

CodeSonar Analysis Report

generated by Administrator on Wed Aug 23 15:55:31 2017
for analysis rpl-tsch analysis 1

Summary

Table 1: rpl-tsch analysis 1 Summary

Active Warnings	File Count	Project Name	Time Started	Time Finished	Machine
58	174	rpl-tsch	Tue Jul 11 15:49:07 2017	Tue Jul 11 15:50:34 2017	eduECFA.kent.ac.uk

Warnings

Figure 1: rpl-tsch analysis 1, Warnings by Class

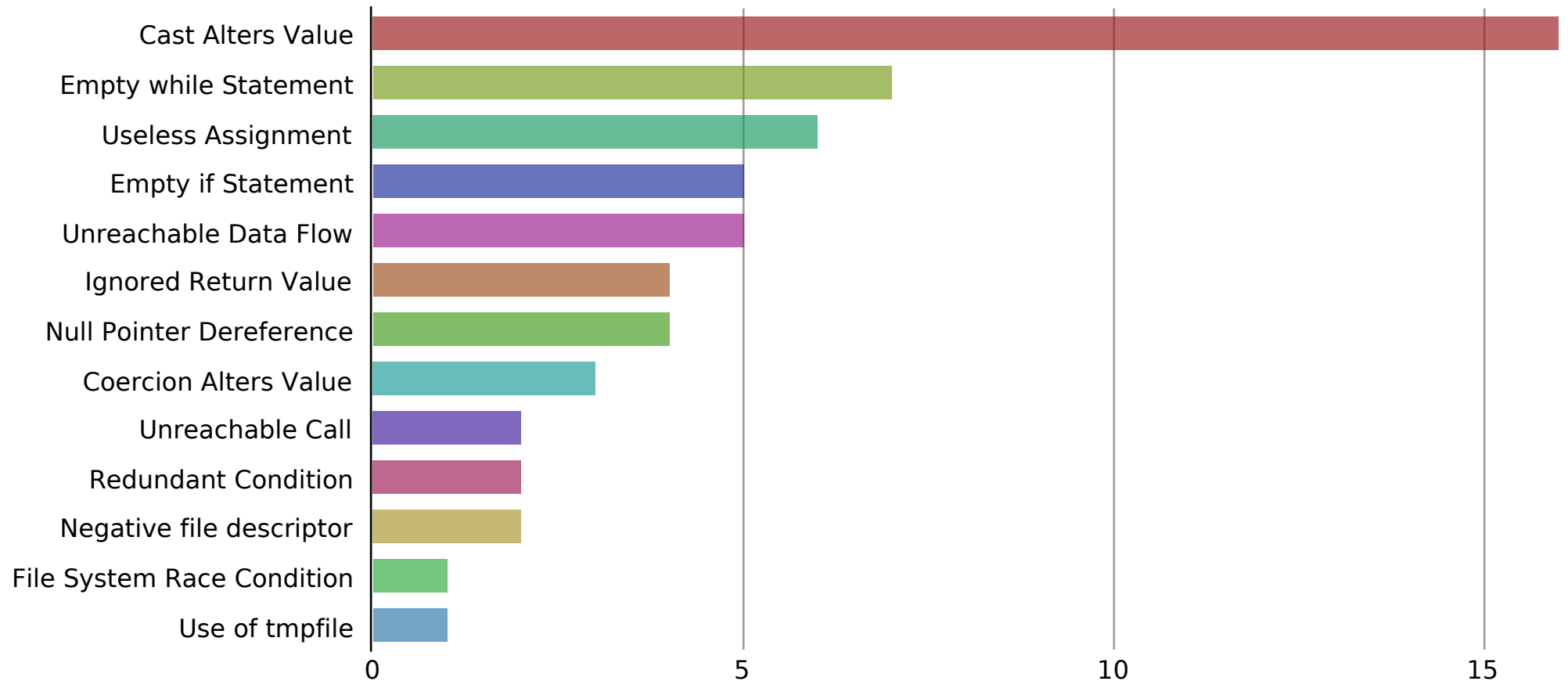


Table 2: rpl-tsch analysis 1, Warnings by Class

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Warning Class	Active Warnings
Cast Alters Value	16
Empty while Statement	7
Useless Assignment	6
Empty if Statement	5
Unreachable Data Flow	5
Ignored Return Value	4
Null Pointer Dereference	4
Coercion Alters Value	3
Redundant Condition	2
Negative file descriptor	2
Unreachable Call	2
Use of tmpfile	1
File System Race Condition	1

Table 3: rpl-tsch analysis 1, Warnings by File

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File	Active Warnings	Total Lines	Language
tapdev6.c	21	425	C
tsch-slot-operation.c	15	1092	C
tsch-packet.c	7	412	C
eeeprom.c	6	166	C
cfs-posix.c	3	108	C
contiki-main.c	2	314	C
tsch-adaptive-timesync.c	1	196	C
sensors.c	1	137	C
tapdev-drv.c	1	111	C
orchestra-rule-eb-per-time-source.c	1	126	C
button-sensor.c	0	32	C
vib-sensor.c	0	73	C
uip_arp.h	0	142	C
uip-fw-drv.h	0	42	C
uip-fw.h	0	176	C
contiki-net.h	0	65	C

Table 3: rpl-tsch analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
tapdev6.h	0	46	C
energest.h	0	155	C
loader.h	0	132	C
procinit.h	0	44	C
rtimer-arch.h	0	49	C
rtimer.h	0	169	C
etimer.h	0	254	C
ctimer.h	0	166	C
clock.h	0	146	C
timer.h	0	101	C
autostart.h	0	62	C
cc-gcc.h	0	43	C
cc.h	0	165	C
lc-switch.h	0	75	C
lc.h	0	130	C
pt.h	0	322	C
process.h	0	531	C

Table 3: rpl-tsch analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
contiki-default-conf.h	0	285	C
contiki-version.h	0	41	C
contiki.h	0	58	C
tcpip.h	0	378	C
project-conf.h	0	188	C
ctk-curses.h	0	66	C
cfs-posix-dir.c	0	87	C
irq.c	0	5	C
ctk-draw.h	0	335	C
ctk-conio.c	0	530	C
orchestra-rule-default-common.c	0	86	C
framer-802154.h	0	46	C
vib-sensor.h	0	52	C
pir-sensor.h	0	12	C
sensors.h	0	72	C
button-sensor.h	0	12	C
serial-line.h	0	76	C

Table 3: rpl-tsch analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
ctk.h	0	989	C
eeeprom.h	0	116	C
xmem.h	0	42	C
xmem.c	0	87	C
tsch-rpl.h	0	55	C
tsch-rpl.c	0	107	C
clock.c	0	70	C
mtarch.h	0	42	C
mt.h	0	263	C
mtarch.c	0	185	C
leds-arch.c	0	60	C
rtimer-arch.c	0	92	C
tsch-log.c	0	159	C
watchdog.h	0	42	C
watchdog.c	0	63	C
orchestra-rule-unicast-per-neighbor-rpl-storing.c	0	223	C
tsch-queue.c	0	477	C

Table 3: rpl-tsch analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
leds.h	0	98	C
tsch-schedule.c	0	448	C
tsch-log.h	0	138	C
tsch-adaptive-timesync.h	0	89	C
cfs.h	0	285	C
elfloader.h	0	194	C
elfloader-arch.h	0	139	C
elfloader-stub.c	0	67	C
net-debug.h	0	86	C
uip-debug.h	0	57	C
uip-mcast6-stats.h	0	117	C
roll-tm.h	0	244	C
esmrf.h	0	83	C
smrf.h	0	88	C
uip-mcast6-route.h	0	110	C
uip-mcast6-engines.h	0	56	C
uip-mcast6.h	0	186	C

Table 3: rpl-tsch analysis 1, Warnings by File

File	Active Warnings	Total Lines	Language
rpl-ns.h	0	72	C
rpl-conf.h	0	341	C
rpl.h	0	340	C
rpl-private.h	0	408	C
orchestra-conf.h	0	105	C
tsch-packet.h	0	105	C
tsch-slot-operation.h	0	124	C
ringbufindex.h	0	72	C
tsch-queue.h	0	194	C
tsch-schedule.h	0	164	C
frame802154e-ie.h	0	120	C
tsch-private.h	0	126	C
tsch-asn.h	0	97	C
tsch-security.h	0	145	C
tsch.h	0	184	C
orchestra.h	0	75	C

(Showing 100 of 174 Files)

Table 4: rpl-tsch analysis 1, Warning Instances

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Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
60	Negative file descriptor	tapdev6.c	tapdev_init_darwin_routes	159	None	None
60	Negative file descriptor	tapdev6.c	tapdev_init_darwin_routes	188	None	None
59	File System Race Condition	eeeprom.c	eeeprom_init	82	None	None
49	Null Pointer Dereference	tsch-slot-operation.c	tsch_tx_slot	683	None	None
49	Null Pointer Dereference	tsch-packet.c	tsch_packet_parse_eb	407	None	None
49	Null Pointer Dereference	tsch-packet.c	tsch_packet_parse_eack	184	None	None
48	Coercion Alters Value	contiki-main.c	stdin_handle_fd	135	None	None
48	Null Pointer Dereference	tsch-slot-operation.c	update_neighbor_state	365	None	None
47	Coercion Alters Value	orchestra-rule-eb-per-time-source.c	get_node_timeslot	52	None	None
46	Coercion Alters Value	tapdev6.c	tapdev_poll	138	None	None
42	Cast Alters Value	tapdev6.c	tapdev_send	397	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	272	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	280	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	281	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	282	None	None
42	Cast Alters Value	tapdev6.c	tapdev_cleanup_darwin_routes	283	None	None

Table 4: rpl-tsch analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	169	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	175	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	177	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	179	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	181	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	230	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	238	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	239	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	240	None	None
42	Cast Alters Value	tapdev6.c	tapdev_init_darwin_routes	241	None	None
27	Ignored Return Value	eeeprom.c	eeeprom_fill	60	None	None
27	Ignored Return Value	eeeprom.c	eeeprom_init	105	None	None
27	Ignored Return Value	eeeprom.c	eeeprom_read	160	None	None
27	Ignored Return Value	eeeprom.c	eeeprom_write	136	None	None
21	Useless Assignment	cfs-posix.c	cfs_seek	92	None	None
21	Useless Assignment	cfs-posix.c	cfs_seek	94	None	None
21	Useless Assignment	cfs-posix.c	cfs_seek	96	None	None

Table 4: rpl-tsch analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
21	Useless Assignment	tsch-packet.c	tsch_packet_create_eack	83	None	None
21	Useless Assignment	tsch-packet.c	tsch_packet_create_eb	208	None	None
21	Useless Assignment	tsch-packet.c	tsch_packet_create_eb	216	None	None
20	Redundant Condition	tapdev6.c	tapdev_init	334	None	None
20	Redundant Condition	tsch-slot-operation.c	tsch_tx_slot	541	None	None
18	Unreachable Call	tapdev6.c	tapdev_init	335	None	None
18	Unreachable Call	tsch-adaptive-timesync.c	tsch_timesync_adaptive_compensate	177	None	None
14	Unreachable Data Flow	contiki-main.c	main	298	None	None
14	Unreachable Data Flow	tsch-packet.c	tsch_packet_create_eack	88	None	None
14	Unreachable Data Flow	tsch-packet.c	tsch_packet_create_eb	211	None	None
14	Unreachable Data Flow	tsch-slot-operation.c	tsch_radio_off	446	None	None
14	Unreachable Data Flow	tsch-slot-operation.c	tsch_radio_on	415	None	None
12	Empty if Statement	sensors.c	process_thread_sensors_process	107	None	None
12	Empty if Statement	tapdev-drv.c	process_thread_tapdev_process	95	None	None
12	Empty if Statement	tsch-slot-operation.c	tsch_rx_slot	738	None	None
12	Empty if Statement	tsch-slot-operation.c	tsch_slot_operation	941	None	None
12	Empty if Statement	tsch-slot-operation.c	tsch_tx_slot	484	None	None

Table 4: rpl-tsch analysis 1, Warning Instances

Score	Warning Class	File Name	Procedure Name	Line Number	State	Owner
12	Empty while Statement	tsch-slot-operation.c	tsch_get_lock	210	None	None
12	Empty while Statement	tsch-slot-operation.c	tsch_rx_slot	762	None	None
12	Empty while Statement	tsch-slot-operation.c	tsch_rx_slot	771	None	None
12	Empty while Statement	tsch-slot-operation.c	tsch_rx_slot	877	None	None
12	Empty while Statement	tsch-slot-operation.c	tsch_tx_slot	562	None	None
12	Empty while Statement	tsch-slot-operation.c	tsch_tx_slot	593	None	None
12	Empty while Statement	tsch-slot-operation.c	tsch_tx_slot	598	None	None
4	Use of tmpfile	eeeprom.c	eeeprom_init	92	None	None

Analysis Metrics

Table 5: rpl-tsch analysis 1 Metrics

Metric Name	Value
Blank Lines	3217
Code Lines	10589
Comment Lines	15756
Include file instances	35
Lines with Code	11580
Lines with Comments	16747
Mixed Lines	991
Top-level file instances	35
Total Lines	30553
User-defined functions	227

File Metrics

Table 6: rpl-tsch analysis 1 File Metrics Summary

Metric Name	Max	Min	Avg
Blank Lines	219	1	18.49
Code Lines	709	2	60.86
Comment Lines	1302	0	90.55
Cyclomatic Complexity	181	0	4.99
Lines with Code	726	4	66.55
Lines with Comments	1422	0	96.25
Mixed Lines	120	0	5.70
Modified Cyclomatic Complexity	170	0	4.74
Taint Propagator Total	3	0	0.06
Taint Sink Total	6	0	0.33
Taint Source Total	2	0	0.03
Total Lines	2219	5	175.59

Table 7: rpl-tschr analysis 1 File Metrics Details

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File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
uip.h	2219	698	1422	578	1302	219
tsch-slot-operation.c	1092	726	283	709	266	100
ctk.h	989	467	506	376	415	107
uipopt.h	684	159	487	122	450	75
uip-nd6.h	575	203	346	183	326	46
process.h	531	90	386	88	384	57
ctk-conio.c	530	419	71	403	55	56
ctk-curses.c	517	384	93	383	92	41
tsch-queue.c	477	338	126	334	122	17
tsch-schedule.c	448	315	112	310	107	26
tapdev6.c	425	287	80	277	70	68
tsch-packet.c	412	285	93	274	82	45
rpl-private.h	408	258	127	224	93	57
psock.h	404	59	321	49	311	34
uip-ds6.h	385	208	152	179	123	54
tcpip.h	378	55	283	53	281	42

Table 7: rpl-tsch analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
packetbuf.h	371	153	185	141	173	45
rpl-conf.h	341	146	183	127	164	31
rpl.h	340	182	155	164	137	21
ctk-draw.h	335	27	281	26	280	28
pt.h	322	57	231	56	230	35
contiki-main.c	314	213	63	209	59	42
tcp-socket.h	299	63	212	62	211	25
radio.h	294	62	186	61	185	47
contiki-default-conf.h	285	95	185	63	153	37
cfs.h	285	61	200	60	199	25
contiki-conf.h	275	183	57	165	39	53
announcement.h	274	35	213	34	212	27
mt.h	263	29	208	28	207	27
tsch-security.c	261	172	60	170	58	31
etimer.h	254	23	208	22	207	24
roll-tm.h	244	92	143	84	135	17
uip-icmp6.h	242	69	171	38	140	33

Table 7: rpl-tsch analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
frame802154.h	230	101	138	65	102	27
orchestra-rule-unicast-per-neighbor-rpl-storing.c	223	144	69	143	68	11
packetqueue.h	222	31	168	30	167	24
linuxradio-drv.c	210	157	34	157	34	19
uip-ds6-route.h	207	116	70	112	66	25
tsch-conf.h	201	97	85	90	78	26
ipolite.h	197	28	151	27	150	19
tsch-adaptive-timesync.c	196	114	68	112	66	16
elfloader.h	194	40	143	34	137	17
tsch-queue.h	194	97	95	81	79	18
udp-socket.h	193	33	147	32	146	14
polite.h	192	25	150	24	149	18
project-conf.h	188	86	86	72	72	30
uip-mcast6.h	186	53	122	48	117	16
mtarch.c	185	92	66	84	58	35
tsch.h	184	86	75	84	73	25
uip-fw.h	176	34	127	30	123	19

Table 7: rpl-tsch analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
collect.h	171	86	71	74	59	26
rtimer.h	169	37	115	33	111	21
ctimer.h	166	20	133	19	132	14
eeeprom.c	166	87	51	87	51	28
orchestra.c	166	97	60	96	59	10
cc.h	165	64	96	47	79	22
tsch-schedule.h	164	68	77	67	76	20
simple-udp.h	163	33	115	32	114	16
tsch-log.c	159	99	56	95	52	8
list.h	157	30	111	29	110	17
energest.h	155	94	44	91	41	20
timesynch.h	150	12	125	11	124	14
clock.h	146	18	115	17	114	14
mesh.h	146	24	110	23	109	13
tsch-security.h	145	64	74	51	61	20
abc.h	144	21	108	20	107	16
uip_arp.h	142	23	98	22	97	22

Table 7: rpl-tsch analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
elfloader-arch.h	139	10	120	9	119	10
broadcast.h	139	20	107	19	106	13
linkaddr.h	138	24	103	20	99	15
tsch-log.h	138	70	60	60	50	18
memb.h	138	21	102	20	101	16
sensors.c	137	77	41	77	41	19
netstack.h	136	74	65	52	43	19
loader.h	132	28	107	12	91	13
lc.h	130	14	108	10	104	12
orchestra-rule-eb-per-time-source.c	126	72	49	72	49	5
tsch-private.h	126	52	63	48	59	15
collect-link-estimate.h	126	16	94	15	93	17
uip-ds6-nbr.h	124	49	68	44	63	12
tsch-slot-operation.h	124	52	63	46	57	15
frame802154e-ie.h	120	53	60	51	58	9
leds.c	119	72	42	72	42	5
orchestra-rule-unicast-per-neighbor-rpl-ns.c	119	67	49	67	49	3

Table 7: rpl-tsch analysis 1 File Metrics Details

File	Total Lines	Lines with Code	Lines with Comments	Code Lines	Comment Lines	Blank Lines
uip-mcast6-stats.h	117	36	75	33	72	9
queuebuf.h	117	43	63	36	56	18
runicast.h	117	28	76	27	75	14
nbr-table.h	116	49	55	46	52	15
eeeprom.h	116	18	86	16	84	14
rime.h	115	43	60	42	59	13
stunicast.h	112	28	70	27	69	15
tapdev-drv.c	111	61	41	58	38	12
multihop.h	110	30	68	29	67	13
uip-mcast6-route.h	110	18	89	13	84	8
netflood.h	110	27	72	26	71	12
cfs-posix.c	108	65	40	65	40	3
collect-neighbor.h	107	42	51	41	50	15
tsch-rpl.c	107	51	54	48	51	5
resolv.h	106	25	64	24	63	18
tsch-packet.h	105	44	49	42	47	14

(Showing 100 of 174 Files)