returned within a given timeout period.

unit/utls/test_state.py	144	0	100%
unit/utls/test_systemd.py	136	0	100%
unit/utls/test_thin.py	619	24	96%
unit/utls/test_timed_subprocess.py	6	0	100%
unit/utls/test_timeout.py	107	21	80%

Overall

Old Coverage(27%):

Name	Stmts	Miss	Cover
/home/varuni/salt/tests/salt/salt/__init__.py	47	18	62%
/home/varuni/salt/tests/salt/salt/_compat.py	11	4	64%
/home/varuni/salt/tests/salt/salt/_logging/__init__.py	1	0	100%
/home/varuni/salt/tests/salt/salt/_logging/handlers.py	60	39	35%
/home/varuni/salt/tests/salt/salt/_logging/impl.py	489	298	39%
/home/varuni/salt/tests/salt/salt/_logging/mixins.py	68	30	56%
/home/varuni/salt/tests/salt/salt/beacons/__init__.py	244	216	11%
/home/varuni/salt/tests/salt/salt/cache/__init__.py	138	107	22%
/home/varuni/salt/tests/salt/salt/channel/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/channel/client.py	361	267	26%
/home/varuni/salt/tests/salt/salt/cli/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/cli/daemons.py	234	190	19%
/home/varuni/salt/tests/salt/salt/client/__init__.py	788	705	11%
/home/varuni/salt/tests/salt/salt/config/__init__.py	1202	779	35%
/home/varuni/salt/tests/salt/salt/crypt.py	938	787	16%
/home/varuni/salt/tests/salt/salt/defaults/__init__.py	24	11	54%
/home/varuni/salt/tests/salt/salt/defaults/events.py	2	0	100%
/home/varuni/salt/tests/salt/salt/defaults/exitcodes.py	20	0	100%
/home/varuni/salt/tests/salt/salt/engines/__init__.py	59	49	17%
/home/varuni/salt/tests/salt/salt/exceptions.py	154	65	58%
/home/varuni/salt/tests/salt/salt/features.py	18	5	72%
/home/varuni/salt/tests/salt/salt/fileclient.py	763	602	21%
/home/varuni/salt/tests/salt/salt/fileserver/__init__.py	523	411	21%
/home/varuni/salt/tests/salt/salt/fileserver/gitfs.py	49	21	57%
/home/varuni/salt/tests/salt/salt/fileserver/minionfs.py	174	151	13%
/home/varuni/salt/tests/salt/salt/fileserver/roots.py	271	218	20%
/home/varuni/salt/tests/salt/salt/grains/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/grains/core.py	1694	1114	34%
/home/varuni/salt/tests/salt/salt/grains/disks.py	118	74	37%
/home/varuni/salt/tests/salt/salt/grains/extra.py	55	24	56%
/home/varuni/salt/tests/salt/salt/grains/minion_process.py	22	2	91%
/home/varuni/salt/tests/salt/salt/grains/opts.py	4	1	75%
/home/varuni/salt/tests/salt/salt/grains/package.py	8	0	100%
/home/varuni/salt/tests/salt/salt/grains/pending_reboot.py	11	2	82%
/home/varuni/salt/tests/salt/salt/grains/rest_sample.py	23	10	57%
/home/varuni/salt/tests/salt/salt/loader/__init__.py	408	211	48%
/home/varuni/salt/tests/salt/salt/loader/context.py	98	56	43%
/home/varuni/salt/tests/salt/salt/loader/lazy.py	685	243	65%

/home/varuni/salt/tests/salt/salt/minion.py	1997	1757	12%
/home/varuni/salt/tests/salt/salt/modules/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/modules/cmdmod.py	871	656	25%
/home/varuni/salt/tests/salt/salt/modules/cron.py	402	141	65%
/home/varuni/salt/tests/salt/salt/modules/match.py	144	118	18%
/home/varuni/salt/tests/salt/salt/modules/network.py	863	782	9%
/home/varuni/salt/tests/salt/salt/modules/selinux.py	291	251	14%
/home/varuni/salt/tests/salt/salt/modules/smbios.py	100	77	23%
/home/varuni/salt/tests/salt/salt/modules/syslog_ng.py	466	141	76%
/home/varuni/salt/tests/salt/salt/modules/x509.py	716	642	10%
/home/varuni/salt/tests/salt/salt/payload.py	193	162	16%
/home/varuni/salt/tests/salt/salt/pillar/__init__.py	673	478	29%
/home/varuni/salt/tests/salt/salt/renderers/jinja.py	29	21	28%
/home/varuni/salt/tests/salt/salt/renderers/yaml.py	51	37	27%
/home/varuni/salt/tests/salt/salt/roster/__init__.py	62	52	16%
/home/varuni/salt/tests/salt/salt/serializers/__init__.py	3	0	100%
/home/varuni/salt/tests/salt/salt/serializers/msgpack.py	18	10	44%
/home/varuni/salt/tests/salt/salt/serializers/yaml.py	78	25	68%
/home/varuni/salt/tests/salt/salt/state.py	2864	2684	6%
/home/varuni/salt/tests/salt/salt/states/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/states/cron.py	234	164	30%
/home/varuni/salt/tests/salt/salt/states/disk.py	81	2	98%
/home/varuni/salt/tests/salt/salt/states/group.py	145	78	46%
/home/varuni/salt/tests/salt/salt/states/ipset.py	130	13	90%
/home/varuni/salt/tests/salt/salt/states/loop.py	87	14	84%
/home/varuni/salt/tests/salt/salt/states/module.py	213	53	75%
/home/varuni/salt/tests/salt/salt/states/pip_state.py	388	195	50%
/home/varuni/salt/tests/salt/salt/states/syslog_ng.py	10	2	80%
/home/varuni/salt/tests/salt/salt/states/x509.py	240	189	21%
/home/varuni/salt/tests/salt/salt/syspaths.py	130	37	72%
/home/varuni/salt/tests/salt/salt/template.py	107	76	29%
/home/varuni/salt/tests/salt/salt/transport/__init__.py	6	0	100%
/home/varuni/salt/tests/salt/salt/transport/base.py	226	179	21%
/home/varuni/salt/tests/salt/salt/transport/frame.py	59	53	10%
/home/varuni/salt/tests/salt/salt/utills/__init__.py	0	0	100%
/home/varuni/salt/tests/salt/salt/utills/args.py	287	234	18%
/home/varuni/salt/tests/salt/salt/utills/asynchronous.py	107	87	19%
/home/varuni/salt/tests/salt/salt/utills/atomicfile.py	49	30	39%
/home/varuni/salt/tests/salt/salt/utills/cache.py	206	155	25%
/home/varuni/salt/tests/salt/salt/utills/configparser.py	135	119	12%

/home/varuni/salt/tests/salt/salt/utills/context.py	126	87	31%
/home/varuni/salt/tests/salt/salt/utills/crypt.py	62	43	31%
/home/varuni/salt/tests/salt/salt/utills/ctx.py	15	6	60%
/home/varuni/salt/tests/salt/salt/utills/data.py	715	559	22%
/home/varuni/salt/tests/salt/salt/utills/dateutils.py	34	23	32%
/home/varuni/salt/tests/salt/salt/utills/debug.py	72	55	24%
/home/varuni/salt/tests/salt/salt/utills/decorators/__init__.py	271	207	24%
/home/varuni/salt/tests/salt/salt/utills/decorators/extension_deprecation.py	15	9	40%
/home/varuni/salt/tests/salt/salt/utills/decorators/jinja.py	35	0	100%
/home/varuni/salt/tests/salt/salt/utills/decorators/path.py	21	11	48%
/home/varuni/salt/tests/salt/salt/utills/decorators/state.py	53	37	30%
/home/varuni/salt/tests/salt/salt/utills/dictdiffer.py	170	137	19%
/home/varuni/salt/tests/salt/salt/utills/dicttrim.py	43	39	9%
/home/varuni/salt/tests/salt/salt/utills/dictupdate.py	130	83	36%
/home/varuni/salt/tests/salt/salt/utills/dns.py	592	483	18%
/home/varuni/salt/tests/salt/salt/utills/entrypoints.py	40	10	75%
/home/varuni/salt/tests/salt/salt/utills/error.py	24	18	25%
/home/varuni/salt/tests/salt/salt/utills/event.py	692	582	16%
/home/varuni/salt/tests/salt/salt/utills/extmods.py	101	88	13%
/home/varuni/salt/tests/salt/salt/utills/files.py	473	376	21%
/home/varuni/salt/tests/salt/salt/utills/functools.py	64	19	70%
/home/varuni/salt/tests/salt/salt/utills/gitfs.py	1700	1518	11%
/home/varuni/salt/tests/salt/salt/utills/gzip_util.py	52	40	23%
/home/varuni/salt/tests/salt/salt/utills/hashutils.py	89	52	42%
/home/varuni/salt/tests/salt/salt/utills/http.py	597	537	10%
/home/varuni/salt/tests/salt/salt/utills/immutabletypes.py	59	20	66%
/home/varuni/salt/tests/salt/salt/utills/itertools.py	50	44	12%
/home/varuni/salt/tests/salt/salt/utills/jid.py	64	50	22%
/home/varuni/salt/tests/salt/salt/utills/jinja.py	426	307	28%
/home/varuni/salt/tests/salt/salt/utills/json.py	52	32	38%
/home/varuni/salt/tests/salt/salt/utills/kinds.py	6	0	100%
/home/varuni/salt/tests/salt/salt/utills/lazy.py	49	12	76%
/home/varuni/salt/tests/salt/salt/utills/locales.py	44	37	16%
/home/varuni/salt/tests/salt/salt/utills/master.py	463	409	12%
/home/varuni/salt/tests/salt/salt/utills/migrations.py	26	22	15%
/home/varuni/salt/tests/salt/salt/utills/minion.py	97	85	12%
/home/varuni/salt/tests/salt/salt/utills/minions.py	629	571	9%
/home/varuni/salt/tests/salt/salt/utills/msgpack.py	48	24	50%
/home/varuni/salt/tests/salt/salt/utills/network.py	1040	778	25%
/home/varuni/salt/tests/salt/salt/utills/odict.py	33	21	36%

/home/varuni/salt/tests/salt/salt/utlils/openstack/_init_.py	0	0	100%
/home/varuni/salt/tests/salt/salt/utlils/openstack/swift.py	131	103	21%
/home/varuni/salt/tests/salt/salt/utlils/package.py	15	4	73%
/home/varuni/salt/tests/salt/salt/utlils/parsers.py	1155	829	28%
/home/varuni/salt/tests/salt/salt/utlils/path.py	162	72	56%
/home/varuni/salt/tests/salt/salt/utlils/pkg/_init_.py	55	37	33%
/home/varuni/salt/tests/salt/salt/utlils/pkg/rpm.py	79	53	33%
/home/varuni/salt/tests/salt/salt/utlils/platform.py	103	38	63%
/home/varuni/salt/tests/salt/salt/utlils/powershell.py	35	29	17%
/home/varuni/salt/tests/salt/salt/utlils/process.py	582	501	14%
/home/varuni/salt/tests/salt/salt/utlils/pycrypto.py	100	60	40%
/home/varuni/salt/tests/salt/salt/utlils/rsax931.py	124	72	42%
/home/varuni/salt/tests/salt/salt/utlils/sanitizers.py	30	15	50%
/home/varuni/salt/tests/salt/salt/utlils/schedule.py	982	908	8%
/home/varuni/salt/tests/salt/salt/utlils/sdb.py	73	66	10%
/home/varuni/salt/tests/salt/salt/utlils/ssdp.py	222	171	23%
/home/varuni/salt/tests/salt/salt/utlils/stringio.py	9	3	67%
/home/varuni/salt/tests/salt/salt/utlils/stringutils.py	313	232	26%
/home/varuni/salt/tests/salt/salt/utlils/templates.py	349	287	18%
/home/varuni/salt/tests/salt/salt/utlils/textformat.py	32	14	56%
/home/varuni/salt/tests/salt/salt/utlils/timed_subprocess.py	71	43	39%
/home/varuni/salt/tests/salt/salt/utlils/url.py	98	64	35%
/home/varuni/salt/tests/salt/salt/utlils/user.py	215	118	45%
/home/varuni/salt/tests/salt/salt/utlils/validate/_init_.py	0	0	100%
/home/varuni/salt/tests/salt/salt/utlils/validate/net.py	42	32	24%
/home/varuni/salt/tests/salt/salt/utlils/validate/path.py	18	11	39%
/home/varuni/salt/tests/salt/salt/utlils/verify.py	399	319	20%
/home/varuni/salt/tests/salt/salt/utlils/versions.py	186	126	32%
/home/varuni/salt/tests/salt/salt/utlils/vt.py	459	409	11%
/home/varuni/salt/tests/salt/salt/utlils/win_chcp.py	65	52	20%
/home/varuni/salt/tests/salt/salt/utlils/win_dacl.py	655	622	5%
/home/varuni/salt/tests/salt/salt/utlils/win_functions.py	126	104	17%
/home/varuni/salt/tests/salt/salt/utlils/win_network.py	212	185	13%
/home/varuni/salt/tests/salt/salt/utlils/win_reg.py	334	308	8%
/home/varuni/salt/tests/salt/salt/utlils/win_system.py	101	75	26%
/home/varuni/salt/tests/salt/salt/utlils/win_update.py	373	340	9%
/home/varuni/salt/tests/salt/salt/utlils/winapi.py	25	12	52%
/home/varuni/salt/tests/salt/salt/utlils/xdg.py	5	0	100%
/home/varuni/salt/tests/salt/salt/utlils/xmlutil.py	153	135	12%
/home/varuni/salt/tests/salt/salt/utlils/yaml.py	3	0	100%

/home/varuni/salt/tests/salt/salt/utlils/win_system.py	101	75	26%
/home/varuni/salt/tests/salt/salt/utlils/win_update.py	373	340	9%
/home/varuni/salt/tests/salt/salt/utlils/winapi.py	25	12	52%
/home/varuni/salt/tests/salt/salt/utlils/xdg.py	5	0	100%
/home/varuni/salt/tests/salt/salt/utlils/xmlutil.py	153	135	12%
/home/varuni/salt/tests/salt/salt/utlils/yaml.py	3	0	100%
/home/varuni/salt/tests/salt/salt/utlils/yamldumper.py	41	10	76%
/home/varuni/salt/tests/salt/salt/utlils/yamlencoding.py	27	17	37%
/home/varuni/salt/tests/salt/salt/utlils/yamlloader.py	85	35	59%
/home/varuni/salt/tests/salt/salt/utlils/yamlloader_old.py	119	99	17%
/home/varuni/salt/tests/salt/salt/utlils/zeromq.py	28	12	57%
/home/varuni/salt/tests/salt/salt/version.py	570	232	59%
init.py	10	5	50%
conftest.py	682	293	57%
support/_init_.py	0	0	100%
support/helpers.py	955	763	20%
support/mixins.py	364	219	40%
support/mock.py	208	162	22%
support/paths.py	63	17	73%
support/pytest/_init_.py	0	0	100%
support/pytest/helpers.py	424	285	33%
support/pytest/loader.py	83	19	77%
support/runtests.py	72	37	49%
support/sminion.py	137	52	62%
support/unit.py	131	80	39%
unit/_init_.py	0	0	100%
unit/conftest.py	6	0	100%
unit/states/_init_.py	0	0	100%
unit/states/test_cron.py	109	0	100%
unit/states/test_disk.py	225	0	100%
unit/states/test_group.py	46	0	100%
unit/states/test_ipset.py	163	0	100%
unit/states/test_loop.py	77	10	87%
unit/states/test_module.py	152	6	96%
unit/states/test_pip_state.py	179	0	100%
unit/states/test_syslog_ng.py	88	0	100%
unit/states/test_x509.py	43	10	77%

TOTAL	44875	32667	27%

New Coverage (28%):

(.venv) varuni@VarusBook:~/salt/tests\$ coverage report			
Name	Stmts	Miss	Cover

/home/varuni/salt/salt/_init_.py	47	18	62%
/home/varuni/salt/salt/_compat.py	11	4	64%
/home/varuni/salt/salt/_logging/_init_.py	1	0	100%
/home/varuni/salt/salt/_logging/handlers.py	60	39	35%
/home/varuni/salt/salt/_logging/impl.py	489	298	39%
/home/varuni/salt/salt/_logging/mixins.py	68	29	57%
/home/varuni/salt/salt/beacons/_init_.py	244	216	11%
/home/varuni/salt/salt/cache/_init_.py	138	107	22%
/home/varuni/salt/salt/channel/_init_.py	0	0	100%
/home/varuni/salt/salt/channel/client.py	361	267	26%
/home/varuni/salt/salt/cli/_init_.py	0	0	100%
/home/varuni/salt/salt/cli/daemons.py	234	190	19%
/home/varuni/salt/salt/client/_init_.py	788	705	11%
/home/varuni/salt/salt/config/_init_.py	1202	779	35%
/home/varuni/salt/salt/crypt.py	938	787	16%
/home/varuni/salt/salt/defaults/_init_.py	24	11	54%
/home/varuni/salt/salt/defaults/events.py	2	0	100%
/home/varuni/salt/salt/defaults/exitcodes.py	20	0	100%
/home/varuni/salt/salt/engines/_init_.py	59	49	17%
/home/varuni/salt/salt/exceptions.py	154	65	58%
/home/varuni/salt/salt/features.py	18	5	72%
/home/varuni/salt/salt/fileclient.py	763	594	22%
/home/varuni/salt/salt/fileserver/_init_.py	523	409	22%
/home/varuni/salt/salt/fileserver/gitfs.py	49	21	57%
/home/varuni/salt/salt/fileserver/minionfs.py	174	151	13%
/home/varuni/salt/salt/fileserver/roots.py	271	218	20%
/home/varuni/salt/salt/grains/_init_.py	0	0	100%
/home/varuni/salt/salt/grains/core.py	1694	1114	34%
/home/varuni/salt/salt/grains/disks.py	118	74	37%
/home/varuni/salt/salt/grains/extra.py	55	24	56%
/home/varuni/salt/salt/grains/minion_process.py	22	2	91%
/home/varuni/salt/salt/grains/opts.py	4	1	75%
/home/varuni/salt/salt/grains/package.py	8	0	100%
/home/varuni/salt/salt/grains/pending_reboot.py	11	2	82%
/home/varuni/salt/salt/grains/rest_sample.py	23	10	57%
/home/varuni/salt/salt/loader/_init_.py	408	211	48%
/home/varuni/salt/salt/loader/context.py	98	42	57%

/home/varuni/salt/salt/utils/args.py	287	234	18%
/home/varuni/salt/salt/utils/asynchronous.py	107	87	19%
/home/varuni/salt/salt/utils/atomicfile.py	49	30	39%
/home/varuni/salt/salt/utils/cache.py	206	155	25%
/home/varuni/salt/salt/utils/configparser.py	135	119	12%
/home/varuni/salt/salt/utils/context.py	126	87	31%
/home/varuni/salt/salt/utils/crypt.py	62	43	31%
/home/varuni/salt/salt/utils/ctx.py	15	6	60%
/home/varuni/salt/salt/utils/data.py	715	559	22%
/home/varuni/salt/salt/utils/dateutils.py	34	23	32%
/home/varuni/salt/salt/utils/debug.py	72	55	24%
/home/varuni/salt/salt/utils/decorators/_init_.py	271	207	24%
/home/varuni/salt/salt/utils/decorators/extension_deprecation.py	15	9	40%
/home/varuni/salt/salt/utils/decorators/jinja.py	35	0	100%
/home/varuni/salt/salt/utils/decorators/path.py	21	11	48%
/home/varuni/salt/salt/utils/decorators/state.py	53	37	30%
/home/varuni/salt/salt/utils/dictdiffer.py	170	137	19%
/home/varuni/salt/salt/utils/dicttrim.py	43	39	9%
/home/varuni/salt/salt/utils/dictupdate.py	130	83	36%
/home/varuni/salt/salt/utils/dns.py	592	483	18%
/home/varuni/salt/salt/utils/entrypoints.py	40	10	75%
/home/varuni/salt/salt/utils/error.py	24	18	25%
/home/varuni/salt/salt/utils/event.py	692	582	16%
/home/varuni/salt/salt/utils/extmods.py	101	88	13%
/home/varuni/salt/salt/utils/files.py	473	374	21%
/home/varuni/salt/salt/utils/functools.py	64	19	70%
/home/varuni/salt/salt/utils/gitfs.py	1700	1518	11%
/home/varuni/salt/salt/utils/gzip_util.py	52	40	23%
/home/varuni/salt/salt/utils/hashutils.py	89	52	42%
/home/varuni/salt/salt/utils/http.py	597	537	10%
/home/varuni/salt/salt/utils/immutabletypes.py	59	20	66%
/home/varuni/salt/salt/utils/itertools.py	50	44	12%
/home/varuni/salt/salt/utils/jid.py	64	50	22%
/home/varuni/salt/salt/utils/jinja.py	426	290	32%
/home/varuni/salt/salt/utils/json.py	52	32	38%
/home/varuni/salt/salt/utils/kinds.py	6	0	100%
/home/varuni/salt/salt/utils/lazy.py	49	12	76%
/home/varuni/salt/salt/utils/locales.py	44	37	16%
/home/varuni/salt/salt/utils/master.py	463	409	12%
/home/varuni/salt/salt/utils/migrations.py	26	22	15%

/home/varuni/salt/salt/utls/minion.py	97	85	12%
/home/varuni/salt/salt/utls/minions.py	629	567	10%
/home/varuni/salt/salt/utls/msgpack.py	48	24	50%
/home/varuni/salt/salt/utls/network.py	1040	778	25%
/home/varuni/salt/salt/utls/odict.py	33	21	36%
/home/varuni/salt/salt/utls/openstack/_init__.py	0	0	100%
/home/varuni/salt/salt/utls/openstack/swift.py	131	103	21%
/home/varuni/salt/salt/utls/package.py	15	4	73%
/home/varuni/salt/salt/utls/parsers.py	1155	829	28%
/home/varuni/salt/salt/utls/path.py	162	72	56%
/home/varuni/salt/salt/utls/pkg/_init__.py	55	37	33%
/home/varuni/salt/salt/utls/pkg/rpm.py	79	53	33%
/home/varuni/salt/salt/utls/platform.py	103	38	63%
/home/varuni/salt/salt/utls/powershell.py	35	29	17%
/home/varuni/salt/salt/utls/process.py	582	501	14%
/home/varuni/salt/salt/utls/pycrypto.py	100	60	40%
/home/varuni/salt/salt/utls/rsax931.py	124	72	42%
/home/varuni/salt/salt/utls/sanitizers.py	30	15	50%
/home/varuni/salt/salt/utls/schedule.py	982	908	8%
/home/varuni/salt/salt/utls/sdb.py	73	66	10%
/home/varuni/salt/salt/utls/ssdp.py	222	171	23%
/home/varuni/salt/salt/utls/stringio.py	9	2	78%
/home/varuni/salt/salt/utls/stringutils.py	313	231	26%
/home/varuni/salt/salt/utls/templates.py	349	200	43%
/home/varuni/salt/salt/utls/textformat.py	32	14	56%
/home/varuni/salt/salt/utls/timed_subprocess.py	71	43	39%
/home/varuni/salt/salt/utls/url.py	98	64	35%
/home/varuni/salt/salt/utls/user.py	215	118	45%
/home/varuni/salt/salt/utls/validate/_init__.py	0	0	100%
/home/varuni/salt/salt/utls/validate/net.py	42	32	24%
/home/varuni/salt/salt/utls/validate/path.py	18	11	39%
/home/varuni/salt/salt/utls/verify.py	399	319	20%
/home/varuni/salt/salt/utls/versions.py	186	124	33%
/home/varuni/salt/salt/utls/vt.py	459	409	11%
/home/varuni/salt/salt/utls/win_chcp.py	65	52	20%
/home/varuni/salt/salt/utls/win_dacl.py	655	622	5%
/home/varuni/salt/salt/utls/win_functions.py	126	104	17%
/home/varuni/salt/salt/utls/win_network.py	212	185	13%
/home/varuni/salt/salt/utls/win_reg.py	334	308	8%
/home/varuni/salt/salt/utls/win_system.py	101	75	26%
/home/varuni/salt/salt/utls/win_system.py	101	75	26%
/home/varuni/salt/salt/utls/win_update.py	373	340	9%
/home/varuni/salt/salt/utls/winapi.py	25	12	52%
/home/varuni/salt/salt/utls/xdg.py	5	0	100%
/home/varuni/salt/salt/utls/xmlutil.py	153	135	12%
/home/varuni/salt/salt/utls/yaml.py	3	0	100%
/home/varuni/salt/salt/utls/yamldumper.py	41	10	76%
/home/varuni/salt/salt/utls/yamlencoding.py	27	17	37%
/home/varuni/salt/salt/utls/yamlloader.py	85	28	67%
/home/varuni/salt/salt/utls/yamlloader_old.py	119	99	17%
/home/varuni/salt/salt/utls/zeromq.py	28	12	57%
/home/varuni/salt/salt/version.py	570	234	59%
init.py	10	5	50%
conftest.py	682	293	57%
support/_init_.py	0	0	100%
support/helpers.py	955	763	20%
support/mixins.py	364	219	40%
support/mock.py	208	162	22%
support/paths.py	63	17	73%
support/pytest/_init_.py	0	0	100%
support/pytest/helpers.py	424	285	33%
support/pytest/loader.py	83	19	77%
support/runtests.py	72	37	49%
support/sminion.py	137	52	62%
support/unit.py	131	80	39%
unit/_init_.py	0	0	100%
unit/conftest.py	6	0	100%
unit/states/_init_.py	0	0	100%
unit/states/test_cron.py	109	0	100%
unit/states/test_disk.py	225	0	100%
unit/states/test_group.py	46	0	100%
unit/states/test_ipset.py	163	0	100%
unit/states/test_loop.py	77	10	87%
unit/states/test_module.py	168	6	96%
unit/states/test_pip_state.py	179	0	100%
unit/states/test_syslog_ng.py	88	0	100%
unit/states/test_x509.py	43	10	77%
TOTAL	44994	32469	28%

Statement of individual contributions

Sakshi:

tests-->unit->util->test_timeout.py

1. Created my own coverage measurement tool for 2 functions: return_something_after and return_args_after
2. Implemented 4 new functions to increase coverage:
 - def test_wait_for_negative_timeout(self)
 - def test_wait_for_function_returning_false(self)
 - def test_wait_for_timeout_equal_to_step(self)
 - def test_return_args_after_timeout(self)

Varuni:

1. Coverage measurement tool for: tests>unit>transport>test_ipc.py>tearDown and tests>unit>transport>test_ipc.py>test_multi_client_reading
2. Enhanced the coverage by adding these: test_empty_message(self), test_large_message(self), test_binary_data(self), test_message_order(self), test_error_handling_in_publisher, test_error_handling_in_subscriber

Pahal:

1. Code Instrumentation to create coverage measurement tool:
 - a. tests>unit>utils>test_botomod.py
 - b. tests>unit>states>test_module.py
2. Test Enhancement:
 - a. tests>unit>utils>test_path.py>test_join_with_empty_strings(self)
 - b. tests>unit>utils>test_path.py>test_join_with_special_characters(self)

Overall Coverage using the existing tool:

Sakshi and Varuni (code did not work on Pahal's system)

Contributions were still equal because of the use of liveshare on VSC.